FIVE YEAR ISSUE BASED REVIEW, September 18 – 21, 2006

University of Nebraska–Lincoln Southeast Research & Extension Center

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University of Nebraska–Lincoln
Southeast Research & Extension Center

FIVE YEAR ISSUE BASED REVIEW

September 18 – 21, 2006

A Comprehensive Study of the Southeast District of University of Nebraska–Lincoln Extension
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OVERVIEW OF THE REVIEW PROCESS

GUIDELINES
This Five Year District Program Review is issue based and follows the Institute of Agriculture and Natural Resources guidelines for Research and Extension Centers revised in 2000 (see Section 7a). As the guidelines indicate, the review focuses on the current and evolving issues that effect this District and to some extent contiguous regions. The identification of external issues was program independent and heavily dependent on clientele input. The IANR Strategic Plan and the Extension Action Team Plans are considered a broad perspective of the issues facing Nebraskans. The District review considers unique regional challenges. The program plans are aligned with the IANR plan and Extension plan and customized to the needs of the District. Three objectives are to be considered in the development of the review process:

- Utilize external input to identify and assess emerging issues.
- Identify strategies to address those issues with some consideration of appropriate resource reallocation.
- Reflect upon the process and the outcome with third party input.

GOALS AND OPPORTUNITIES
The issue based review provided us an opportunity to engage in a process of dialogue on the future direction of our programs and how we engage clientele. Our goals were to challenge existing paradigms and think across boundaries. The process began with input from clientele to identify emerging issues. Faculty also assessed emerging issues by looking at trends and research in their respective disciplines. Following issue identification, 12 work groups and 15 sub-groups engaged in a process of prioritizing issues and developing a set of strategies to address the issues during the next three to five years.

Through discussions and interactions we gained new insights into our own program areas and developed a broader understanding of the vast expanse of our educational programs in all disciplines. The results are already evident. Not only have we charted a clear course but we have already set our plan in motion.

Through the engagement we have gathered synergy. There has been a tug of war on change – for some it is too fast for others it is too slow. What we do know is the discussions we hold today on innovative program delivery and relevant high quality programs will seem status quo when members gather for the next five year review.

The results of these efforts will be an organization that can create and deliver relevant and responsive high impact programs. We look forward to the insights the review team provides.

ORGANIZING THE COMMITTEE STRUCTURE
We began our review process in March 2005 with the selection of co-chairs and a steering committee. (see Section 1b) Our review committee was built around the framework of the current Extension action plans and several engagement and delivery issues that emerged from our discussions. Our first few steering committee meetings were spent reviewing the process, setting the timeline and finalizing the work groups.
The work groups formed around the following:

**Priority Education Programs**
- Food Production and Natural Resource Systems
- Building Strong Families
- Nutrition, Health and Wellness
- Community and Residential Environment
- Community Resource Development
- 4-H Youth Development

**Cross Cutting Program Issue**
- Water

**Engaging Our Clientele**
- Diversity
- Educational Technology
- Marketing
- Student Recruitment
- Urban Initiative

**GENERAL KICKOFF**
On April 13, 2005 we held a Spring Conference at the fair grounds in Seward, Nebraska (see Agenda in Section 7c). Dean Dickey spoke to the group about the review process. Each faculty member was provided sections of the 2000 Southeast District Review and South Central District Review documents that related to their focus area, a review timeline (see Section 7b) and the IANR Review Guidelines. In the morning each issue team met to discuss the 2000 Review and identify what had been accomplished since the last review. In the afternoon the issue work groups and the engagement work groups met to develop a process for collecting external input and data. Each staff member had an opportunity to participate in two areas— a program area and an engagement area.

**COLLECTION OF EXTERNAL INPUT**
The summer of 2005 was devoted to collecting stakeholder input and demographic data. Various methodologies, including focus groups, electronic surveys and interviews were used. Work groups also researched recent secondary data from state, federal and agency sources. The IANR listening session and strategic plans were valuable resources. Each work group report identifies the methods they used to collect input.

**FACULTY RETREAT**
SREC held a faculty retreat October 6 -7, 2005 in York (see Agenda in Section 7d). The retreat began with each team’s sharing information they had gathered from clientele. Andrew McCrea, nationally know speaker from Missouri, challenged us with “How Leaders Turn Ordinary to Extraordinary.” Seth and Carie Dermer, with national FFA, helped us think about teamwork with “Get in My Way…I’ve Got Work to Do.” Both stressed the need to be creative and innovative. During the two day retreat each issue team met to analyze information gathered from stakeholders. Several teams invited outside guests to help them prioritize issues. Many groups began developing strategies. We left the retreat planning to communicate regularly as teams to write reports during the winter months.

**APPRECIATIVE INQUIRY PROCESS – EDUCATION PROGRAMS**

*Previous hidden possibilities emerge when organizations engage conversations that matter (Whitney and Trosten-Bloom, 200).*

The steering committee met during the summer to share ideas and progress. They chose to use a process called “Appreciative Inquiry” by Diana Whitney and Amanda Trosten-Bloom to frame their education program issues and discussions. The process has two components. The first is Appreciation or the recognition of the best: present strengths, successes and assets. The second is Inquiry or the
spirit of learning: quest for new possibilities and openness to change. To inquire is to ask questions, to study and to search (Whitney and Trosten-Bloom, 2003). The process works in a 4-D Cycle based on the notion that organizations grow in the direction of what they study. The study of positive potential gives the organization energy to transform and to sustain success. The process is affirmative, inquiry-based and improvisational. The application of the process can be adapted and approaches changed as it fosters a continuous learning cycle.

The program issues report is built around the 4-D cycle:

- **Discovery – Appreciate what is** The search to understand the best of what we do. The discovery involves all members of the organization and stakeholders. It sets the benchmark for best practices and enhances organizational knowledge and collective wisdom. There is often an emergence of unplanned changes well before the cycle is concluded.
- **Dream – Imagine what might be** This is a collective exploration of opportunities for the future.
- **Design – Determine what should be** Working with the high impact elements of the most desired qualities the organization develops a comprehensive strategy for the future. Each group developed a logic model and indicators for success.
- **Destiny – Create what will be** Employees launch an extensive array of activities that change the organization.

> When you build on strengths you feel empowered to take bold steps toward a desired future (2003, Whitney and Trosten-Bloom).

**ENGAGEMENT ISSUES – WHITE PAPERS**

After a great deal of discussion the steering committee decided to move the information in the sections on Engaging our Clientele to a white paper format. The format identifies four major sections: Current Situation, Emerging Trends and Issues, Implications for Extension and Recommendations. The team leaders felt that the discussions of these issues were best described in this format. These topics did not lend themselves well to the development of logic models in the Design section of the Appreciative Inquiry model. While these white papers do not have detailed plans, many team members have volunteered to remain on committees to accomplish the recommendations outlined in the reports.

**REVIEWING PLANS AND STAKEHOLDERS**

SREC held its Spring Conference on April 11, 2006 on the University’s East Campus (see Agenda in Section 7e). Each team met with Specialists and stakeholders to go over the drafts of their five year plan. Discussion led to revisions and further dialogue about strategies. Final copies of the plans were due to the District Office May 30, 2006. The document was presented to the Deans on August 1st and to the outside review team on August 15, 2006.

**IMPLEMENTATION**

As with any strategic plan the challenge will be in implementation of the ideas generated by the unit and the review team. Our goal is to keep this process alive and continue to engage faculty and staff in growing a successful and dynamic organization.

Extension like other organizations and businesses seek change to survive. Peter Senge in his book *The Dance of Change* describes five reasons for organizational change:

- The need to respond quickly to external changes.
- The need to think more imaginatively about the future.
- The desire to unleash employee talent and enthusiasm.
- The need to move closer to the customer.
- The desire to achieve long term success.
According to Senge, profound change is sustained when a core group of committed people work together. They start small and grow steadily with pilots and initiatives. They have clearly defined goals (Senge, P., Kleiner, A., Roberts, C., Ross, R., Roth, G., & Smith, B., 1999). Our process of teams working together through the Appreciative Inquiry method should foster this type of change.

In his best-selling book *The World is Flat*, Thomas L. Friedman says, “What is flattening the world is our ability to automate more work with computers and software and to transmit that work anywhere in the world, and that it can be done more efficiently or cheaply thanks to the new global fiber optic network.” Friedman identifies categories of workers whose jobs are vital and can’t be touched. These workers have jobs which cannot be outsourced or automated. One of those groups is workers who can change with changing times and changing industries (Friedman, T. L., 2005).

As described by Friedman, Extension is operating in an increasingly changing environment challenged by a rapid explosion of information and complex issues. Faculty and staff in the Southeast Research and Extension District have embraced the focused Educator and regional program concept to meet these changes. The future Extension Educator will need to be an information expert, forecaster and trend analyzer, be able to build strong networks and collaborate with others and empower individuals and groups (Seevers, B., Graham, D., Gamon, J., & Conklin, N., 1997). To accomplish the role, the Extension Educator will need to shift from being a generalist who is isolated in a county, to a subject specialist who is part of a regional work group delivering high quality, relevant and timely programs which meet the needs of clientele (Seevers, et al., 1997). The rapid developments in the availability of information, the expectations of faster response times to solve problems, and greater demands for stakeholder involvement in decision-making processes challenge the traditional delivery extension system (King & Boehije, 2000). Stakeholders want a quality cutting-edge educational product from extension (Leholm, Hamm, Suvedi, Gray, & Poston, 1999). Educational programs need to be timely and customer-focused with a multi-disciplinary systems approach to problem solving (Leholm et al., 1999).

Extension has the type of organizational culture that allows it to be adaptable and to change to meet these identified issues. It has a structure of educators actively involved in community programming in combination with the research-base of a land-grant university seeking solutions to Nebraska problems. Extension has developed teams or work groups of educators and specialists which deliver programs in greater depth and breadth, reaching larger numbers of people than ever before (Hutchins, 1992). These teams will be instrumental in the implementation of the strategic plan. This ability to change to meet emerging needs is what gives Extension a specialization in the state of Nebraska that is difficult to outsource making it in Friedman’s terms “untouchable!”
SOURCES


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Site Visit Schedule

Monday, September 18

6:00 p.m. Dinner and Informal Gathering at hotel
7:15 p.m. Welcome by Susan Williams, District Director

Tuesday, September 19

7:30 a.m. Review Team Breakfast/Charge
8:30 a.m. Overview of Nebraska East Union
9:00 a.m. Team Reports/Discussion – 3 Programs
12:00 p.m. Lunch
1:00 p.m. Team Reports/Discussion – 3 Programs
4:00 p.m. Water Report
4:30 p.m. Review Team available to meet with individuals
5:00 p.m. Reception
6:30 p.m. Dinner and Writing Time

Wednesday, September 20

7:30 a.m. Department Head Breakfast at Nebraska East Union
8:30 a.m. Engaging our Clientele Panel
12:00 p.m. Lunch
1:00 p.m. Individual team members travel to program locations and meet stakeholders
6:00 p.m. Dinner and Writing Time

Thursday, September 21

7:30 a.m. Breakfast and Report to the Deans
9:00 a.m. Report to SREC Staff
11:30 a.m. Lunch
ACKNOWLEDGEMENTS

The Southeast Research and Extension Center review document demonstrates our commitment to helping the people of southeastern Nebraska enhance their lives through research based education. Many individuals are responsible for developing the plan and I would like to take this opportunity to acknowledge their efforts.

I would like to thank all of the Southeast Research and Extension District faculty and staff. Each made a contribution to the review process and helped shape the document into a usable plan for the future. I value your time and appreciate your commitment to the success of our organization.

I would also like to thank the department heads and specialists who join us on several occasions to for review and discussion. Your insights were very important and we continue to value our partnerships with each of you.

A special thank you goes to our clientele, stakeholders and agency/industry partners who helped guide us. Their time commitment and insight helped us key in on important issues.

I wish to express my thanks to the co-chairs, Gail Brand and Gary Zoubek who helped keep us moving forward and guided the success of this review process. We all thank Margaret Ladely for her many hours of effort in organizing and formatting the document.

I would like to thank the members of the steering committee whose discussions and challenges took this project to the next level. I thoroughly enjoyed our dialogues about the future of Extension.

A huge thanks to Dean Dickey, Associate Dean Bimstihl, Dean Cunningham and chair of the review team Martin Massengale for their sound advice and strong support.

In advance, all of us thank the review team for their time reading and studying the document and for their recommendations that will assist us in the implementation of our ideas.

As with any strategic plan the challenge will be in implementation of the ideas generated by the unit and the review team. Our goal is to keep this process alive and continue to engage faculty and staff in growing a successful and dynamic organization.

Thank You
Susan Williams
District Director
Southeast Research & Extension Center
District Overview

The Southeast Research and Extension Center (SREC) is a University of Nebraska–Lincoln Extension district which includes the 28 counties in southeast Nebraska. The District’s north edge is a line from Hall and Merrick Counties to Washington County, and its south edge is the Kansas border. On the east the District borders Iowa and extends west approximately 175 miles to Webster, Adams and Hall Counties (see map below). The area includes 15,223 square miles which is 19.8% of Nebraska’s land mass.

Approximately 1.24 million people or 71.1% of Nebraska’s population reside in the Southeast District.

Within SREC, soil and climate conditions, agronomic systems and population diversity are significantly different from east to west and north to south. The western part is heavily irrigated crops while the eastern part has a large urban population. These differences drive our Extension programming efforts.

In this chapter we will highlight many of the characteristics that make the Southeast District unique. Each education program section of the review document will contain demographic information specific to the subject matter being addressed. A series of detailed demographic maps can be found in Section 7k.

Since the last Issue Based review, SREC has expanded from 21 to 28 counties. Cuming and Burt Counties moved into the Northeast District and Adams, Hall, Webster, Nuckolls, Clay, Hamilton, Merrick, Fillmore and Thayer counties were added to the southwest region of the District.

SREC contains Nebraska’s two urban cities, Omaha and Lincoln, with populations of 409,416 and 236,146 respectively (U.S. Census Bureau 2004). In total the District includes six of the seven largest cities in the state (Omaha, Lincoln, Bellevue, Grand Island, Fremont and Hastings).
During the period 1990 to 2000, one county lost more than 10% population, nine lost 0-10% population, twelve experienced 0-10% growth while five counties experienced more than 10% population growth. The counties along the Kansas-Nebraska border experience the greatest population decline. All the counties around Lincoln and Omaha experienced population gains and are expected to continue to grow.

Twenty of the 28 counties experienced a net migration in of population rather than a loss.
Sixteen communities in SREC had Hispanic populations of 100 or more with six counties having over 1000 persons.

**Agriculture Data**
Agriculture in the District is extremely diverse and ranges from small acreages to large farms. Farming operations are both dryland and irrigated production grain-based systems. SREC has approximately 19.8% of the state’s land mass and 19,001 farms or 38.5% of the state’s total farming operations (National Agricultural Statistics Service, 2002). In county reported agricultural data:

- Fifty-three to 86% percent of the farm operators report farming as their primary occupation.
- The number of farm operators has declined in 24 of the 28 counties since 1997.
- The average decline in farm operators the past five years was approximately 7%, thus farm size in the District is continuing to increase.
- Average farm size varies from 262 acres to 744 and averages approximately 500 acres per farm compared to a state average of 930 acres per farm (National Agricultural Statistics Service, 2002).

Rainfall extremes range from 34-36 inches in the southeast part of the District to 24-26 inches in the western part (Source: Martin, D., Biological Systems Engineering).
The market value of total production from farms in the District was 28.5 percent of the state total production market value in 2002. Crop sales in the District accounted for $1,401,571,000 (41.4 percent of the state value). Crop sales are primarily corn and soybeans, but also include wheat, grain sorghum, hay, and other alternative crops (National Agricultural Statistics Service, 2002).

Corn was produced on approximately 2,851,260 acres yielding 354,807,332 bushels of corn or 39.0 percent of the state’s total in 2002. Soybeans were grown on 2,441,198 acres producing 86,647,409 bushels or 50 percent of the state’s total soybean production in 2002. In 2002, the District produced irrigated crops on 2,609,000 acres or 34.2 percent of the state’s total irrigated acres (National Agricultural Statistic Service, 2002).

According to the 2002 National Agricultural Statistics Service livestock sales accounted for $1,360,494,000 or 21.5 percent of the state value. Livestock sales are primarily cattle and calves, hogs and pigs but poultry, dairy, sheep, goats and other animals and animal products are included as well. Typical beef inventories are 1,057,000 beef and 1,529,000 hogs approximately 17.0 percent and 20.8 percent respectively of the state in 2002.

Net farm income per farm for the District varied from a county average of $285 to $61,237 and averaged $21,677 compared to a state average of $24,800. Farm payment received in the District averaged $9,931 compared to a state average of $10,900.

**Growing Metroplex**

Lincoln, Omaha and the surrounding metropolitan communities are changing rapidly. This region has been coined the Flatwater Metroplex because of its location to the Platte River and growth patterns that may merge the large cities into one (Cecil Stewart, University of Nebraska–Lincoln College of Architecture, 2004). The region will be home to more than two million people by the year 2050 (Bureau of Business Research, University of Nebraska–Lincoln). The demographics noted here relate to future programming and how the Southeast District and the Institute of Agriculture and Natural Resources can be more engaged in urban programs. More information can be found in the references cited. The following information identifies two key issues:

- Cities surrounding the metro areas are growing at a rapid rate.
- Omaha will have an increasing demand for workers, attracting more people to the surrounding area and increasing the need for individuals to commute.

Nebraska population estimates for 2005 U. S. Census Bureau indicate the cities surrounding Omaha and Lincoln are the fastest growing in the state (Omaha World-Herald, June 24, 2006). The communities include:

- Gretna 4,860 population 106.4% increase 2000-2005
- Elkhorn 8,192 population 35.1% increase 2000-2005
- La Vista 15,692 population 34.1% increase 2000-2005
- Hickman 1,356 population 25.1% increase 2000-2005
- Papillion 20,431 population 24.9% increase 2000-2005

Education Programs – General Demographic Trends 2a.4
Southeast Research & Extension Center
Omaha grew by 6.3 percent between 2000 and 2005 adding almost 25,000 residents for a total population of 414,000. State population increased 1.6 % between 4/2000 and 7/2003 while Sarpy County grew 8.1%, Douglas County grew 2.8%, Washington County grew 4.8% and Cass County grew 3.7%. Total population of Omaha and the Iowa (NE-IA) Urbanized Areas is 626,623. Omaha NE-IA Urbanized Area labor force is 339,455 with 321,908 commuting to work (1998, Omaha Conditions Survey).

Omaha Metropolitan Statistical Area (MSA) includes Douglas, Sarpy, Washington and Cass counties. The area has an unusually high labor force participation rate and an unusually low unemployment rate. The participation rate in 1990 was 71.5 %, ranking 23 among 284 metropolitan areas in the nation (Omaha Conditions Survey, 1998).

Omaha’s labor force has grown faster than its population in recent years. The labor force (employed and unemployed persons) grew 14.7%, the work force (number of persons in wage and salary jobs) grew 20.5% and the working age population grew only 8.5% between 1990 and 1997 (Omaha Conditions Survey, 1998). Labor availability is a concern for Omaha because of high labor force participation, low unemployment and rapid growth of the labor force and work force relative to the population. There is a need to bring more persons into the labor force and increase hours or better jobs for the underemployed.
In the 50 miles between Omaha and Lincoln, along the I-80 corridor, development is expected to increase in the next few decades, with the effect of joining the metropolitan areas of Lincoln and Omaha by mid-century (Lincoln Journal Star, January 1, 2006). Additional four lane roads will help workers from small communities and acreages commute to urban centers. The expansion to four lanes on Highways 77 and 92 will soon create an efficient connection between Lincoln and Omaha through Wahoo. Fremont will soon be connected to the west edge of Omaha by new four lane Highway 77 south, connecting Lincoln to Beatrice. Highway 2 south from Lincoln and Highway 75 south from Omaha (improved but not 4 lane) connects Nebraska City to the growing metroplex.

The two cities once competitive are starting to collaborate on economic development and tourism grants and funding opportunities. Each city has a unique cultural and financial climate. Lincoln is a government and university town and Omaha a business and corporate town. Omaha ranks eighth among the nation’s 50 largest cities in both per-capita billionaires and Fortune 500 companies (Lincoln Journal Star, December 28, 2005). Six of Lincoln’s top ten employers are governmental agencies.

Growing Central Tri-City Area
The Grand Island, Hastings and Kearney areas are also growing as a result of their close proximity to each other and Interstate I-80. Grand Island is the fourth largest city in the state. The Grand Island population was 39,386 in 1990 and grew to 44,546 in 2005. The fifth largest city in the state is
Kearney, located in the West Central District, which gained about 4,247 people in the 15 year period. Hastings is the seventh largest city in the state. Hastings grew from 22,837 in 1990 to 25,107 in 2005. As these communities continue to grow and urbanize it will be beneficial to bring them into the urban initiative program plans.

**Trade Centers**

SREC has a variety of community classifications according to the Beal Codes (Cantrell, R. 2005). Metro status counties are those which meet the Federal Office of Management and Budget Metropolitan definition. Large Trade Center counties contain a population center of 7,500 or more. Small Trade Center counties contain a town of 2,500 or more. Small Town is a term that identifies a county where all communities are less than 2,500 persons (Cantrell, R. 2005). In the Southeast District, seven counties are classified as Metropolitan, five as Large Trade Centers, seven as Small Trade Centers and nine as Small Town.

- Large Trade Counties – Dodge, Gage, York, Hall, Adams
- Small Trade Counties - Otoe, Nemaha, Richardson, Saline, Jefferson, Hamilton, Merrick
- Small Town Counties – Johnson, Pawnee, Butler, Polk, Fillmore, Thayer, Clay, Nuckolls, Webster

This brief overview will help us frame our reports; however, additional program specific demographics can be found in each program section of the reports and the program appendix. Additional demographic maps can be found in Section 7j of this report.

**Sources**


Omaha Area Projections to 2050. Bureau of Business Research (BBR) University of Nebraska–Lincoln.


U.S. Census Bureau 2004 http://info.neded.org/stathand/bsect5c.htm
Southeast District agriculture is diverse and its impact on Nebraska’s economy is significant. The issues of irrigated agriculture, agriculture production and risk management, diversified agriculture and livestock agriculture are the focus of this review.

A snapshot of southeast Nebraska’s share of the State’s crop and livestock production:

- Corn 38 %
- Soybeans 49 %
- Grain Sorghum 84 %
- Wheat 18 %
- Oats 27 %
- Orchards 58 %
- Vegetables 34 %
- Calves on Feed 19 %
- Sheep 32 %
- Broilers 32 %
- Layer Hens 13 %
- Dairy 27 %
- Swine 32 %

The number of operators who need to work off the farm to earn a sufficient income is increasing. Agricultural risk management strategies will be an important part of Extension educational efforts as Farm Bill subsidies may be reduced and production input costs continue to increase. Livestock production and other diversified agriculture endeavors are key to retaining current producers, helping prospective producers begin their agricultural careers, and making production agriculture a family sustaining business. By creating and sustaining a positive environment for crop and livestock producers at all levels, we can improve the prospects for rural communities—and Nebraska as a whole.

Population dynamics are an important consideration when evaluating the educational efforts necessary for southeast Nebraska clientele. This area contains 71% of the State's population. The opportunity for growing new markets needs to be pursued with both rural and urban interests in mind. Extension can play a role in connecting agriculture with the urban population in a positive manner that benefits all Nebraskans.

Source: 2002 Census of Agriculture
http://www.nass.usda.gov/Census_of_Agriculture/Census_by_State/Nebraska/index.asp
Southeast Nebraska contains a very diverse atmosphere for production agriculture. Providing quality educational opportunities pertaining to risk management is important as it provides individuals involved in agricultural production and the agriculture industry tools to be successful. The contribution agriculture production has in Nebraska is vital to Nebraska’s economic success.

Risk management and production agriculture education is important as it helps producers learn and develop successful plans for diverse agricultural situations. Risk management deals with managing old and new risk related to production, marketing, financial, and legal issues in a confident manner in the rapidly changing agricultural industry. Most successful farmer/ranchers are looking for deliberate and knowledgeable approaches to risk management as a vital part of their operation. Producers who manage risk will remain profitable and sustainable in their operations.

Define – Overview

There are many changes facing the agricultural industry that challenge producers to manage risk. These changes include changing market demands, increased age of producers, land ownership changes, and the changing governmental role in agriculture. According to Robert Wisner, Iowa State Grain Marketing Specialist, marketing is a risk management tool producers can use to find an extra 10-20 cents per bushel by developing a solid plan that avoids mistakes (Winning the Game/Marketing Stored Grain materials, Center for Farm Financial Management, University of Minnesota). With the increasing age of producers, changes will occur in land ownership and management. Educational efforts related to succession farming will become increasingly important in the next few years since the average age of producers is approximately 54 and they will be starting the transitioning process with their operation in the next five to ten years. The increasing number of urban individuals buying land for recreation and acreages has affected land ownership changes in the agricultural industry. The result is increasing land values and costs of poorer land. “The southeast part of the state showed sizable value increases across the land classes, averaging nearly 13 percent from preliminary estimates. This occurred even though some drought effects were evident in the 2005 crop season, and has continued to intensify into 2006” (Johnson, 2006). In addition, the demand for land coming on the market is robust, with both active farmer-buyers and non-farm investor buyers present (Johnson, 2006).

Also increasing are producers’ costs of production. The 2006 survey conducted by Doug Jose, University of Nebraska–Lincoln Extension Farm Management Specialist, shows the previous year’s (2005) average costs in Nebraska. Results indicate that farmers who custom hire can expect to pay 15% more for tillage operations and about 13.5% more for planting operations than from 2004. Other costs that increased during the last two years based on the Indexes of Prices Paid by Farmers published by the National Agricultural Statistics Service include: repairs, 8.1 percent; depreciation, 8.8 percent; overhead, which includes interest, insurance and housing, 14.4 percent; and labor, 10.1 percent. Farm policy education provides producers with the opportunity to understand the government’s changing role in agriculture. Each of these areas will greatly affect the future of agriculture in the next five years.
Education in agricultural production empowers producers to continue moving towards the future of agriculture and expand their horizons. Extension’s role in working in a trainer and trainee setting for production management and risk management is vital to providing education to producers, agriculture lenders and other individuals involved in the agricultural industry. This role enables Extension to enhance agricultural lenders’ limited knowledge of the agricultural industry. Increasing knowledge by education is the key to a successful future of agriculture.

**Discovery – Appreciate “The Best of What Is”**

Our strength in risk management and production agriculture education is the network we have used to deliver research-based information to our constituents, providing programs on a timely basis, collaboratively working with outside sponsorship, and provide information based on research and factual data.

This network begins with research conducted by our two, formal on-farm research groups: Soybean and Feed Grain Profitability Project and Greater Quad Counties On-farm Research Group which are unique to the Southeast District. These on-farm research groups are comprised of producers, Extension Educators, Specialists, and consultants who research topics with producers to determine the efficiency, profitability, and sustainability of practices on their own farms. After compiling the data, production agriculture workshops, field demonstrations, and publications disseminate the information to other producers and crop consultants. A 2004 study involving the Soybean and Feed Grain Profitability Project and the Greater Quad Counties On-farm Research Group evaluated the farmer research process and assessed the impact of the project. Based on the responses, the estimated impact on average annual whole farm profitability attributed to the farmer research is $2,370 for planting research, $3,643 for tillage research, $5,188 for research on soil fertility, and $3,181 for research on pest management. This totals to an average gain in profitability of over $14,000 per year per producer (Wortmann, C.S., Christiansen, A.C., Glewen, K.L., Hejny, T.A., Mulliken, J., Peterson, J.M., Varner, D.L., Wortmann, S. & Zoubek, G.L., 2005). It was these on-farm research practices that led to the Ten Easy Ways to Boost Profits $20/acre workshops held throughout Nebraska which were taught by Extension Educators and Specialists. Ten to Twenty project workshops reached 372 farmers and consultants, of which 338 indicated they would probably or definitely make changes in cropping practices based on what they learned. Follow-up surveys conducted show farmers who tried the promoted practices valued them up to $49.79/ac, for a minimum impact of over $941,000 for survey respondents alone. Additionally, on-farm research groups have recently been formed in Adams and Cass Counties.

There are two Research Centers in the Southeast District, the ARDC near Mead and the South Central Agriculture Laboratory near Clay Center at which research data are distributed to constituents via agriculture workshops, field demonstrations, and publications. The ARDC at Mead has also been utilized for numerous targeted programs for Crop Consultants, such as Crop Management and Diagnostic Clinics. Since 2001, over 2,200 crop consultants and producers attending the Crop Management and Diagnostic Clinics and representing almost 6 million acres annually valued the program an average of $5.37/acre for a potential average impact of over $31 million annually. Soybean Management Field Days, a statewide program coordinated in the
Southeast District provides demonstration sites for educational events at a variety of locations in Nebraska. Since 2001, almost 2,400 producers and crop consultants attending the Soybean Management Field Days and representing over 500,000 acres annually valued the program an average of $9.23/acre for a potential average impact of almost $5 million annually. Solution Days, additionally provides a demonstration site for an educational event held in the Southeast District. Since 2002, over 1,000 producers and crop consultants attending Solution Days and representing over 550,000 acres annually valued the program an average of $6.99/acre for a potential average impact of almost $1 million annually.

Another strength includes our workshops focused in Risk Management and Marketing. Workshops such as Farmers & Ranchers College and Winning the Game/Marketing Stored Grain (WTG/MSG) utilize interactive direct teaching methods to achieve their workshop learning objectives. The interactive teaching methods used at these programs represent a model that could be implemented throughout the district and state.

Extension’s Farmers & Ranchers College was formed in January, 2000 with the purpose of providing high quality, dynamic, up to date educational workshops for area agricultural producers in Nebraska through a collaborative effort between business, industry, higher education leaders, and the Agricultural Economics department at the University. While this type of partnership is not new to Extension programming, the level of programming provided, promotion of programs and the amount of financial assistance from private industry is new. Extension’s Farmers & Ranchers College will provide high quality continuing education to farmers and ranchers in a rapidly changing global agricultural environment. Furthermore, Extension’s Farmers & Ranchers College will provide tools necessary so that agricultural producers will be able to respond positively to these changes using a profitable decision making process. Since 2002, over 2000 producers attending the Farmers & Ranchers College annually valued the program an average of $9.58/acre for a potential average impact of $3.6 million annually.

Winning the Game (presented since 2003) and Marketing Stored Grain (presented since 2005) utilize a game format which enables participants to make decisions for insuring and marketing corn, soybeans or wheat for a hypothetical farm situation. Since 2003, over 40 workshops have been held in the Southeast District with nearly 1,000 attendees. Almost 90% of the participants indicated they would forward contract more grain as a result of the Winning the Game workshops. Participants also indicated they would increase the amount of grain forward contracted from 23% to 40% for soybeans and from 27% to 49% for corn (Selley, Jose, Smith, Hejny, Meduna & Goeller, 2003). After the Marketing Stored Grain workshops, almost 60% of these producers indicated that they will not store corn past July 1 in the future (Selley, Jose, Smith, Hejny, Wilson, Lemmons & Miller, 2006). The Nebraska Soybean Board and Agricultural Economic Department at the University worked in collaboration with these programs and provided support for these efforts. This support is vital to showing producers the importance of the program.

The 2002 Farm Bill was the most complicated USDA program for farmers to understand since the PIK years in the early 1980’s. Extension responded to farmer education needs in dramatic fashion during the August 2002 - April 2003 period. Twenty southeast Extension Educators played an active role in educating producers on the 2002 Farm Bill. In more than half of these meetings, Extension
Educators presented part of the program reaching 6,187 clients. Extension’s rapid response in providing education related to government programs has enabled Extension to provide mobilized educational efforts including the Conservation Security Program (CSP), 2002 Farm Bill, bio-security, and future government programs.

Computerized Farm Financial Recordkeeping is a workshop program developed and implemented in the Southeast District. The program was developed to provide producers with a hands-on workshop to develop record keeping systems for their operations. The curriculum for this workshop was developed by a team of Educators in the Southeast District and implemented in the program by Educators. This program involved over 100 farm businesses and was taught at several locations in the Southeast District.

Dream – Imagine “What Could Be”

Our vision is to improve the production efficiency, profitability, and sustainability of production agriculture in the Southeast District while expanding opportunities in global and domestic marketing and market development. Current trends show fewer farms, and fewer producers and an increasing average age for producers. Extension Educators, Assistants, and Specialists in the Southeast District are aware of these trends.

Extension is on the cutting edge providing producers with resources needed to develop risk management plans. We want to keep current producers’ farming and ranching operations profitable and sustainable by helping them develop and implement risk management and marketing plans and evaluate their current production practices to minimize their production costs. To achieve this, the development of programs that offer hands-on opportunities to develop a comprehensive farm management plan is ideal. An example section of planning would include construction of plans for smooth farm transitions between current farmer/ranchers and those who desire to farm/ranch. This would take a concerted effort in farm/ranch transition programming and education between Extension and other agricultural entities. Technology education is vital in providing producers the essential information necessary to make educated and profitable management decisions. Agriculture technology education would include areas related to GPS/GIS technologies, variable rate nutrient application and options of manure management to provide nutrients. Opportunities that arise in agriculture pertaining to ethanol should be addressed to show the impact ethanol plants have on the agricultural producers in rural communities.

Extension can continue to lead the educational efforts for risk and farm/ranch management; however, collaboration with other agricultural entities to provide quality educational programs will be essential to Extension’s success and viability in the future. In the future, Extension will utilize more opportunities to work with Specialists, private industry, and other organizations in a concerted effort for future education. Nebraska Farm Business, Inc. provides numerous services related to risk and production management and provides collaborative opportunities for future endeavors. Thirty percent of their clientele is from southeast Nebraska and 50% of the producers taking part in their analysis services are from southeast Nebraska (Barrett, 2006). Utilizing the informative efforts of Market Journal will provide unlimited opportunities to reach producers across the Southeast District in relation to our educational efforts. The University Agricultural Economics department will continue serving as an active contributor of research-based knowledge. The Farm Service Agency (FSA) is another potential collaborator in the area of transition.
options for farmers/ranchers because of their close contact and knowledge of producers’ situations throughout the Southeast District. The Roger’s Farm is another research facility providing long term no-till research that could be utilized more in the future for conservation tillage education.

Design – Determine “What Should Be” – Stakeholder Input

Surveys distributed to state senators (in rural areas), LEAD graduates, high school agricultural education instructors (FFA), agricultural county representatives, and livestock grain and commodity boards (executives and directors), in addition to discussions with Extension agriculture Educators and Assistants served as the basis for our stakeholder input. Using qualitative evaluation techniques, common themes were found among all surveyed. Common themes included farm transitioning to younger, interested individuals; collaboration between Extension and other agricultural entities; concerns of the 2007 Farm Bill; and marketing (see Appendix).

Destiny – Create “What Will Be”

The long term outcome of our educational programming ensures that producers in the Southeast District will remain efficient, profitable and sustainable at a time of increasing input costs and low commodity prices. In the short term, producers who attend risk management/marketing workshops will create a risk management or marketing plan by the completion of the workshop. Producers who attended those workshops will actually implement their risk management and marketing plans, therefore achieving our long-term outcome. By educating producers about research-proven ways to improve efficiency in their production practices through On Farm Research workshops and field demonstrations, we plan on minimizing the cost of production for producers. This again helps us achieve our long-term outcome.

Our team of agricultural Educators and Assistants will continue to utilize our interactive direct teaching method to deliver research-based information to constituents in the areas of agriculture production, price received and cost of production so that production agriculture in the Southeast District will remain efficient, profitable and sustainable in the future. Risk Management refers to price protection, insuring against production shortfall, and minimizing expenses. In regards to pricing, our goal is to teach producers techniques for marketing grain that integrate marketing tools, price trends and crop insurance strategy. We will also teach about any new options/components of the 2007 Farm Bill and issues relating to Farm Policy that are affected. Our goal for minimizing cost of production is to keep farmers abreast of the research on new products and help them analyze their operations to eliminate expenses that have marginal or questionable return on investment. The first goal will utilize two primary educational workshops: Farmers and Ranchers College and Winning the Game/Marketing Stored Grain. The second goal will be reached through on-farm research groups and a series of workshops with linkage to field demonstrations.

Below we list the key indicators of our educational progress. These indicators will be determined by conducting surveys at the conclusion of all workshops and educational programs to gather the appropriate information. In addition, the formative evaluation plan will incorporate focus group interviews and follow-up surveys conducted in the late fall or early winter. We will also utilize demographic information to view trends in changing numbers of producers.
Key Indicators for Educational Programs in Risk Management and Production Agriculture

The key indicators of our educational progress are:

*Development and adoption of a marketing plan* – indicates that producers are assessing their current financial situation and calculating cash flow needs and break-even/target prices.

*Development and adoption of a risk management plan, including a plan for farm transition* – indicates that producers are assessing their level of risk and are using production, price, legal and human resources risk tools in managing their agricultural business.

*Development and implementation of strategies to optimize production resources* – indicates that producers are evaluating their production practices to minimize their cost of production, eliminating expenses that have marginal or questionable return on investment and maximizing environmental stewardship as well as participation in agricultural policy and governmental programs.

References


http://citnews.unl.edu/extension/ears/lib/showReport.cgi?RECORD=2400
http://citnews.unl.edu/extension/ears/lib/showReport.cgi?RECORD=2868
http://citnews.unl.edu/extension/ears/lib/showReport.cgi?RECORD=3460
### Logic Model
Risk Management and Production Agriculture Education Program in the SREC

<table>
<thead>
<tr>
<th>Outcome-Impact</th>
<th>Outputs</th>
<th>Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Long Term- Conditions</strong></td>
<td><strong>Intermediate- Action</strong></td>
<td><strong>Short Term- Learning</strong></td>
</tr>
<tr>
<td>• Agriculture producers in the Southeast District will improve production efficiency, profitability, and sustainability while expanding opportunities in global and domestic marketing and market development. Producer’s increased profits means more dollars are spent in local businesses, strengthening community vitality and increasing opportunities to retain youth in well paying careers in agriculture in local communities.</td>
<td>• Agricultural producers participating will implement a marketing plan for their farm business.</td>
<td>• Agricultural producers participating will have the tools necessary to develop a marketing plan utilizing seasonal price trends and other appropriate information.</td>
</tr>
<tr>
<td></td>
<td>• Agricultural producers participating will implement a risk management plan for their farm business, including a transition plan for their operation.</td>
<td>• Agricultural producers attending will have the have the tools necessary to develop a risk management plan that addresses production, marketing, financial, legal and human resources risk related to their farm/ranch business.</td>
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<td></td>
<td>• Agricultural producers in the Southeast District will make informed decisions regarding components/options of the 2007 Farm Bill and contact policy makers to provide input.</td>
<td>• Agricultural producers will understand components/options of the 2007 Farm Bill.</td>
</tr>
<tr>
<td></td>
<td>• Agricultural producers will implement one strategy for minimizing their cost of production after attending the workshops or field demonstrations.</td>
<td>• Producers will evaluate their production practices and new products for their operations based on proven research information provided in workshops and field demonstrations like On Farm Research.</td>
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<thead>
<tr>
<th>Who</th>
<th>What</th>
<th>Product</th>
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</thead>
<tbody>
<tr>
<td>Crop &amp; Livestock Producers, Agency Personnel, Farm Managers, Lenders, Agriculture Allied Industry Representatives, Land Owners, and Extension professionals in the Southeast Research and Extension District.</td>
<td>Focus on marketing education.</td>
<td>Workshops/on line courses/short courses, etc. in areas of: grain and livestock marketing, crop insurance and livestock risk protection, computerized record keeping, farm transition and/or succession, farm policy, leasing, law.</td>
</tr>
<tr>
<td></td>
<td>Focus on risk management education.</td>
<td>Workshops/Field demonstrations in production agriculture topics based on UNL and on-farm research.</td>
</tr>
<tr>
<td></td>
<td>Focus on farm policy education.</td>
<td>Publications in the above listed areas.</td>
</tr>
<tr>
<td></td>
<td>Focus on production agriculture with UNL and on-farm research education.</td>
<td>In-services for Educators/Assistants in the Southeast District.</td>
</tr>
</tbody>
</table>

**Assumptions:**
1. Individuals want to return to the farm.
2. Marketing is an important part in the agricultural process and producers are willing to learn and improve their marketing.
3. Governmental programs will continue to reward sound conservation practices.
4. Producers will use sustainable practices on their farm/ranch which will effectively utilize their resources.
5. Extension will collaborate with outside entities to present educational programs and opportunities.
6. Producers are willing to evaluate their production practices and change for the betterment of their operation.

**Environment & External Factors:**
1. Political decisions about governmental programs will affect the future of agriculture.
2. High energy and production costs coupled with lower commodity prices will impact the future of agriculture.
3. The increasing average age of the producer will impact the number of farms in transition situations.
4. Drought forecasts will impact producers’ management decisions.

**Evaluation Plan:**
Key Indicators: Developing and Implementing a Marketing Plan, Developing and Implementing a Risk Management Plan, Evaluation of production practices and changing to improve production efficiency

For each educational workshop and field demonstration, the following evaluation formats will be implemented as appropriate:
1. Post workshop evaluations will evaluate knowledge gained and intent to implement practice change
2. Follow up surveys at 6 months or 1 year to identify changes in practice
3. Appropriate focus group interviews and follow ups to evaluate the adoption of new practices and identify emerging issues
4. Demographic information
5. Personal interviews and testimonials
Producers of diversified agriculture products will improve profitability and sustainability while expanding opportunities in domestic markets. Producers’ increased profits mean more dollars to sustain and expand their farming operations. Increased income is spent in local businesses, strengthening the regional economy and community vitality while increasing opportunities to retain families and youth in rural Nebraska.

A role of Extension is to promote research and support diversified, sustainable agricultural endeavors. Three distinct audiences make up diversified agriculture in southeast Nebraska. These include: 1) the sustainable agriculture farmers who are or who would like to be full time farmers in sustainable, which includes organic, agriculture; 2) the conventional farmer who wants to use an alternative agriculture enterprise for a second income source; and, 3) the acreage owner who wants to develop an alternative agriculture enterprise for his or her idle land.

While the number of farm operators continues to decline statewide (Figure 1) due to marginal income opportunities (Figure 2) we feel that there is great opportunity ahead for Southeast District agriculturists.
Both full- and part-time producers (Figures 3-4) will have opportunities with diversified agriculture enterprises.

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**Percentage of Farm Operators Reporting Farming as their Primary Occupation: 2002**

![Figure 3](source: 2002 Census of Agriculture)

**Change in Percentage of Farm Operators Reporting Farming as their Primary Occupation: 1997 - 2002**

![Figure 4](source: 2002 Census of Agriculture)
Define – Overview

Diversified agriculture includes both value-added enterprises and niche markets. These markets are among the most rapidly growing segments of Nebraska agriculture. As an example, nationwide, organic food production and consumption has increased 20 percent annually over the past fifteen years. “Naturally” grown food products, woody florals, viticulture and other enterprises are examples of diversified agriculture opportunities. This form of agriculture is an alternative to conventional agriculture, requiring less capital and land to make production viable.

Diversified agriculture potential is tremendous in the southeast Nebraska. Over seventy percent of Nebraska’s population and six major trade centers (Omaha, Lincoln, Grand Island, Fremont, Hastings, and Beatrice) reside in the Southeast District. Kansas City, Topeka and Des Moines are regional urban market centers that warrant exploration.

Approximately one-third of Nebraska farmers operate in the same District. The average number of acres per farm is the smallest in the State (Figure 5) while farmland values (Figure 6) are the highest.
The development of acreages around Omaha, Lincoln, Grand Island and throughout southeast Nebraska is a natural prospect for alternative agriculture in this District. Many acreage owners have the interest, financial capital and the land to develop these enterprises into small businesses and second income sources; however, many lack the knowledge base for getting started in alternative agriculture. They come from widely diverse backgrounds, and many have had no direct ties to the farm prior to moving out into the country. Even those with farm experience lack the specific knowledge base needed for some of these highly specialized forms of agriculture. There is great demand for this information. Clientele seek assistance from Extension as their primary source of information and assistance. Extension will help the southeast Nebraska region realize its full economic potential in alternative agriculture.

Discovery – Appreciate “The Best of What Is”

The Southeast District has workgroups in place and a solid infrastructure to support and enhance diversified agriculture. This includes the Eastern Nebraska Diverse Agriculture Work Group which is made up of nine Extension Educators from the Southeast and Northeast Districts. In addition, a separate group of nine Extension Educators make up the Acreage Owners Work Group. This group works extensively with acreages in and around the metropolitan areas of the Southeast District. Programs focus on helping clientele establish and maintain profitable agricultural enterprises. District Educators created and continue to enhance the “Acreage and Small Farm Insights” website, listserv and electronic newsletter. WebEx Internet education technology was integrated as a program delivery tool in 2006.

One of our strengths in diversified agriculture education is the new Kimmel Research and Education Center that opened for business in January 2006. The educational programs offered through the Center focus primarily on agrotourism, viticulture, specialty forest products and sustainable agriculture. Projects emphasize developing value-added products and markets for Nebraska and the region along with land stewardship.

University faculty have research plots to evaluate grapes and marketable woody plants at the orchard. Several educational field days and programs are taught at this site. Faculty is also exploring ways to expand agrotourism as a source of added income for farmers and to educate people about agriculture's importance. The University Agricultural Research and Development Center is a world class research facility that offers tremendous potential for researching diversified agriculture and educating producers.

The Southeast District has an Educator focused exclusively on diversified agriculture who was instrumental in brokering this partnership with the Richard P. and Laurine Kimmel Charitable Foundation. This Educator position focuses on research development and educational program development centered on diversified agriculture opportunities. Another Southeast District Educator serves as Nebraska’s Sustainable Agriculture and Research Education (SARE) and Small/Part-Time Farming Program Coordinator. A third Educator specializes in delivering small fruit and vegetable programs to clientele. These Educators focus their time and resources developing diversified agriculture programs throughout the District with assistance from other Educators.
This Diversified Agriculture workgroup has cultivated a fruitful partnership with the Nebraska Sustainable Agriculture Society to offer the annual Rural Advantage Conference. Each conference offers participants a choice of three tracks of programs related to alternative agriculture. Examples of these tracks include the topics of niche marketing, sustainable agriculture practices, agrotourism, direct marketing and many others. The conference is in its fifth year and approximately one-hundred fifty producers attend annually.

The Center for Rural Affairs, Nebraska Sustainable Agriculture Society, Nebraska Department of Agriculture, and Extension developed a program entitled “Farm Beginnings™”. This Land Stewardship Project began in Minnesota with very good results. The program offers participants nine classroom sessions, a mentoring program and farm tours. In the winter of 2005 and 2006, thirteen families participated in the program which was held in Syracuse, Nebraska.

Extension Educators in the Southeast District have a successful track record of integrating diversified agriculture in annual programming efforts. We conduct Summertime in the Country field days and Acreage Insights - Rural Living Clinics annually to help rural landowners develop their land resources. Tours have focused on agricultural enterprises such as alpacas, miniature donkeys, buffalo, organic, direct marketing, viticulture, pheasant hunting reserve, goat processing, beekeeping, and other diversified agriculture endeavors. The Acreage Owners Website is a tremendous electronic information resource for clientele.

**Dream – Imagine “What Could Be”**

Opportunities for diversified agriculture will increase in the Southeast District for three reasons. Obviously, the increase in the population of people in the Southeast District will bring further opportunities for sale of these products. Producers will also have the competitive advantage of producing products and offering services to large trade centers generally within fifty miles of their farms. Finally, there continues to be a growing population of people who are interested in purchasing and consuming locally grown, sustainable and pesticide free agriculture products. Extension Educators will teach producers how to identify and develop profitable enterprises that meet these customer demands.

Traditional commercial grain farmers and livestock producers will embrace diversified enterprises and practices including organic production to remain viable agricultural producers. Acreage and other rural non-farm audiences will seek agricultural enterprises that will connect them to the land and offer income opportunity on their idle land resources. These growers will embrace a variety of direct marketing methods including community supported agriculture (CSA), farmers markets, Nebraska Food Coop, roadside stands and direct marketing. Other producers will develop relationships with retail outlets that educate consumers about the environment where their food is grown. Another sector of producers will choose to market their products wholesale including nationwide sales or possibly internationally.
Extension must be positioned to support and enhance this new era of agriculture. Our delivery methods will be multi-faceted with focus on just-in-time education delivery. Sustainable agriculture education materials such as the SARE Sustainable Agriculture Network (SAN) will be promoted and emphasized as agriculture education material. Our established on-farm research programs will help diversified agriculturists improve their production programs using scientific means to evaluate and demonstrate various practices. Nebraska Farm Business Association expertise will help these producers analyze their business operations.

All Agriculture Extension staff should be trained in diversified and sustainable agriculture concepts including general information on alternative enterprises and niche marketing. More Educators will gravitate to focused assignments in this arena. Publication resources including SAN and Appropriate Technology Transfer for Rural Areas (ATTRA) will be promoted and used. Further local publications will need to be written and published to meet the needs of this audience. Southeast District faculty will embrace the Nebraska Organic Initiative. Our faculty will work closely with colleagues in the Northeast District to introduce and establish alternative swine production enterprises. (Figures 7 and 8)

Educators will work with the University Food Science and Technology Department to develop the Nebraska Food Cooperative concept. Further collaboration with Nebraska Sustainable Agriculture Society, Center for Rural Affairs and Natural Resources Conservation Service along with other groups in conducting informational programs, tours, and conferences will be advantageous to everyone. Southeast Extension faculty will continue to work with Extension Specialists throughout the Institute of Agriculture and Natural Resources to research issues and deliver educational programs associated with diversified agriculture.

**Design – Determine “What Should Be” – Stakeholder Input**

Survey results (see Appendix) of Nebraska Extension Board Members, State Agricultural Leaders, Nebraska LEAD alumni, Secondary Agriculture Instructors and State Senators demonstrated support for diversified agriculture exploration and education. A few excerpts from survey responses included:

- “Diversification of operations in order to financially survive”
- “Alternative crops that are high value that can serve higher population areas”
“Agrotourism—bring others that want to spend time in rural communities to the smaller towns”
“Alternative crops or businesses for all farmers to consider in diversifying their operations”
“Feasibility of business plan development for diversification options”

Evaluations of the Acreage Insights - Rural Living Clinic participants indicate strong support for further education provided by the Extension. Participants in both viticulture and a woody floral program indicated a priority interest in alternative enterprises to supplement their income. Sustainable agriculturists are also very interested in information from University Extension but are somewhat pessimistic that it will happen. Extension needs to be positioned to respond and meet the needs of a more diversified agriculture science.

Collaborative efforts with other organizations in the diversified agriculture arena have already built public support and demand for such programs. Continued efforts in those areas will be very beneficial to the Southeast District clientele.

Destiny – Create “What Will Be”

Agriculture in the Southeast District will become more diversified in the future. Extension will continue its successful track record of helping producers explore, research, produce, process and market agricultural products. The outcome of this focus will be an array of consumer-driven agricultural enterprises that will offer small farmers diversified agricultural ventures. Idle acreage land will become an integral part of the local community food production land base. Nebraska producers will have opportunities to engage in an array of agricultural enterprises that are profitable ventures.

The rapidly changing dynamics of agriculture in southeast Nebraska will demand a mobile and specialized Educator team that embraces change by building relationships with key partners, leveraging resources via grant and user-based funding, and working intimately with producers.

Helping traditional producers evolve into diversified agriculture enterprises while introducing a new generation of producers to these new agricultural markets will sustain the farm population in the Southeast District.

The critical needs of Southeast District diversified agriculture:

- A collaborative working relationship among public and private organizations working in diversified agriculture. These include the Nebraska Sustainable Agriculture Society, the Center for Rural Affairs, the Natural Resource Conservation Service, Nebraska Department of Agriculture and others.

- Produce economic feasibility studies of various diversified enterprises so that people looking at those enterprises will have some idea as to the profitability of such enterprises.

- Research varieties, fertilizer requirements, cultural practices, irrigation management, etc for diversified crops and livestock in Nebraska. This would include economic research on the benefits of alternative enterprises to the community and the environment.

- Promote the expansion of alternative agriculture enterprises by removing obstacles such as the lack of a food coop and policy changes within the Nebraska Department of Agriculture.
Key Indicators for Educational Programs in Diversified Agriculture

The key indicators for our educational program are:

Adoption of diversified enterprises including specialty or high value crops – diversifying agricultural enterprises is key to developing new market potential and reducing risk. Nebraska Department of Agriculture will assist in quantifying this result.

Number of farms in Southeast District metro area (60 mile radius of major trade centers) – demonstrates sustainability of existing farming operations and addition of new farms.

Quantities of Community Supported Agriculture (CSA) Enterprises, Farmers Markets and Roadside Stands – demonstrates adoption of diversified production and direct and/or niche marketing.

Inventory the volume of agriculture products exchanged through the Nebraska Food Cooperative -- demonstrates adoption of diversified production and direct and/or niche marketing.

Number of restaurants purchasing products directly from Nebraska producers – baseline survey data will be compared to progress in five years.

Number of conventional farmers producing alternative crops – Farm Service Agency will assist in quantification via crop acre certification.

Adoption of Agri-Tourism Enterprises – Monitoring of the number of Agri-Tourism enterprises in the Southeast District. Nebraska Department of Agriculture will assist in quantifying this result.

References

Census of Agriculture (2002).


University of Nebraska–Lincoln Agricultural Research and Development Center, (2006) http://ardc.unl.edu/

University of Nebraska–Lincoln Extension Acreage and Small Farm Insights Website, (2006) http://acreage.unl.edu/
## Logic Model

### Diversified Agriculture Education Program in the SREC

<table>
<thead>
<tr>
<th>Long Term - Conditions</th>
<th>Intermediate - Action</th>
<th>Short Term - Learning</th>
<th>Who</th>
<th>Outputs</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SREC Metro Area (60 mile radius)</strong></td>
<td></td>
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<tr>
<td>Producers will improve profitability and sustainability which translates into hundreds of small businesses (farms) remaining viable.</td>
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</tr>
<tr>
<td>Prospering farm businesses with enhanced opportunities in domestic markets will enhance rural community economies.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sustainable farms will support rural communities that offer family-friendly environments.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Farm and non-farm Rural producers will adopt diversified enterprises</td>
<td>Rural farm and non-farm audience will be open-minded to diversified agriculture enterprises.</td>
<td>Small and part-time farming operators.</td>
<td>Focus on researching and developing diversified agricultural enterprises to enhance farm income.</td>
<td>Research and demonstration projects.</td>
<td></td>
</tr>
<tr>
<td>Producers will successfully direct and niche market their products.</td>
<td>Producers will experiment with diversified agricultural enterprises.</td>
<td>Acres and rural, non-farm owners.</td>
<td>Establish collaborative relationships</td>
<td>Workshops and clinics.</td>
<td></td>
</tr>
<tr>
<td>Agricultural production will be community-based.</td>
<td>Collaborative efforts among producers and supporting organizations will strengthen</td>
<td>Educators and producers that serve as trainers (train-the-trainer approach).</td>
<td></td>
<td>Publications.</td>
<td></td>
</tr>
<tr>
<td>Farm numbers will be sustained or increased.</td>
<td>Successful diversified enterprise producers will share their knowledge and experience among traditional producer audience</td>
<td></td>
<td></td>
<td>Web resources.</td>
<td></td>
</tr>
<tr>
<td>Net farm income will improve.</td>
<td></td>
<td></td>
<td></td>
<td>Field days at diversified agriculturists’ farms.</td>
<td></td>
</tr>
</tbody>
</table>

### Assumptions:
1. Traditional commodity-based production profit margins will decrease.
2. Urban population centers will continue to grow.
3. Current and/or beginning farmers will readily adopt non-traditional agricultural enterprises.
4. Traditional livestock industry will gravitate to corporate model.
5. Market demand for local, organic and naturally grown food will increase.

### Environment & External Factors:
1. Reduced farm program payments will impact conventional producer adoption of diversified agricultural enterprises.
2. Urban development will encourage the development of diversified agriculture.
3. Wholesalers and retailers will purchase locally grown agriculture products.
4. Energy costs will encourage development of locally grown food products.

### Evaluation Plan:
1. Monitor Nebraska Agricultural Statistics data for farm numbers and net farm income trends.
2. Quantify volume of farm products that are direct marketed.
3. Measure quantity of agriculture products that are sold to restaurant industry.
4. Participation in diversified agriculture programs will be monitored by UNL Extension and partnering organizations.
5. Farm Service Agency will document trends in non-conventional crop certification.
6. Impact gathered via surveys, evaluations and personal interviews.
7. Participation in diversified agriculture programs will be monitored by UNL Extension and partnering organizations.
8. Farm Service Agency will document trends in non-conventional crop certification.
9. Impact gathered via surveys, evaluations and personal interviews.

### Inputs
- **Facilities** – Kimmel Education and Research Center, UNL Agricultural Research and Extension Center, Cooperator research/demonstration Plots
- **Funding** – grants, user fees and program fees
- **Partners** – Nebraska Sustainable Agriculture Society, United States Department of Agriculture, Center for Rural Affairs, Resource and Conservation Development, Organic Crop Improvement Association, One Cert (Sam Welsch), Nebraska Food Cooperative Board
- **Educators** – Jim Hruskosi, Gary Lesoing, Jim Peterson, Connie Reimers-Hild, Monte Stauffer, Steve Zimmers, Gary Zoubek, Richard Ness
- **Specialists** - Scott Josiah, Paul Read, Bob Wright, Ron Johnson, Charles Shapiro
Irrigated crop production is critical to the economy of southeast Nebraska. Statewide, irrigated farms generated 3.3 times as much revenue per farm compared to dryland farms, according to the 2002 Ag Statistics. The total crop income from irrigated farms was over $2.7 billion. The Southeast District has 34% of the state's irrigated acres, producing 36% of the state's irrigated corn and soybeans. Irrigated crop production has a multiplier effect on community revenue. The larger yields generate greater cash flow and there are unique industries, such as irrigation companies that add value to the local economy. Irrigated farm land is taxed at a higher rate than dryland farms, making those acres key to county services and local schools. The presence of irrigation has helped those farms maintain production during drought which would be devastating to dryland farms and the communities that depend upon them.

Water quality and quantity issues are frequently mentioned in the IANR listening sessions, Extension Board reviews and the University Rural Poll. Since irrigation is the primary use of pumped water in Nebraska, irrigation impact on quality and quantity of water is a critical issue. The Natural Resources Districts (NRD) provide much of the public direction for priorities on water issues in Nebraska, thus their priorities were important in our consideration of stakeholder input.

**Define – Overview**

The University plans of work address these issues by focusing research and education on water use efficiency. Efficiency is key for addressing the main issues facing irrigated agriculture, which include profitability, declining water tables, drought induced low flow for surface water irrigators, and nitrate contamination of groundwater. There are three distinct situations in this District, each requiring a unique approach to address educational issues. They are: 1) Platte River Valley, 2) Uplands, and 3) Republican River Valley.

**Platte River Valley** - drought in the Rocky Mountains and the Interstate Cooperative Agreement for protecting endangered species have been driving forces for water issues along the Platte River from the Panhandle to Columbus. The designation of the Platte River as fully appropriated has elevated the water quantity issue to be equal to the historic water quality problem along this shallow water table.

Merrick and Hall counties have the highest concentration of irrigation wells in Nebraska, most of which are shallow and overlaid with coarse soils. There is a clear hydrologic connection between the surface water (Platte River) and groundwater in this area. Nitrate, being a water soluble nutrient, readily moves through these soils, contaminating the groundwater. The University has been conducting educational programs on nitrogen and irrigation water management in this area since 1984.
Although irrigation water seems readily available, a moratorium is in place on well drilling in this NRD. Conversions of inefficient, gravity irrigation systems to more efficient technologies are encouraged to help meet Platte River Cooperative Agreement goals of reduced withdrawal. While water restrictions on current irrigators is not under discussion at this time, the issue of irrigating sandy soils on limited irrigation needs to be addressed.

**Uplands** - the upland soils, south of the Platte River, are among the most productive irrigated crop acres in the United States. Most of the soils are deep loess and the primary aquifer is greater than 50 feet below surface. The nitrate issues that impact the Platte River Valley are becoming important in the uplands as time and gravity move nitrate into the aquifer. The Upper Big Blue, Little Blue, Lower Platte North and Lower Platte South NRDs have all instituted mandatory education programs and require reports of nitrogen and irrigation water management to address nitrate contamination of the aquifer.

LB962 took effect in 2005, requiring the Department of Natural Resources to evaluate Nebraska watersheds on an annual basis, designating which streams are fully or over appropriated. While LB962 has limited impact on most of the upland acres at this time, water quantity issues are prominent due to several years of drought, particularly in the Upper Big Blue and Little Blue NRDs, both of which have a declining water table putting them close to levels that trigger water restrictions. The “reporting trigger” in the Upper Big Blue NRD was reached in 2006, requiring all irrigators to report water use.

**Republican River Valley** – The Republican River passes through Webster and Nuckolls counties before entering Kansas, and is impacted by the low flow conditions and the legal issues that will continue to affect farming in the area. University programs in the area are focused on maximizing economic production on limited irrigation. Most of the educational effort is being directed by team members in Central and Western Nebraska. Of all the irrigation issues in this District, this one currently has the greatest impact on the rural economy as it has a direct effect of decreasing production, farm income and land values, but it is a relatively small portion of irrigated acres in this District.

**Discovery – Appreciate “The Best of What Is”**

Our strength in irrigation education is our Biological Systems Engineering (BSE) research base and a state of the art facility at the South Central Ag Lab (SCAL). Research on limited irrigation at the West Central Research and Extension Center is also critical for growers in this District. No other entity in Nebraska has the resources to test economic impact of different irrigation strategies, including irrigation systems and irrigation management. We can research gravity flow, sub-surface drip and sprinkler irrigation systems. The Nebraska Climate Center's Network of weather stations and high tech instrumentation at SCAL allow us to develop educational programs that take a very detailed look at crop water use.

There are 21 counties in Nebraska with over 150,000 irrigated acres. Eight of those counties are in the Southeast District. Of the eight Educators in the state with irrigation management as their focus, four work out of the Southeast District. They are part of the statewide team that is addressing water issues.
The Southeast District is well staffed to address nitrogen management, with seven Educators who have many years of experience working with soils specialists on nitrogen management education programs.

A long history of a close working relationship with the NRDs in the District has positioned Extension to be on top of key water issues. The NRDs rely on Extension to deliver educational programs that are demanded by the public. This relationship also brings capital to programming in the form of direct funding from NRD and as a partner for larger grants through Environmental Protection Agency, Natural Resources Conservation Service and Nebraska Department of Environmental Quality.

A key audience for irrigation management education is crop consultants. The Southeast District leads the state with continuing education programming for consultants. The Agriculture Research and Development Center (ARDC) near Mead provides a lab for year-round training of farmers and consultants. Coordination of workshops and field days throughout the District is provided by an agricultural Educator housed at the ARDC.

Another special assignment in the Southeast District is an Educator who coordinates the educational programs sponsored by the Nebraska Agriculture Technology Association (NeATA). Many of the developments in irrigation management are presented to and adopted by members of NeATA ahead of the general population.

We have a track record of successful programming, such as the Central Platte Nitrogen Management Demonstration Project (CPNMDP) and the Mid-Nebraska Water Quality Demonstration Project. Both projects changed the management of many south central farmers, with documented reduction of nitrogen fertilizer and irrigation water application. Prior to 1987, when groundwater nitrate reached 19.2 ppm, the average concentration in the Central Platte NRD was increasing .5 ppm per year. The CPNMDP was instrumental in reversing that trend and decreasing nitrate concentration to 16.0 ppm by 2004. (Ferguson, 2005)

The new model of focused Educators working closely with Extension Specialists has been modeled in the Southeast District. “Ten Easy Ways to Boost Profit $20/acre” was developed in the Southeast District to integrate the work of Specialists and Educators. The project functions as an integrated team of 40 Educators and Specialists, who plan workshops, author supporting publications and presentations, and deliver workshops in the eastern half of Nebraska. Many of the workshops have a strong focus on nutrient and water management. Impact of more than $2 million has been documented from these workshops to date. (Extension Accomplishment Report, 2006)

Dream – Imagine “What Could Be”

Extension is uniquely positioned to accelerate the adoption of irrigation management technology and techniques that improve efficient use of water. Our educational team is strong in the Uplands and Platte River Valley. We have the research facilities and the network with NRDs that afford us access to a high percentage of the target audiences.

A sustained, focused educational program on irrigation water management can have tremendous impact on irrigation water use. Research indicates that improvements in irrigation management will likely reduce irrigation application by at least 1 inch of water per acre. The potential savings is over
70 billion fewer gallons pumped in our District, also saving over $10 million in fuel expense. Adoption of efficient techniques and technologies will increase crop production in areas of limited water, reduce leaching of nitrates in sensitive areas, reduce groundwater withdrawal in areas of declining water tables and result in greater profit for irrigators.

Nebraska research shows that no-till systems can reduce water requirement 3 to 5 inches per acre under center pivot irrigation, compared to tilled fields. (Klocke, 2004) The District Educators are teaming with NRD and NRCS to promote and teach no-till for irrigators. Recent conversions of gravity systems to center pivots has made the switch to no-till easier and has increased interest in no-till among farmers in the western half of the Southeast District. The 2004 Conservation Tillage Information Center estimate of no-till in York, Hamilton, Clay, Adams and Merrick counties was 10% or less. The District effort is expected to double the percent no-till in these counties by 2011.

### Design – Determine “What Should Be” – Stakeholder Input

The public listening sessions conducted by IANR and Extension listed water quality and quantity issues among priorities. These sessions plus summaries from the Rural Poll provide general support for education on these broad issues, but we looked more closely at NRD priorities for specifics.

The NRDs are operated by natural resources professionals and directed by boards elected by the public. They have jurisdiction over ground water resources and play an important role in surface water issues, too. We looked at the priorities of the NRDs because the priorities for public investment of funds are indicators of public priorities. When it comes to irrigation, most of the NRD funding is tied to improved water use efficiency. They cost share conversions from gravity irrigation to sprinklers and they cost-share irrigation scheduling equipment and surge valves to improve gravity irrigation.

The NRDs also address nitrate as the most prevalent water quality issue. Six of the NRDs associated with our District have mandatory nitrogen management programs. Rate of nitrogen application is the key issue in the eastern part of our District, while irrigation management is equally important in the irrigated west. It is clear that the public wants access to clean water with the minimum amount of restrictions.

Agriculture is the greatest user of surface and groundwater. As such, agriculture has an obligation to utilize water in an efficient manner that will not degrade the resource for future use. Educational programs that improve the efficient use of irrigation water will have a positive, long term impact on the availability of clean water.

The public is interested in applying sub-surface drip irrigation (SDI) to commercial crop production. Critical questions about types of systems, operation of SDI, and the economics of these systems need to be addressed.

### Destiny – Create “What Will Be”

The long term outcome of our educational program ensures that irrigated agriculture will remain economically viable in Nebraska and our water resources will be of high quality. An intermediate measure of our progress will be the adoption of economic based irrigation management techniques.
that we teach. We can measure progress in three ways: 1) progress in adoption of irrigation management techniques documented through mandatory reporting to NRDs, 2) Nebraska Ag Statistics document the production and dollar return to irrigated agriculture, and 3) field surveys of no-till adoption.

Long term changes in water quality are primarily influenced by the weather. The human factor from an agricultural perspective involves management of resources, including water, on the soil surface. We will capture use of SDI and proper irrigation scheduling through the NRD data base and surveys.

The irrigation education plan of work will focus on increasing the adoption of practices that improve water use efficiency. Most of our people assets are focused on the most densely irrigated portion of our District. Our education program addresses the critical needs associated with fully and overly appropriated watersheds and the continued problem of nitrate contamination of ground water. We have integrated teams of Educators and Specialists leveraging financial support from NRDs and other outside sources to increase the scope of the educational program.

Extension has become more involved in documenting no-till acres. Surveys conducted in the spring of 2006 will be a benchmark to measure progress in adoption of no-till over the next 5 years.

The plan of work in the Southeast District is compatible with the goals described by the Extension Natural Resources and Environmental Management Action Team, which calls for increased irrigation efficiency and adoption of new technologies. The Institute of Agriculture and Natural Resources also addresses irrigation management as it relates to reduced surface water contamination and protection of groundwater quality, in its Action Plan.

**Key Indicators for Educational Programs in Irrigated Agriculture**

The key indicators for our educational progress are:

*Use of ET gauges and current technology for soil water monitoring* – indicates use of proper irrigation scheduling techniques for better water use efficiency.

*Adoption of Sub-surface Drip Irrigation* – ultimate in water use efficiency. Survey information will tie use to educational effort from SCAL.

*Trend of ground water nitrate concentration in Platte Valley* – area where short term progress can be measured.

*Reduce soil carry over nitrate in uplands, based on NRD data* – indicator of proper nitrate management and reduced threat of leaching nitrate to groundwater.

*Number of irrigated acres and value of irrigated crop* – important to show benefit to Nebraska and measure of viability.

*Number of wells tested for efficiency* – reported in terms of improvement versus Nebraska criteria for wells.

*Percent acres no-till* – spring surveys by Extension for predominantly irrigated counties.
References

2002 Census of Agriculture
http://www.nass.usda.gov/Census_of_Agriculture/Census_by_State/Nebraska/index.asp

Central Nebraska Public Power and Irrigation District. Platte River Cooperative Agreement
http://www.cnppid.com/CA-Water_Issues_QnA.htm


http://www.extension.unl.edu/ears search 2006, key word phrase: Ten to Twenty.

## Logic Model
### Irrigated Agriculture Education Program in the SREC

<table>
<thead>
<tr>
<th>Long Term</th>
<th>Intermediate</th>
<th>Short Term</th>
<th>Outputs</th>
<th>Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conditions</strong></td>
<td><strong>Action</strong></td>
<td><strong>Learning</strong></td>
<td><strong>Who</strong></td>
<td><strong>What</strong></td>
</tr>
<tr>
<td>Potable drinking water is readily available to Nebraska citizens, maintaining viability and growth potential of Nebraska communities.</td>
<td>Nebraska irrigators will use economics as a factor for irrigation management.</td>
<td>Farmers will adopt irrigation scheduling technologies that will reduce pumping by at least 1&quot; per acre, pumping 70 billion gallons less water.</td>
<td>Irrigated crop producers in the Platte River Valley west of Columbus.</td>
<td>Focus on Nitrate issues for improved water quality.</td>
</tr>
<tr>
<td>Irrigated agriculture remains viable in Nebraska, providing opportunities to retain youth in agriculture and affiliated occupations, giving rural communities economic stability.</td>
<td>Farmers will change management in a way that fewer pounds of nitrogen will be left in the soil at the end of the crop year, decreasing risk of leaching to groundwater.</td>
<td>Farmers will adopt SDI based on data from SCAL resulting in a high rate of successful outcomes.</td>
<td>Irrigated crop producers in the UBBNRD, LPNNRD, LPSNRD, LBND, crop consultants.</td>
<td>Focus on adoption of technologies that improve water use efficiency, including SDI, no-till.</td>
</tr>
<tr>
<td>Irrigation adds value to agriculture and supports the rural economy of Nebraska by sustaining farm cash flow, property taxes, and associated industry.</td>
<td>Farmers will double the number of acres of no-till by 2011</td>
<td>Farmer management of nitrogen and water will help continue the downward trend of nitrate concentration in groundwater in the CPNRD will continue.</td>
<td>Irrigated crop producers in the Lower Republican NRD and those irrigating from the Bostwick canal.</td>
<td>Focus on irrigation scheduling to reduce ground water decline and reduce expenses.</td>
</tr>
</tbody>
</table>

### Assumptions:
1. Nebraska values agriculture as a key component to its economy and life style.
2. Farmers want to utilize their resources wisely.
3. It is possible to manage water resources to attain a higher economic return.

### Environment & External Factors:
1. Weather in Nebraska and the Rocky Mountains have a great impact on the viability of irrigated agriculture.
2. Political decisions and the farm program will affect the future of irrigated agriculture.
3. Production costs and markets will impact the future of irrigated agriculture.

### Evaluation Plan:
1. Each of the focused areas has plans of work that include evaluation of impact.
   
   A. Central Platt Nitrogen Management
      Track ground water nitrate concentration. Goal is to trend toward lower concentration.
   
   B. Upland irrigation scheduling
      NRD data on irrigation scheduling techniques used, conversions to SDI, residual N in soil, nitrogen balance improvement based on NRD records. Number wells tested for efficiency.
   
   C. Republican River limited water.
      Adoption of irrigation strategies that improve return on limited water application.

### Acronyms
- SDI = Sub-surface Drip Irrigation
- SCAL = South Central Ag Lab
- CPNRD, UBNRDRD, LPNNRD, LPSNDRD, LBND = Natural Resources Districts for Central Platte, Upper Big Blue, Lower Platte North, Lower Platte South and Little Blue respectively
- BSE = Biological Systems Engineering department
Agriculture and livestock production are the economic engine that drives Nebraska’s economy—generating some $11 to $12 billion in economic activity each year from agricultural commodity marketing, and providing jobs for one in four Nebraskans. Nebraska’s economic health depends upon agriculture, which is the state’s number one industry. Livestock is Nebraska’s largest agricultural segment, with nearly 65% of all agricultural receipts coming from livestock sales. That translates into about $7.5 billion dollars of our state’s economy coming from the livestock industry.

Livestock processing is the largest single employment sector in Nebraska and provides many jobs in rural communities. Livestock is the largest user of grain in Nebraska and over one-third of grain produced in Nebraska is fed to Nebraska livestock. The cattle feeding industry is crucial to competitiveness of ethanol, which is destined to be one of Nebraska’s largest industries. Profitable livestock operations contribute significantly to the local economy, community vitality and helps secure jobs for future generations.

Diversification makes for a healthier investment portfolio. It’s the same with Nebraska’s livestock industry. All of us can benefit from a mix of sizes, locations and types of livestock operations. By creating and sustaining a positive environment for livestock producers at all levels, we can improve the prospects for rural communities—and Nebraska as a whole.

Define – Overview

Economic viability for livestock enterprises of all sizes enhances rural economic development—and what’s good for rural Nebraska is good for all Nebraskans. If Nebraska is going to grow and prosper, it needs to capitalize on its resources and assets and leverage them into long-term successes. Open spaces, water, grain, grasslands and hard-working people are our areas of strength. Improving the viability of livestock production offers rural communities the opportunity to convert these resources into revenue-generating, job-creating, tax-paying businesses.

The landscape of Nebraska’s livestock industry is changing, and many of these changes are having a dramatic impact on the state. Both the number of producers and the number of animals in the state have decreased in recent years—and the impact is being felt in very important ways.

When farmers and ranchers suffer, the entire state economy suffers. Nebraska is undergoing a dangerous trend as the number of livestock operations and animals diminish (Handbook, Building Nebraska’s Livestock Industry, Nebraska Foundation for Agricultural Awareness). Various kinds of
Educational programs need to be developed to assist all types of livestock operations to remain competitive and profitable.

Because approximately 71% of the population base and 33% of the farmers and ranchers in Nebraska are located in the Southeast District, and the identified issues are critical to the livestock industry of our area, the livestock agricultural issues team felt that the over-arching goal of University Extension programming in livestock ultimately involved the “Growth and Survivability of the Livestock Industry in Southeast Nebraska.”

**Critical issues addressed**

Our team solicited, via survey and needs assessment tools, a variety of issues which producers, educators, and stakeholders felt as key to the livestock industry. Those were all discussed and prioritized and eventually narrowed down to the following three critical issues:

- Identification of livestock premises, animal identification and bio-security
- Zoning to allow for co-existence of urban encroachment and livestock production
- Environmental issues surrounding livestock production

**Discovery – Appreciate “The Best of What Is”**

The livestock team determined that the strengths of Southeast District Extension Educators in the livestock area are in conducting of livestock programming in local, regional and state-wide efforts. Examples of those programs that are proven successes include: Lambing and Kidding School; Acreage Owners Workshops; Nebraska Ram Project; Nebraska Pork Model; Beef Feedlot Roundtable; Spanish Speaking Farrowing School; Farmers and Ranchers Cow/Calf College; 4-State Beef Conference; Forage and Livestock Satellite Series; Comprehensive Nutrient Management Program; Animal Science Field Day; 4-H LIFEstock Camp; Rural Advantage; Horse Stampede; Horsin’ Around; Nebraska Youth Beef Leadership Symposium; and Pork Bridge to highlight a few.

In taking inventory of the particular facilities that make the Southeast District unique and viable in its educational programming successes, several facilities stand out. They include: Agricultural Research and Development Center near Mead; USDA Meat Animal Research Center and Great Plains Veterinary Educational Center near Clay Center; College Park in Grand Island; University of Nebraska–Lincoln Animal Science Complex, East Campus; Dalby-Halleck Farm near Virginia; Area County Fairgrounds; Area Community Centers; Legion Halls, Area Community Colleges, etc.

An extraordinary amount of dollars, partnerships and coalitions are needed to conduct the quantity and type of high quality educational programs needed for producers and clients in Southeast District. Those collaborations and funding sources include: Nebraska Department of Agriculture; Grants from the United States Department of Agriculture; Southeast Research and Educational Center; Nebraska Pork Producers Association; Nebraska Cattlemen’s Association; Nebraska Beef Council; National Cattlemen’s Beef Association; Nebraska Sheep and Goat Association; Nebraska Poultry Industries; Nebraska Horse Council; 4-State Beef Conference; Livestock Emergency Disease Response System; Crop Commodity Groups; Livestock Commodity Groups; Farmers and Ranchers College, Banks and Agricultural Lenders; University Institute of Agriculture and Natural Resources; and the University Animal Science Department.

It takes more than funding and facilities to make programming in livestock happen in our District. There are some unique tools that Educators have at their disposal to facilitate the types of meetings that are needed by their clientele. These tools include: Polycom locations across the District; Satellite delivery and receiving systems; Computers and LCD projectors in county offices; and of course support staff in county and District offices.
Dream – Imagine “What Could Be”

Vision
If we had unlimited resources you would envision that every program conducted in the Southeast District would be self sufficient and meet all of the educational needs of the livestock producers in the District. In addition, more Educators would have programming efforts in livestock production.

The Educators in the Southeast District are aware of programs mandated or may be mandated by the industry. These types of programs include: Youth Livestock Quality Assurance; Pork Quality Assurance; Comprehensive Manure Management Program; National Pollutant Discharge Elimination System; Premise Identification; Individual Animal identification; Country of Origin Labeling; and Private Applicator Training as examples. We are also cognizant of potential issues like Foreign Animal Diseases, Avian Influenza, Bio-Security Issues, and Animal Safety Concerns.

We as professionals are aware of cultural changes that are happening within our District and beyond. One of the most obvious examples involves workers from beyond the U.S. boundaries. We are aware of the demographics that effect livestock production and agriculture in local county, district, state, and national scales. We are aware of the scarcity of resources: land, labor, capital and management.

The Southeast District Livestock Issues team determined that the most prevalent emerging issues affecting Educators can be narrowed down to the following areas: County, State and Local Zoning Issues; Urban Encroachment; Bio-Security Issues in Livestock Production Areas; Premise and Individual Animal Identification; Re-Educating Rural America – Ag/Livestock 101; Decline of Livestock Production Units; Animal Welfare Concerns; Safety and Handling of Livestock; Feedlot Employee Education; Educating Producers to be Competitive and Efficient; and Environmental Issues Surrounding Livestock Production.

Recommendations that came from review sessions with Educators, producers and stakeholders indicate that we should continue with what is working within our District and counties and then develop and deliver programs that address new and emerging issues.

Unique ways in which Extension could deliver future programs in the Southeast District were identified as: web based delivery; computer and power-point presentations; self study in beef, sheep, swine, ranch and other livestock areas with computer media; and through interactive study – problem solving on your own farm.

The collaborate vision for research needs in the Southeast District centers on the projected need for research in livestock systems in areas that include: Multi-species Grazing; Animal Identification Technology; Cohabitive Livestock Systems; Odor and Particulate Problems; Forage Based Meat Production; Alternative Uses of Waste; and Ethanol and Ethanol Co-product Expansion and Use.

The nature of emerging focused issues on livestock dictates that University Specialists are needed to update Educators on critical areas and concerns facing the agricultural and livestock industries. This can be accomplished with improved communications between Specialists, researchers and Educators. It is imperative that on-going, pertinent in-services in livestock production and research based updates on what the University and our counterparts are doing in livestock production.
It is recommended that personnel in the Southeast District continue using funding and partnerships that are now in place, but that we look towards the future of Extension. With the changing face of agriculture and ultimately Extension, it is recommended that we evaluate a couple of possibilities that may have impact in parts of our District. The expected outcome of each would ultimately extend and make the best use of the resources available and better serve the collective clients of those areas.

One possibility is the establishment of regional offices manned by focused Educators and Specialists at strategic locations, serving several counties, resulting in an octopus effect. The other possibility would be cross region programming with focused Educators being stationed at county offices. Those Educators would then have responsibility for their focused area of expertise across several counties, with well defined regional programming. Each county would then receive expertise from several Educators in varying areas of the agricultural emphasis.

In order to survive in the short run and prosper in the long run, financing for programming expenses and travel will have to come from program fees and/or from grants. With continued pressure on finances at the University and local county offices, it is envisioned that we utilize the services of grant writers as a district for regional programming funding and to continue alliances with partnerships listed under the “Discovery” section.

The Southeast District Livestock Issues team suggests that the development of regional offices or input of regional funding for focused Educators in livestock would enhance the delivery of research based information to clientele. The establishment of regional offices or funding for regional programming would enhance the ability of focused Educators to travel and develop multi-county programs. Currently, there are severe restrictions on travel dollars within county budgets. The addition of other Educators with focused educational programs related to various livestock production aspects would enhance the regional concept. We also encourage the continual update of technology across the District.

Design – Determine “What Should Be” – Stakeholder Input

Needs/Issues identification
Several assessment methods were involved in helping to determine “what should be” including: Cross District listening sessions with clientele; Conservations with constituents and stakeholders; Surveys sent and compiled from Ag Teachers in District; Surveys sent and compiled with LEAD Program graduates; Brain storming with fellow Educators at meetings; Demographic material gathered from various sources; District Livestock Team meetings, and Involvement of livestock commodity groups.

Fall District Conference was the setting of the first step in prioritizing of needs expressed across the District.

Committee members individually submitted their thoughts on the needs and the prioritization of those needs. Livestock committee leaders presented the livestock committee recommendations to the District Review Issues group. The livestock committee met to finalize the priority and develop the logic model for the three issues identified.

What are the critical issues?
Critical Issue 1: Identification of livestock premises, animal identification and bio-security
The USDA’s National Animal Identification System (NAIS) is a cooperative state-federal-industry program being created to track animal movements from birth to death for the purpose of disease tracking. It will be established over time through the integration of three key components: premises identification, animal identification and animal tracking.
The NAIS is designed to encompass the tracking of all animal species (beef and dairy cattle, bison, camelids [alpacas, camels, llamas], cervids [deer, elk, moose], equine, goats, poultry, sheep and swine) that could directly or indirectly impact the animal health status of our nation’s food animal system. Eventually, the NAIS will allow animal health officials to identify all animals and premises that have had contact with a foreign or domestic animal disease of concern within 48 hours of an initial presumptive-positive diagnosis. Bio-security means doing everything a producer or employee can do to protect their livestock and poultry from disease.

Critical Issue 2: **Zoning to allow for co-existence of urban encroachment and livestock production**
The trend of people buying small acreages in the country will continue into the future. The construction of housing areas in the country has created conflict between livestock producers and other community residents. Livestock production is an integral component in Nebraska’s economic and social structure. Everything is directly or indirectly tied to the business of rearing livestock. Zoning laws have been implemented in many counties and many more counties are looking at zoning issues that ultimately affect the livestock producer. There is a large potential for further erosion of the livestock industry base in the Southeast District.

The lifeblood of rural America is a population that’s involved with agribusiness (*Handbook, Building Nebraska’s Livestock Industry, Nebraska Foundation for Agricultural Awareness*). Educational programs need to be developed to help people understand and support livestock production and the need of a safe and sufficient food supply. In addition, educational programs need to be developed to help livestock producers to develop effective methods/skills on how to deal with urban neighbors and zoning requirements. The Nebraska Department of Agriculture and the Nebraska Unicameral have implemented a “Livestock Friendly County” designation that combines promotion of livestock with protection for livestock producers and possible livestock producers from unfair and perhaps unmerited zoning requirements that may keep them from becoming engaged or further engaged in the livestock industry.

Critical Issue 3: **Environmental issues surrounding livestock production**
The environmental issues surrounding livestock production are cause for considerable discussion and debate. Protecting our natural resources is foremost on the minds of livestock producers because they rely upon water, grain and grasslands for their very livelihood.

New technologies and production management practices have dramatically improved the environmental impact of livestock production in recent years. Research continues into managing livestock waste, reducing odor and protecting groundwater. Educational programs need to be developed and delivered to help utilize these tools on livestock operations. In addition, educational programs need to be developed to help livestock producers to develop effective methods and skills on how to deal with their rural and urban neighbors and to properly comply with NDEQ and EPA rules and regulations, as well as the zoning rules that may be in a county or next to a municipality.

Livestock producers are subject to increasingly strict environmental regulations—and each new or expanding livestock facility must meet stringent standards to assure that the community’s natural resources and quality of life are protected as much as possible. Extension Educators and Specialists
need to be present to help educate livestock producers and the public on how livestock operations comply with strict environmental regulations.

Destiny – Create “What Will Be”

The Southeast District livestock issues team has determined that the following competencies need to be addressed in the short run. These are the learning concepts that we need to address.

• Livestock producers will learn about technologies and management practices to improve the impact of livestock production on the environment.
• Livestock producers will learn how to register their livestock premise and use correct procedures for identifying and tracking animals.
• Counties without zoning regulations will learn about balanced rules and regulations that are appropriate to symbiotic relationships with livestock producers, county and communities.
• Community residents and zoning boards will learn about the importance of livestock production to Nebraska.
• Livestock producers will learn how to understand concerns and effectively interact with non-rural people.

The Southeast District livestock issues team has determined that the following competencies, skills and practices need to be attained as we progress through this educational process. These are the actions that we hope we can foster.

• 100% of livestock premises will be identified.
• 100% of animals will be identified.
• Zoning boards in 10 counties will have adequate information to start working on becoming livestock friendly counties.
• 50% of livestock producers will adopt new management practices that will enhance the environment.
• Urban neighbors will have a better understanding about the production practices used by livestock producers.
• 50% of livestock producers will use science based information and new skills when interacting with non-rural people.

The Southeast District livestock issues team has determined that the following conditions will be the result as we complete our goals. The following are long range objectives that we hope to attain:

• All livestock premises and animals will be identification and managed in a bio-secure manner.
• Livestock operations will be sustainable and allowed to grow in agricultural friendly counties.
• Livestock producers will use environmentally friendly management practices.
• Livestock producers will effectively communicate science-based information when they interact with urban and rural neighbors.
• Urban and rural communities will be supportive of environmentally friendly livestock production.
• Counties without zoning regulations will have access to material that portrays the needs for agricultural/livestock producers in harmony with the needs of the environment and the concerns of their local communities.

Ultimately, livestock producers, using best management practices in livestock security; environmental quality; and networking with their extended community, will maintain or enhance the profitability of
their operations; add to the vitality or the local economy; and create/maintain a viable future for youth to remain or become involved in agriculture.

Key Indicators for Educational Programs in Livestock

The key indicators for our educational program are:

Livestock producers will have their premises identified and registered with the Nebraska Department of Agriculture and will start the process of individual animal identification. – Accomplishing these tasks are key to implementing the NAIS/USAIP plan to attain the goal of 48 hour traceability in case of a foreign disease, bio-terrorism, or a livestock emergency. The numbers of premises and animals identified to the NAIS and/or NAPE system will measure the effectiveness of the education program.

A logical proportion of counties in the Southeast District will have Livestock Friendly County designation or have realistic and favorable zoning that allows the continuation and possible growth of the livestock industry. – With the continual encroachment of urban housing, businesses and developments it is imperative that there be constructive dialogue and education to fend off the fights and disagreements that are certain to arise. The future of the livestock industry and therefore the economy of Nebraska are keys to protection of existing and potential livestock enterprises. Zoning in counties that is not detrimental to livestock production and advancing of the LFC program throughout the District will indicate the impact of this educational and advisory thrust. A list of counties with zoning that is friendly to livestock will be attainable from the NDA.

Our environment, (land, water and air) is protected with good stewardship and management practices, but not at the expense of viable and compliant livestock producers. Research based education and tools, new technologies and production management practices in managing livestock waste, reducing odor and protecting groundwater are implemented to accomplish this task to accomplish good stewardship and good neighbors. The measurable increase of new livestock facilities which are meeting the requirements of DEQ and EPA will be the indicators of the effectiveness of our programming in this area.

References

Data and information utilized for the completion of the Ag Issues Livestock Team for the Southeast District Review for 2006 were extrapolated from the following resources:

U.S. Census of Agriculture (2002)
NDA – Nebraska Department of Agriculture, Ag Promotions Division, http://www.agr.state.ne.us/
NDEQ – Nebraska Department of Environmental Quality, http://www.deq.state.ne.us/
NEFB – Nebraska Farm Bureau, Livestock Promotion, http://www.nefb.org/
NFAA - Nebraska Foundation for Agricultural Awareness, “Handbook on Building Nebraska's Livestock Industry”
### Logic Model

#### Livestock Agriculture Education Program in the SREC

<table>
<thead>
<tr>
<th>Outcome - Impact</th>
<th>Outputs</th>
<th>Product developed</th>
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</thead>
<tbody>
<tr>
<td>Long Term - Conditions</td>
<td>Intermediate - Action</td>
<td>Short Term - Learning</td>
</tr>
<tr>
<td><strong>Who we reach</strong></td>
<td><strong>What we do</strong></td>
<td><strong>Funding sources</strong></td>
</tr>
<tr>
<td>• All livestock premises and animals will be identification and managed in a bio-secure manner.</td>
<td>• Livestock producers will learn about technologies and management practices to improve the impact of livestock production on the environment.</td>
<td>• Teaches clientele by conducting county and regional: - demonstrations - workshops - seminars - field days - internet programs - WebEx programs</td>
</tr>
<tr>
<td>• Livestock operations will be sustainable and allowed to grow in agricultural friendly counties.</td>
<td>• Livestock producers will adopt new management practices that will enhance the environment.</td>
<td>• Translate scientific data into laymen use</td>
</tr>
<tr>
<td>• Livestock producers will use environmentally friendly management practices.</td>
<td>• Urban neighbors will have a better understanding about the production practices used by livestock producers.</td>
<td>• Involve commodity groups in programs</td>
</tr>
<tr>
<td>• Livestock producers will use effective methods when dealing with their town, acreage and other rural neighbors.</td>
<td>• Livestock producers will learn how to work with people who live in cities, towns and acreages.</td>
<td>• Educate zoning boards</td>
</tr>
<tr>
<td>• Communities are supportive of environmentally friendly livestock production.</td>
<td>• Livestock producers will adopt new management practices to enhance the environment.</td>
<td>• Provide 1-on-1 help where appropriate</td>
</tr>
</tbody>
</table>

### Assumptions:
1. Identification tags and technology will be available.
2. Urban encroachment on livestock enterprises will continue.
3. There will be land, capital and resources available to livestock producers.
4. Livestock producers and urban people will be receptive of educational programs.

### Environmental (External Factors):
- The following aspects will affect the production of livestock: zoning laws, Nebraska Department of Environmental Quality regulations, U.S. Environmental Protection Agency, urban development, government programs, political entities (local, regional, state, national), cost of equipment, economy, production costs, and resistance of change by livestock producers.

### Evaluation Plan:
1. Each of the focus areas will have a plan of work that includes the procedures for evaluating the program impact and key indicators of impact.
2. The livestock team will work closely with the Nebraska Department of Agriculture in monitoring the number of livestock premises and animals identified.
3. A data base of people participating in the focuses programs will be developed; thus, these people will be surveyed in an appropriate manner to determine their acceptance of livestock operations, acceptance/adoption of new production technology by livestock producers to enhance the environment, and adoption of new methods to use when dealing with urban/rural people.
4. Most likely, some of the programs will require a pre and post evaluation of participants’ knowledge level about the issue/subject matter presented.
5. Where appropriate, the information gained from the impact study will be released to the public; thus, UNL Extension is seen as a valuable asset to communities.
Individuals and families who are successful in marriage and relationships and are financially stable will provide a safe and secure future for children and strengthen community vitality and viability. Teaching families to achieve and sustain their own best quality of life for all members is the role that Extension Educators have played for Nebraskans for many decades. Whether it is teaching parents how to select a child care provider, how to develop and live within a budget, or what measures to take to strengthen family relationships, learners gain knowledge and build skills through a variety of teaching formats including workshops, newsletters/articles, and hands-on learning experiences. Southeast District Extension staff teaches families to access, use and manage resources wisely, thereby enriching family life. Family members learn sound practices for managing financial resources, building family and community relationships, as well as learning how to maintain a healthy lifestyle for all members.

**Define – Overview**

These statistics give a snapshot of families in southeast Nebraska: Seventy percent of the state’s population is in the Southeast District. In 2004, the Southeast District had both 71% of the marriages and 71% of the divorces for the state of Nebraska (see Appendix F).

In 2004, 43.5% of the divorces were granted to people ages 30-39. Just under one-fourth of the 2004 divorces lasted three years or less while nearly half ended marriages lasting seven years or less. The marriage and divorce rates, both nationally and in Nebraska, have declined slightly in recent years. However, children are still impacted greatly as more than half of the 2004 Nebraska divorces involved children affecting 6,215 statewide. (HHSS, 2004)

According to a study by Ohio State University, marriage or divorce greatly impacts a person’s financial well-being. One who marries and stays married accumulates nearly twice the personal wealth as a person who is single or divorced. Those who divorce lose, on average, three-fourths of their personal net worth.

There were nearly 84,000 children under the age of five in our District at the 2000 census; statewide, 70% of their mothers were in the workforce as compared to 59% nationally (Kids Count, 2004).
Sixty three percent of the state population aged 65 years and over resides in this District. Over 6,000 of this District’s grandparents are responsible for raising their grandchildren.

The poverty rate for Nebraska families is 9.7% as compared to 12.4% nationally. However, the poverty rate for children in the Southeast District stands at 11.4% (US Census Bureau). More than 12,000 bankruptcies were filed in Nebraska during 2005, a 35% increase over 2004 (Administrative Office of the United States Courts).

**Discovery – Appreciate “The Best of What Is”**

The Educators and Assistants who work in family programming are the greatest asset we have. They are skilled at identifying needs, brokering resources and applying current research to address local issues. They are adept at bringing together community and regional partnerships. Focused Educators give leadership to program development which is then supported and delivered throughout the District by additional family focused staff members.

Southeast Nebraska Extension staff has taken the opportunity to benefit from the strong family-based research of Dr. John DeFrain, known internationally for his work. One tool to help families determine their strengths is the Family Strengths Inventory.

A wide variety of programs are offered to help families build upon their strengths. For example, Parents Forever and Kids Talk About Divorce were established in response to state legislation allowing judges to mandate parent education prior to the divorce decree; programs are mandated in six judicial districts.

Working together, the Nebraska Supreme Court, the State Bar Association and University of Nebraska–Lincoln Extension created a guardianship curriculum that now has court-mandated attendance across Nebraska. The guardianship program has reached more than 356 across Nebraska (286 of those in Southeast Nebraska) since it began as a pilot program in 2004. A partnership with the Third District Congressional Office has resulted in the creation of a methamphetamine awareness education program that has been delivered to 3000 people throughout the Southeast District during 2004-2005.
Critical issues that Educators have addressed include: Training provided to early childhood Educators to help them meet licensing requirements, raising awareness of community members to the plight of those living in poverty, offering parent education using a variety of educational formats and providing education to children, youth and adults on wise financial management.

*Preventing Credit Card Blues at 22* has reached more than 2500 high school students (see map). The impact of this program has resulted in significant changes in behavior. For example, participants were better able to define credit, identify factors to consider when shopping for a credit card, and identify sound practices for managing credit card debt and protecting their personal identity.

Extension has partnered with Nebraska Health and Human Services on two programs targeting two specific audiences. *Building Nebraska Families* provides family life education for the hard-to-employ rural clients of Nebraska’s Health and Human Services System welfare-to-work program.

The Medicare education program, delivered by Extension staff, was established to educate senior citizens to make wise choices with their prescription drug benefits.

Each of these programs has been developed based on current research and statistics in the state. A variety of tools are used for delivery, from printed curriculum to internet web sites.

Funding for family programming is not always easy to obtain, particularly through usage fees. In most cases, family programming is offered at low or no cost to encourage all families, regardless of economic status, to participate. Most of the programs are funded through grant dollars and programming budgets. Cooperators such as the Nebraska Supreme Court set guidelines for fees that can be charged. This illustrates the importance of support provided by additional funding for family issues through relatively small local or state-funded grants. One notable exception is the *Building Nebraska Families* program grant. Their $2.2 million contract is funded by Nebraska Health and Human Services through September, 2007.
Following is a partial list of additional agencies and organizations who have partnered with Extension in the Southeast District:

College of Education and Human Sciences
Early Childhood Education Coalitions
3rd District Congressional Office
Nebraska District Court Judges, Nebraska Probation
Nebraska Department of Education
Nebraska Children and Families Foundation
Nebraska Caregivers Coalition
AARP
Family, Youth & Community Partners
Regional Health Departments
Nebraska Department of Juvenile Justice

Dream – Imagine “What Could Be”

For families: According to Wade F. Horn, Assistant Secretary for Children and Families at the U.S. Department of Health and Human Services, “…healthy and stable marriages support children and limit the need for government programs. Whether the problem is abuse, neglect, or poverty, research clearly shows the best chance a child has of avoiding these problems is to grow up with their mom and dad in a stable, healthy marriage.” To maintain a strong marriage, couples would communicate in open, positive ways. They would feel connected and committed to each other and enjoy spending time together. Couples would have, and use, problem solving skills to sustain a positive relationship rather than separating or divorcing. Caregivers would have the resources they need to fulfill their responsibilities effectively. Families would communicate effectively about money matters and have organized savings plans. More families in Nebraska would control or eliminate their debt and create financial plans to sustain their family throughout their life span. All Nebraskans would have equal access to resources they need, including prescriptions and health care services and educational information to effectively manage their families.

Extension would be the “go-to agency” for family relationship and financial management education. This education would be provided to Nebraska’s adult population (to get out of and stay out of unsecured debt), to single-parent families (to step up and step out of poverty), to high school graduates (to explore traditional/non-traditional career opportunities available in rural Nebraska) and to school students (to learn how to save and invest their money). It would be “normal” for individuals and families to get family life education, not just seek it when in crisis.

For staff: Each Educator would be specialized in one aspect of family life, addressing key family issues throughout the life cycle. They would use appropriate technology to reach audiences and be strategically located throughout the District. They would continually receive training to keep current with emerging focus issues (i.e. couple relationships, caregiving throughout the life cycle, Medicare, bankruptcy, credit, psychological aspects of spending habits, etc.). Training would also be offered on
current and future learning styles and preferred delivery methods which would be audience-appropriate. Culturally appropriate curriculum would be available for varied audiences. Educators would know how each audience prefers to learn and tailor programs accordingly. As a team of Extension Educators, we would work with agency partners and university researchers to develop curriculum and teach targeted groups in both relationships and financial security. We would coordinate with both youth development and community development staff to fill the programming “gaps” throughout our District.

For resources: Extension would be known statewide as the educational source for family and financial information. Unfortunately, as school budgets have been cut, the classes which provide family life education have also been cut, leaving few places where young adults can receive training as they begin their adult lives and relationships. Extension would also be seen as a leader for transformational change in community attitude toward families seeking family life education. Policy makers would frequently seek out Extension for information regarding pertinent family life issues and request help in establishing policies that affect families. Some examples of these policies might include pre-marital and marriage education, child care, guardianship and family relationships. Communication would occur among community partners, thus avoiding duplication and enhancing networks to more efficiently meet prioritized needs. As a result of effective programming there would be adequate funding for family life programming.

Grants would be secured for developing or purchasing family relationships and financial management curricula and programming. Grants would also be available for families and individuals so they could afford to attend or access Extension programming.

Design – Determine “What Should Be” – Stakeholder Input

Strengthening family relationships and managing family resources have recently emerged as key issues.

Members of the District family issues team collected data throughout the District by focus groups, surveys and personal contacts with key individuals (see Appendix). Statistical research was also conducted via the web and other sources to document needs as related to issues. The National Extension Association of Family and Consumer Sciences survey, along with the Program of Work from Cooperative State Research Education and Extension Service/United States Department of Agriculture confirm both of these areas as high priority. The University of Nebraska Institute of Agriculture and Natural Resources Strategic Plan 2000 - 2008 includes also the theme, Strengthen the Quality of Life of Individuals and Families and Contribute to Community Viability.

Statistics from the Southeast District and the state of Nebraska further confirm the importance of addressing these two issues.

FAMILY RELATIONSHIPS ISSUES INCLUDE: marriage education, grandparents as caregivers, expanded guardianship training

The divorce rate in Nebraska is nearly 50% of those marrying.

- In 2004, 71% of the marriages (8863) and 71% of the divorces (4201) in Nebraska occurred in the Southeast District.

A significant number of children are being cared for by caregivers other than parents.

- 6,118 grandparents are responsible for raising their grandchildren in the Southeast District (US Census Bureau).
• 70% of Nebraska women with children under age 5 are in the workforce (Kids Count).
• 11,160 children are in subsidized child care in Southeast Nebraska (NE Dept. Of Education).

Guardians are appointed by the court.
• In 2002, 1,589 guardians were appointed in Southeast Nebraska to care for another person (NE Supreme Court).

FAMILY FINANCIAL MANAGEMENT ISSUES INCLUDE: debt reduction, bankruptcy education, retirement planning

Family indebtedness is escalating.
• The average credit card debt per household is $7200. Consumer Reports, November 2005 issue states the average card debt per household with at least one credit card topped $9,300 in 2004. More than a third (36%) of those who owe more than $10,000 on their cards have household incomes under $50,000. Thirteen percent of those who owe that much have household incomes under $30,000.

• Homeowners owe an average of 50% of their home’s value. (Consumer Credit Counseling, 2005) In the fourth quarter of 2005, personal saving as a percentage of disposable personal income decreased to -0.4 percent, according to the US Bureau of Economic Analysis. The annual rate for 2004 was 1.8 percent. The last time the annual rate was lower was 1934, during the Great Depression.

Bankruptcies are increasing and the rules have changed.
• There were 8,992 bankruptcies in Nebraska in 2004; 12,110 in 2005 (Administrative Office of the United States Courts). For bankruptcies filed after October 17, 2005, the debt “slate” is no longer wiped clean. Instead, those filing for bankruptcy are now required to have a repayment plan and complete a personal financial management course.

Baby boomers are retiring.
• 146,050 people in the Southeast District are over the age of 65, accounting for 63% of the state 65+ population (US Census Bureau). Between 2000 - 2010, the most significant population increase will be in the 45 - 65 age group. These increasing numbers demand programming efforts be refocused towards financial security issues for the aging population.

Destiny – Create “What Will Be”

The long-term outcome of family programming is for Southeast Nebraska families to be strong and viable. Individuals and families successful in marriage and relationships will strengthen community vitality and future generations. Utilizing the strong families research, future programming is planned to address couples communication, with the outcome being healthy two-parent families. As individuals and families increase savings, the risk of bankruptcy and outstanding consumer debt will decrease, resulting in increased family financial security. Individuals and families with decreased indebtedness will provide a safe and secure future for children and contribute to community viability.
Progress will be measured through both short and long term methods of evaluation. Progress indicators are:

- Community and/or state policies will encourage marriage education.
- The divorce rate will decline.
- Individuals who are given care will have a positive, supportive environment for growth and development.
- An increased number of guardians, grandparents and early childhood providers will develop skills to improve the care they give.
- Financial progress will be measured through self-reporting of reduced debt and increased savings.
- The number of bankruptcies filed will decrease.

Given the busy lifestyles of today’s families and the constantly changing technology that is available, delivery strategies that apply to these emerging issues will be developed to meet the needs of the generation of learners. A wide variety of methods are being planned ranging from totally anonymous to face-to-face programming. Potential technologies may include CDs, podcasts, web-based programming with interactive discussion groups and Polycom presentations. A variety of new and creative methods will be used in order to reach the greatest number of Nebraska families.

**Key Indicators for Educational Programs in Family Financial Management**

Key indicators for progress will be measured through self-reporting of reduced debt and increased savings as well as a decrease in bankruptcies filed.
## FAMILY ISSUES TEAM
### FAMILY RELATIONSHIPS LOGIC MODEL

<table>
<thead>
<tr>
<th>Outcome - Impact</th>
<th>Outputs</th>
<th>Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Long term</strong></td>
<td><strong>Intermediate</strong></td>
<td><strong>Short</strong></td>
</tr>
<tr>
<td>Individuals and families successful in marriage and relationships will strengthen community vitality and future generations.</td>
<td>Improved couple communication, family functioning and communication, social and life skills.</td>
<td>Couples will become aware of/utilize positive communication and problem-solving techniques</td>
</tr>
<tr>
<td>Individuals who are cared for by others will have a positive, safe, supportive environment for growth and development</td>
<td>Families &amp; caregivers access resources that they need, reduce stress and improve morale</td>
<td>Couples will seek ways to improve their relationships</td>
</tr>
<tr>
<td>Improved community support for child care, self-care, disability and elder care programs.</td>
<td></td>
<td>Caregivers will develop skills to strengthen relationships</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Increase knowledge about self-care, accessing community resources, and care giving for children, elders or people with disabilities</td>
</tr>
</tbody>
</table>

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*Education Programs – Building Strong Families 2c.8*

*Southeast Research & Extension Center*
<table>
<thead>
<tr>
<th>Reach more families with research based information through increased partnerships and working together on family issues.</th>
<th>Communities will promote and support family life education at key points throughout the life cycle. Policy makers seek out Extension for family life information</th>
<th>Legislators and other key stakeholders will receive extension updates on family issues.</th>
<th>Citizens in SE Nebraska</th>
<th>Documentation regarding needs and impact of family programming</th>
<th>Marketing plan, executive impact reports</th>
<th>Staff time Research Technology Media outlets Funds for marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased funding streams for family life programming (as a result of partnerships) and effective programming</td>
<td>Policy-makers begin process for developing legislation or community agreements</td>
<td>Communities become aware of the potential impact of family policies</td>
<td>Community leaders, faith community, policy makers, couples</td>
<td>Provide opportunities to learn about potential impact of education to strengthen families, learn about models from other states, provide opportunity for discussion</td>
<td>Community discussions, media</td>
<td>Grants/money Extension staff University faculty Research Technology Partners (including faith community and legislators) Marketing Staff time</td>
</tr>
<tr>
<td>Policies established for strengthening families</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Assumptions:** Couples will want to attend/participate. Buy-in from the faith community and policy makers.

**Environment (External Factors):** Results will vary depending on programming availability, location of focused staff and funding for programming outside of counties where family issues staff are housed. Increasing numbers of diverse audiences and an increase in aging population increase needs in the area of family issues. Diversity and urban population needs to be considered as plans are made and carried out. Time pressures, commute time, busy family schedules all contribute to minimal time available to attend programs. Access to internet by some, and to high speed internet lines by others, will limit the use of interactive website. Turnover in legislators and staff as a result of term limits.

**Evaluation:** End-of-meeting evaluation & long-term follow-up for classes; internet usage; web feedback; establishing baseline statistics by county compared with divorce rate statistics 5 - 10 years in future. New legislation introduced and enacted. Communities adopt marriage education policies.
# FAMILY FINANCIAL MANAGEMENT LOGIC MODEL

<table>
<thead>
<tr>
<th>Long term</th>
<th>Intermediate</th>
<th>Short</th>
<th>Who</th>
<th>Outputs</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Families with decreased indebtedness provide a safe and secure future for children and contribute to community viability.</td>
<td>Individuals and families re-evaluate a budget for long-term impact.</td>
<td>Individuals and families will: * Discover personal indebtedness * Evaluate spending patterns * Identify personal income and expenses * Make and implement a budget</td>
<td>Building Nebraska Families (BNF) Clients</td>
<td>Teach Money Management: Classes Workshops Camps One-on-one (BNF)</td>
<td>Pay Down Debt Web Site Credit Card Blues Program Budgeting Education Auto Town Web Site Camps for Youth &amp; Families NebGuides Curriculum to teach financial management: -credit scores -kids and money</td>
</tr>
<tr>
<td>Families are building wealth.</td>
<td>Individuals and families will decrease spending.</td>
<td>Individuals and families will: * Develop a savings plan * Learn about investing</td>
<td>General public: Adults Families ADC recipients School students</td>
<td>Development of a series of news columns Development of a money management camp for families Marketing Development of school enrichment</td>
<td></td>
</tr>
<tr>
<td>Families are maintaining a sustainable financial lifestyle.</td>
<td>Individuals and families will practice saving regularly.</td>
<td>Individuals and families will: * Learn about credit and how it works * Understand the impact of advertising on spending * Regularly balance a checkbook</td>
<td></td>
<td>Develop savings &amp; other financial mgmt. curriculum Use web sites, news articles, PowerPoint, 1/3 page inserts to teach</td>
<td></td>
</tr>
<tr>
<td>Family forum provides structure for financial decision-making and management.</td>
<td>Families will increase communication regarding their finances.</td>
<td></td>
<td></td>
<td>Work with partners to: team teach, identify program needs and clientele</td>
<td></td>
</tr>
</tbody>
</table>

**Inputs**

- Staff
- Website
- Materials/worksheets
- Computers
- Research
- Partners: University faculty English Language Learners Public schools Nebraska Health & Human Services System Funding for development of web site

- Savings Curriculum: -web site -retirement planning -estate planning -young families saving for college -investing

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Education Programs – Building Strong Families 2c.10
Southeast Research & Extension Center
<table>
<thead>
<tr>
<th>Long</th>
<th>Medium</th>
<th>Short</th>
<th>Who</th>
<th>What</th>
<th>Product</th>
<th>Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>A financial plan sustains a family against bankruptcy throughout the lifespan</td>
<td>Families and individuals will maintain financial plan to reduce debt and increase savings.</td>
<td>Families or individuals will identify areas for debt reduction and establish a family financial plan.</td>
<td>Financially at-risk populations</td>
<td>Evaluate programs</td>
<td>Trained staff</td>
<td>Staff</td>
</tr>
<tr>
<td>All aging Nebraskans will have financial resources throughout their lifespan</td>
<td>Individuals or couples will sustain standard of living on retirement income.</td>
<td>Individuals or couples will learn how to live on a retirement income.</td>
<td>Financially overextended groups</td>
<td>Provide opportunities for staff to better meet the needs of clients</td>
<td>If Needed: Workshops News columns</td>
<td>Training</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aging populations</td>
<td></td>
<td>Trained staff</td>
<td>Financial Support</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Retirees</td>
<td></td>
<td>Savings Curriculum: Retirement planning Estate planning</td>
<td>Needs Assessment Partners: SHIIP Eldercare &amp; Aging Services Providers Attorneys</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sandwich generation</td>
<td></td>
<td>Teach retirement and estate planning</td>
<td></td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Evaluate programs</td>
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</tbody>
</table>

**Assumptions:**
1. Families will want to reduce debt and begin to save their money.
2. Retired Nebraskans will strive to maintain pre-retirement standard of living.

**Environment (External Factors):** Results will vary depending on programming availability, location of focused staff and need for increased staffing [in urban areas]. The number of families experiencing high levels of indebtedness has continued to rise over the past five years. Cost of Living rates have increased faster than levels of family income in Nebraska. Easy access to credit cards and increasing interest rates has contributed to high levels of debt. Families and the aging population often live from paycheck to paycheck; unexpected expenses create a money management crisis. American families continue to slip further and further in debt. A record 12,110 of Nebraskans filed bankruptcy in 2005 to erase or ease their debt load. Federal changes in bankruptcy law which began October 17, 2005, put more stringent parameters on future filings.

**Evaluation:**
end-of-meeting evaluation & long-term follow-up for classes; internet usage; web feedback; establishing baseline statistics by recording the 2006 number of bankruptcies filed and comparing it to numbers 5 to 10 years in the future. A reduced number of aging Nebraskans applying for Medicaid assistance due to limited levels of income and resources.
"More than 90 million Americans are affected by chronic diseases and conditions that compromise their quality of life and well-being. Overweight and obesity, which are risk factors for diabetes and other chronic diseases, are more common than ever before. To correct this problem, many Americans must make significant changes in their eating habits and lifestyles." (Dietary Guidelines for Americans, 2005)

USDA's 2005 introduction of the new *Dietary Guidelines for Americans* and *MyPyramid Food Guidance System* emphasized the importance of diet, physical activity and food safety "…to promote health and to reduce risk for major chronic diseases…"

At the state level, University of Nebraska–Lincoln Extension has designated "Nutrition, Health & Food Safety" as one of its Focus Areas. In turn, these are addressed in the Institute of Agriculture and Natural Resources (IANR) Strategic Plan Goals of "Strengthen the quality of life of individuals and families and contribute to community vitality" and "Bolster food safety and a safe food supply."

Within Southeast Research and Extension Center (SREC) three priority areas were determined, with each discussed in a separate section in this review:

- Food safety education
- Healthy lifestyles education
- Using technology as a program delivery method

A fourth, separate section is included on SREC's Nutrition Education Program (NEP). NEP works with limited resource families and features programming in all three of our priority areas. Its content and target clientele are mandated by federal guidelines.

As part of this review, an Internet-based stakeholder survey was sent to a listserv of dietitians and related educators in other organizations. Respondents were asked to identify emerging important issues in nutrition, health and food safety in our District and what Extension could do to help with them. This group is both an end-user of Extension materials and is in a position to identify emerging issues. A copy of the complete survey and responses to the University of Nebraska–Lincoln "Southeast Extension & Research District ‘Nutrition, Health & Food Safety Survey’" is included as Appendix A.
Define – Overview

According to the Centers for Disease Control, chronic diseases—such as heart disease, stroke, cancer, and diabetes—are among the most prevalent, costly, and preventable of all health problems. Seven of ten Americans who die each year, or more than 1.7 million people, die of a chronic disease. The CDC states, “To a large degree, the major chronic disease killers are an extension of what people do, or not do, as they go about the business of daily living. Health-damaging behaviors—in particular, tobacco use, lack of physical activity, and poor nutrition—are major contributors to heart disease and cancer, our nation’s leading killers.”

The National Institutes of Health have reported economic costs of obesity and being overweight as $99.2 billion, with approximately $51.6 billion in direct costs and $47.6 billion in indirect costs. The NIH also reports that lack of physical activity contributes to the prevalence of overweight and obesity in the United States. Only 22 percent of U.S. adults report getting the recommended regular physical activity (five times a week for at least 30 minutes). About 15 percent exercise vigorously three times a week for at least 20 minutes. About 25 percent of adults claim they participate in no physical activity at all during their leisure time.

Obesity is increasing at epidemic levels, with 61% of Nebraska adults being overweight or obese in 2003. This follows a national trend seen since 1990 of a significant increase in obesity and overweight trends, making Nebraskans at a higher risk for developing heart disease, diabetes, and many other chronic diseases and conditions.
Youth are following a similar pattern, with one-third of Nebraska’s youth, in grades K-12, being at risk for overweight or obesity during the 2002/2003 School Year, according to the Nebraska Health and Human Services report on Physical Activity, Nutrition, and Obesity. When only high school students are surveyed, 25% are considered overweight or at risk for being overweight, according to the 2005 National Youth Risk Behavior Survey (YRBS), which indicated that the percentage of students in Nebraska who were at risk for becoming overweight fell from 14.6% in 2003 to 13.8% in 2005, although the percentage of students who were overweight increased from 10.5% to 11% (Source: Youth Risk Behavior Surveillance – United States, 2005, Morbidity & Mortality Weekly Report 2006;55(SS-5):1–108.).

The Youth Risk Behavior Surveillance Survey showed that Nebraska youth do a fair job of eating fruits and the more common vegetables, but only 13% eat five or more servings per day, compared to 20% nationally and only 18% drank three or more glasses of milk daily. This was better, however, than the national average of 16% (Source: Youth Risk Behavior Surveillance – United States, 2005, Morbidity & Mortality Weekly Report 2006;55(SS-5):1–108.).

Nebraska youth are on the move, with only 8% not participating in regular exercise, compared to almost 10% nationally. They also watch less television than their counterparts nationally, with 26.5% watching more than 3 hours daily in Nebraska, versus 38% nation wide (Source: Youth Risk Behavior Surveillance – United States, 2005, Morbidity & Mortality Weekly Report 2006;55(SS-5):1–108.).

Tobacco use among Nebraska youth has decreased since 2003. The Youth Risk Behavior Surveillance Survey reports that the percentage of students who had ever tried cigarette smoking had declined from 60% in 2003 to 53% in 2005. All other surveyed questions related to tobacco and alcohol use also showed decreasing trend, possibly indicating that the messages and education about avoiding high risk behaviors is helping (Source: Youth Risk Behavior Surveillance – United States, 2005, Morbidity & Mortality Weekly Report 2006;55(SS-5):1–108.).

Further statistics regarding Nebraska youth and high risk behaviors are available in the Appendixes.

According to the CDC, practicing healthy behaviors, such as eating low-fat, high-fruit-and-vegetable diets, getting regular physical activity, and refraining from tobacco use, would prevent many premature deaths. Because health-related behaviors are usually established in childhood, positive choices need to be promoted before unhealthy behaviors are initiated or become ingrained.

Thus, overall good health of Southeastern Nebraskans is related to healthy weights, and reduction of high risk behaviors and risk factors of chronic diseases. A key strategy for addressing these risk factors is to educate the public and health care practitioners about the importance of prevention. SREC Extension Educators have been successful in identifying and reaching a variety of audiences with research based health and wellness programs, addressing issues related to these high risk diseases and health conditions identified. Individuals, families, and communities are made aware of these relationships, learn methods to address these issues and take responsibility for personal health as it relates to weight and chronic diseases by engaging in healthful behaviors through healthy lifestyle educational opportunities taught by Extension Educators in Southeastern Nebraska.

**Discovery – Appreciate “The Best of What Is”**

Behavioral risk data from both the state and national levels indicate the need for more educational programs related to diet and physical activity choices for Nebraska citizens. One very successful program has been the partnership between Extension and the *Every Woman Matters* program, a health outreach program administrated by Nebraska Health and Human Services targeting 40 to 64-year-old women who are uninsured or underinsured. According to the Office of Women’s Health Annual Report from 2004-5, 51% of the population in Nebraska are female. The number of women in the EWM program with no insurance coverage of any kind is 65%. SREC Extension Educators deliver the *ABCs for Good Health Program* classes, teaching lifestyle intervention sessions aimed at nutrition and physical activity. These women are at higher risk for heart disease.
Education Programs – Nutrition, Health & Wellness

and diabetes. Over 1,100 women in Nebraska have completed the course since it started, which is taught in both English and Spanish. Nine Educators in the SREC have taught the ABC’s for Good Health classes for EWM since the partnership began in 2003. Client satisfaction surveys show the effectiveness and impact of the ABCs for Good Health Program. Results show that 99.5% reported they had learned new information from the classes; 97% felt that they were able to set nutrition and/or exercise goals for each class session; 72% reported they had been able to reach those goals all or most of the time. An overwhelming majority of clients also commented that they plan to exercise more and eat healthier in the future.

The ABCs for Good Health Program is coordinated through Extension by Linda Boeckner, R.D., PhD, Extension Nutrition Specialist and Cathy Dillion, Lifestyle Intervention Coordinator for the Every Woman Matters Program, Nebraska Department of Health and Human Services.

The 4-H Youth Development – Healthy Lifestyle Education Project Area in SREC helps teachers and students in providing health education in the school curriculum. Extension Educators help fill that educational void that not all teachers have the expertise to teach in health lifestyle education. These programs help support the National Initiative to Improve Adolescent Health (NIIAH) by the year 2010, which is based on the Healthy People 2010 initiative and also complement the Nebraska State Standards for Health Education. Areas focused on included high risk behavior prevention education in the areas of tobacco, alcohol, and drugs; farm safety; and making safe choices for personal health. 4-H Youth Development – Healthy Lifestyle Education Project Area has several other health related projects with 4-H’ers. The Healthy Clubs Challenge is for all 4-H club members to learn more about physical activity and healthy eating while having fun!

New projects within the 4-H Youth Development program help emphasize the importance of diet, health, and nutrition. Youth in Motion educates 4-H’ers and their families about the importance of a complete physical fitness picture. Youth have the opportunity to learn new and fun ways to be active, personal goal setting, and choosing health snacks. Fast Foods reconnects youth and families with basic cooking skills, getting nutritious foods on the table, and developing an enjoyment of cooking and eating good food. Both of these projects have been updated to include the new MyPyramid and recommended dietary guidelines.
Extension was seen as on the cutting edge for providing the education on the new *MyPyramid*. In April 2005, the U.S. Department of Agriculture launched the new *MyPyramid Food Guidance System*. Presentations were developed by Extension and were among the first available in the nation to help educators implement *MyPyramid* guidelines. To expand outreach in a timely and cost-effective manner, the PowerPoints were made available for downloading by other educators across the nation via a SREC website. These programs were delivered to both youth and adult audiences for schools, consumer groups, senior center audiences, and professional venues.

SREC Educators have taken the steps to better the health of southeastern Nebraskans. Extension Educators in Southeastern Nebraska supported this goal, educating consumers the importance of increasing their physical activity and daily exercise plan. Audiences included professional organizations, consumer groups, teachers, and 4-H youth. The *Walk Nebraska* website is a unique web site designed to help achieve a healthier lifestyle by making walking an important part of a personal fitness program. Through *Walk Nebraska*, participants walk on their own but select a trail for a "virtual walk" across the state. As miles are walked and recorded, messages will automatically appear along the virtual trail, giving useful health tips as well as showing beautiful scenery, notable landmarks and interesting sites in Nebraska. Once the trail is completed, participants may choose another route for more adventurous walks in Nebraska. This program is designed to help individuals become more physically active but it can also be useful with a group of friends, co-workers or families. Five “virtual” Nebraska walking trails - Northeast Trail, Southeast Trail, Central Trail, Panhandle Trail, and West Central Trail were developed. Additional materials on the site include: monthly newsletters, nutrition and health website links, benefits of walking, and trail completion certificates at the end of each trail.

The Rand Corporation reports that obese respondents to a 1998 survey of 10,000 Americans reported spending approximately 36 percent more on health services and 77 percent more on medications than normal-weight individuals. According to data collected by a Kaiser Permanente health plan in another study, obese individuals spent as much as $5,000 more on health care costs than normal-weight people during the nine-year period that was studied. If each of 10 participants in 10,000 steps who reported lower blood pressure lowered their lifetime health care costs by $1000, significant benefits to these individuals and to the overall American economy reasonably can be assumed.

Funding for healthy lifestyle programming is obtained from collaborative or individual grants or user fees. Facilities for programming vary from community to community, usually local Extension offices or community meeting rooms, schools, and churches. Partnerships are with local and regional health departments, schools, 4-H youth groups, Nebraska Department of Education, National School Wellness Policy, Nebraska Department of Health and Human Services, Nebraska Tobacco-Free grant, Region V Systems, N-Lighten Nebraska, Action for Healthy Kids, local and state agencies and health departments, and local community groups.
Dream – Imagine “What Could Be”

If the Nutrition, Health, and Food Safety team could look onto the horizon and predict what the emerging health issues would be, then prevention would be the key. Making a difference in the lifestyles of Nebraskans depends on environmental, social, behavioral, and genetic factors. High risk behaviors could be identified before they enter the “crisis” mode. We would be able to forecast trends for emerging health issues and base our teaching to be proactive instead of reactive.

Emerging health issue predictions will be based on effective partnerships with health coalitions, medical communities, partnerships with campus researchers, and national trends. Working with local schools and being a part of the School Wellness Policy as they are developed in state school districts also allows a unique opportunity for an Extension partnership.

Utilizing current research from the National Youth Risk Behavior Survey (YRBS) that targets the top youth risk behaviors and health issues helps pinpoint what the issues are that impact families and communities, allowing Extension to be the local “go to” professional in community for healthy lifestyle education for schools, workplace, or consumer group education. The national YRBS monitors priority health risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States. The national YRBS is conducted every two years during the spring semester and provides data representative of 9th through 12th grade students in public and private schools throughout the United States, and is a valuable tool in showing national and state indicators of health concerns.

Design – Determine “What Should Be” – Stakeholder Input

Knowing what an emerging issue is and the clientele served means that SREC Health Educators have the ability to base program delivery method on clientele and resources available, audience, and subject matter. This can be done by surveying audiences to determine need for program development using web based or questionnaire resources; and using SREC and State Nutrition, Health & Food Safety focus areas identified and utilized to effectively focus on subject matter expertise.

The state Nutrition, Health, and Food Safety team has identified assessment needs, including the 2005 Dietary Guidelines for Americans and MyPyramid initiatives to provide basic food and physical activity guidance policies that are to be used by Extension professionals for their programming efforts. Partners identified include HHSS/EWM, district health departments, local health care networks, health coalitions, media, and schools.

Technological surveys have and will continue to help identify the needs and emerging issues. The University of Nebraska–Lincoln “Southeast Extension & Research District ‘Nutrition, Health & Food Safety’” survey in 2005 reinforced the need to continue educating in the areas of weight management, childhood obesity, issues relating to physical activity for self and family, healthy eating, diabetes, heart diseases, and healthy lifestyle education related to nutrition, health, and wellness (See Appendix A). *What do you feel will be the important issues in nutrition, health and food safety in the Southeast Research and Extension District in the next five years?*) These have been successfully implemented in the past as a way to target specific audience bases to current relevant health issues – i.e., teachers, health care professionals, etc. as virtual focus groups. These surveys have also helped support programming trends and validate the need.

The Nutrition, Health, and Food Safety Team will continue to utilize issues identified by NHHS Research and Statistical Data Surveys as basis for supporting existing issues and spotlighting possible educational areas to target for future health trends.
Training for staff is important, to be up-to-date on valid research for upcoming health trends and issues. SREC Educators will coordinate professional development opportunities with state Nutrition, Health, and Food Safety Action Team to make sure educational topics are covered in our District. Future training topics in the healthy lifestyles area would include *ABC’s for Good Health*, childhood obesity issues, *4-H Youth Development – Healthy Lifestyle Education Project Area*, emerging nutrition and wellness issues and increasing physical activity.

Other options include utilizing a user-friendly Internet-based (staff access only) sharing site for program materials where each person could upload their own materials, saving program development time for program delivery time! Effective partnerships and collaborations with state and local agencies and health departments for healthy lifestyle programming and funding opportunities will bring in communities and stakeholders on those issues that are of interest to those patrons and consumers.
**Logic Model**

**Nutrition, Health & Wellness: Healthy Lifestyle Education Program**

**SITUATION:** Overall good health of Southeastern Nebraskans is related to healthy weights, and reduction of high risk behaviors and risk factors of chronic diseases. Physical and emotional impacts are caused directly or indirectly by underweight and overweight conditions of youth and adults. Many can be directly related to record levels of obesity in youth and adults. Individuals, families, and communities must be aware of these relationships, learn methods to address these issues and take responsibility for personal health as it relates to weight and chronic diseases by engaging in healthful behaviors.

**ASSUMPTIONS:**
1. Health issues are of interest
2. People want to be healthy and feel good
3. Parents and communities are interested in healthy children/people
4. Lifestyle is a major influence on health
5. Healthier people lead to lower medical costs
6. Extension will be supported in the health agenda

**ENVIRONMENT:**
We have several partners with whom we can work including: HHSS/EWM, district health departments, local health care networks, health coalitions, media, and schools. The 2005 Dietary Guidelines for Americans and MyPyramid provide basic food and physical activity guidance policy that will be used by Extension in its programming effort. There are existing curricula and resources (both within our system and external to it) that can be accessed and used in Extension programming.

<table>
<thead>
<tr>
<th>OUTCOMES-IMPACT</th>
<th>INPUTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Long Term</strong></td>
<td><strong>Intermediate</strong></td>
</tr>
<tr>
<td>1. Incidence of chronic conditions related to poor diet, lack of physical activity and risky behaviors will be decreased.</td>
<td>1. Older adults will choose foods that match their MyPyramid recommendations.</td>
</tr>
<tr>
<td>2. Older adults’ dependence on medical treatment for chronic diseases related to poor diet and lack of physical activity will diminish.</td>
<td>2. Older adults will implement a personal physical activity plan to increase the number of minutes spent in daily physical activity to recommended levels.</td>
</tr>
<tr>
<td>3. Older adults will experience decreased medical expenditures due to reduced chronic disease.</td>
<td>3. Older adults will identify the steps needed to take personal responsibility for their health.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OUTPUTS</th>
<th>EDUCATIONAL PRODUCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Older Adults</td>
<td>Classes</td>
</tr>
<tr>
<td>Caregivers of older adults</td>
<td>You CAN!</td>
</tr>
<tr>
<td>Professionals working with older adults</td>
<td>ABCs for Good Health</td>
</tr>
</tbody>
</table>

**OUTCOMES-IMPACT**

1. Incidence of chronic conditions related to poor diet, lack of physical activity and risky behaviors will be decreased.

2. Older adults will choose foods that match their MyPyramid recommendations.

3. Older adults will implement a personal physical activity plan to increase the number of minutes spent in daily physical activity to recommended levels.

**OUTCOMES-IMPACT**

1. Young/Mid-age Adults will choose foods that match their MyPyramid recommendations.

2. Young/Mid-age Adults will implement a personal physical activity plan to increase the number of minutes spent in daily physical activity to recommended levels.

**OUTCOMES-IMPACT**

1. Young/Mid-age Adults will increase their knowledge of methods to incorporate healthful eating and feeding practices into their lifestyles.

2. Young/Mid-age Adults will increase their knowledge of ways to be physically active in their daily living.

3. Young/Mid-age Adults will identify the steps needed to take personal responsibility for their health.

<table>
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<td>2. Young/Mid-age Adults will experience decreased medical expenditures due to reduced chronic disease.</td>
<td>2. Young/Mid-age Adults will implement a personal physical activity plan to increase the number of minutes spent in daily physical activity to recommended levels.</td>
</tr>
<tr>
<td>3. Social and economic cost of high risk behaviors will be reduced.</td>
<td>3. Young/Mid-age Adults will decrease risky behaviors such as excessive alcohol use.</td>
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</table>

<table>
<thead>
<tr>
<th>EDUCATIONAL PRODUCT</th>
<th>INPUTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class health fairs</td>
<td>Curriculum already developed or purchased:</td>
</tr>
<tr>
<td>Walk Nebraska website</td>
<td>ABCs for Good Health</td>
</tr>
<tr>
<td>N-Lighten Nebraska classes</td>
<td>MyPyramid lessons</td>
</tr>
<tr>
<td>ABCs/New You MOPS/HeadStart Worksites</td>
<td>You CAN!</td>
</tr>
<tr>
<td>N-Lighten NE Web courses</td>
<td>Florida – Pyramid lessons</td>
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<tr>
<td>Young Adult-Singles</td>
<td>Trained Staff on older adult issues</td>
</tr>
</tbody>
</table>

**OUTCOMES-IMPACT**

1. Young/Mid-age Adults will choose foods that match their MyPyramid recommendations.

2. Young/Mid-age Adults will implement a personal physical activity plan to increase the number of minutes spent in daily physical activity to recommended levels.

3. Young/Mid-age Adults will decrease risky behaviors such as excessive alcohol use.

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<thead>
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<tr>
<td>N-Lighten Nebraska classes</td>
<td>MyPyramid lessons</td>
</tr>
<tr>
<td>ABCs/New You MOPS/HeadStart Worksites</td>
<td>You CAN!</td>
</tr>
<tr>
<td>N-Lighten NE Web courses</td>
<td>Florida – Pyramid lessons</td>
</tr>
</tbody>
</table>

**OUTCOMES-IMPACT**

1. Young/Mid-age Adults will increase their knowledge of methods to incorporate healthful eating and feeding practices into their lifestyles.

2. Young/Mid-age Adults will increase their knowledge of ways to be physically active in their daily living.

3. Young/Mid-age Adults will identify the steps needed to take personal responsibility for their health.

4. Young/Mid-age Adults will increase their awareness of the relationship between healthy weights and general good health.

**OUTCOMES-IMPACT**

1. Incidence of chronic conditions related to poor diet, lack of physical activity and risky behaviors will be decreased.

2. Young/Mid-age Adults will choose foods that match their MyPyramid recommendations.

3. Young/Mid-age Adults will implement a personal physical activity plan to increase the number of minutes spent in daily physical activity to recommended levels.

<table>
<thead>
<tr>
<th>EDUCATIONAL PRODUCT</th>
<th>INPUTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>F&amp;V Express website</td>
<td>Curriculum to be purchased:</td>
</tr>
<tr>
<td>Web newsletter</td>
<td>“Staying Alive” curriculum for HS seniors and college freshmen</td>
</tr>
<tr>
<td>N-Lighten and “New You” in-service training on website</td>
<td>A New You</td>
</tr>
<tr>
<td>&amp; new curricula</td>
<td>In-service training on website</td>
</tr>
<tr>
<td>Computers/technology</td>
<td>Computers/technology</td>
</tr>
</tbody>
</table>

**OUTCOMES-IMPACT**

1. Incidence of chronic conditions related to poor diet, lack of physical activity and risky behaviors will be decreased.

2. Older adults will choose foods that match their MyPyramid recommendations.

3. Older adults will implement a personal physical activity plan to increase the number of minutes spent in daily physical activity to recommended levels.

4. Older adults will increase their knowledge of methods to incorporate healthful eating and feeding practices into their lifestyles.

5. Older adults will increase their knowledge of ways to be physically active in their daily living.

6. Older adults will identify the steps needed to take personal responsibility for their health.

**OUTCOMES-IMPACT**

1. Older adults will experience decreased medical expenditures due to reduced chronic disease.

2. Older adults will experience decreased medical expenditures due to reduced chronic disease.

3. Social and economic cost of high risk behaviors will be reduced.

4. Young/Mid-age Adults will increase their knowledge of ways to be physically active in their daily living.

5. Young/Mid-age Adults will increase their knowledge of methods to incorporate healthful eating and feeding practices into their lifestyles.

6. Young/Mid-age Adults will identify the steps needed to take personal responsibility for their health.

7. Young/Mid-age Adults will increase their awareness of the relationship between healthy weights and general good health.
### Education Programs – Nutrition, Health & Wellness

**Southeast Research & Extension Center**

<table>
<thead>
<tr>
<th>Long Term</th>
<th>Intermediate</th>
<th>Short Term</th>
<th>Who reached</th>
<th>What is done</th>
<th>Educational Product</th>
<th>What is Invested</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Incidence of chronic conditions related to poor diet, lack of physical activity and risky behaviors will be decreased.</td>
<td>1. Adolescents/teens will choose foods that match their MyPyramid recommendations.</td>
<td>Adolescents/Teens 4-H Athletes FCS FCCLA FFA Extracurricular/youth groups and clubs</td>
<td>Health and Career Fairs School Enrichment Leadership conventions/workshops Sports clinics/camps Hands-on technology Music/TV/internet and high tech messages Teachers, coaches; parents of adolescent; school wellness councils</td>
<td>Fast Foods Youth in Motion Web newsletter</td>
<td>In-service training on adolescent needs Computers/technology Website development</td>
<td></td>
</tr>
<tr>
<td>2. Social and economic cost of high risk behaviors will be reduced.</td>
<td>2. Young/Mid-age Adults will implement a personal physical activity plan to increase the number of minutes spent in daily physical activity to recommended levels.</td>
<td>1. Adolescents/teens will increase their knowledge of methods to incorporate healthful eating and feeding practices into their lifestyles.</td>
<td>1. Adolescents/teens will increase their knowledge of ways to be physically active in their daily living.</td>
<td></td>
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<tr>
<td></td>
<td>3. Young/Mid-age Adults will decrease risky behaviors such as excessive alcohol use.</td>
<td>3. Adolescents/teens will identify the steps needed to take personal responsibility for their health.</td>
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<tr>
<td></td>
<td></td>
<td>4. Adolescents/teens will increase their awareness of the relationship between health weights and general good health.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Fast Foods Youth in Motion Web newsletter</td>
<td>In-service training on adolescent needs Computers/technology Website development</td>
<td></td>
</tr>
<tr>
<td>2. Children will exhibit healthy weights.</td>
<td>1. Nebraska parents and caregivers will adopt healthy feeding practices and children will demonstrate those healthy eating practices.</td>
<td>Children- Toddler through pre-adolescent Youth groups: 4-H, Scouts MOPS Good Beginnings Group Child Care Professionals Parents</td>
<td>Health Fairs Kids Fairs Summer Day Camps Farm Safety Camps Promotion of ARF and VERB Classes in schools, youth groups, and parent settings</td>
<td>Nutrition Mission N=Lighten Kids Healthy Habits for Healthy Kids School Enrichment curricula</td>
<td>Curriculum already developed: Nutrition Mission ABCs for Healthy Kids Curriculum to be purchased: Dairy Council Staff Training and In-service</td>
<td></td>
</tr>
<tr>
<td>2. Social and economic cost of high risk behaviors will be reduced.</td>
<td>2. Children will increase the number of minutes spent in daily physical activity to recommended levels.</td>
<td>1. Parents/caregivers will increase their knowledge of methods to incorporate healthful eating and feeding practices into their children’s lifestyles.</td>
<td>1. Children will identify ways to be physically active each day.</td>
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<tr>
<td></td>
<td>3. Children will decrease time spent in sedentary activities such as TV watching, computer and video games.</td>
<td>2. Parents and caregivers will increase their awareness of the relationship between healthy weights in children and general good health.</td>
<td>2. Children will decrease time spent in sedentary activities such as TV watching, computer and video games.</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>Children- Toddler through pre-adolescent Youth groups: 4-H, Scouts MOPS Good Beginnings Group Child Care Professionals Parents</td>
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<td>Curriculum already developed: Nutrition Mission ABCs for Healthy Kids Curriculum to be purchased: Dairy Council Staff Training and In-service</td>
<td></td>
</tr>
</tbody>
</table>

**Indicators:**
- Minutes spent in physical activity
- Knowledge change: nutrition and physical activity; weight issues
- Changes in nutritional practices: fruit and vegetable; low-fat dairy intake; reduced high-calorie/low-nutrient beverages
- Minutes spent in sedentary behavior
- Intention or aspiration for change in physical activity/ nutrition behaviors
- Change in alcohol use/tobacco use or intention to make change???
Define – Overview

Overall good health of limited-resource families in southeastern Nebraskans is related to healthy weights, and reduction of high risk behaviors and risk factors of chronic diseases. Low-income families have a higher rate of obesity and chronic health diseases than the general public. The goal of the Food Stamp Nutrition Education Program (FSNEP) and Expanded Food and Nutrition Education Program (EFNEP) is to provide educational programs that increase the likelihood of all food stamp recipients making healthy food choices (within a limited budget) consistent with the most recent dietary advice as reflected in the Dietary Guidelines for Americans and the MyPyramid. The Nutrition Education Program (NEP) is in 17 Southeast Research and Extension District counties, based upon Nebraska Food Stamp demographics.

Discovery – Appreciate “The Best of What Is”

- Hands-on food preparation demonstrations for adults, youth and seniors create positive behavior changes as indicated by evaluation data.

- In 2004-2005, 1,416 of the 4,682 adults enrolled in the Nutrition Education Program (NEP) completed a minimum of six educational lessons. According to the federal Expanded Food and Nutrition Education Program (EFNEP) evaluation of graduates, 78% improved at least one food resource management skill, 82% improved one or more nutrition practices and 55% improved one or more food safety practices.

- Nutrition education was provided to 8,990 youth ages 3 to 18 and 800 adults age 60 and older in 2004-2005. Behavior changes were positive as measured by Nebraska NEP electronic evaluation for both youth and older adults.

- Adults and youth received nutrition education in their neighborhoods through 390 community groups in 2004-2005.

- Federal funding from FSNEP and EFNEP, combined with match from state and local sources, provides 20.8 full-time equivalent staff who provide educational programming, administrative and clerical support.

- The Nebraska Community Nutrition Partnership Council, coordinated by Nebraska NEP, provides a forum for strategic planning with over 20 statewide agencies, focusing on diet quality and food security.
Dream – Imagine “What Could Be”

- Clients will increase consumption of fruits, vegetables and milk and increase physical activity resulting in a decrease of childhood and adult obesity and chronic disease as outlined in the Food Stamp Nutrition Education Plan of Work (Appendix).

- Clients will have an adequate supply of nutritious foods which will last until the end of the month (Appendix).

- Clients will be able to access nutrition education through flexible program delivery including group and individual education, mail, phone and web-based programs (Appendix).

- New Americans will feel that their needs are being met through culturally appropriate education by culturally competent Extension professionals and partnering agencies.

Design – Determine “What Should Be” – Stakeholder Input

- Food Stamp Nutrition Education Program Plan of Work/Strategies Outline 2005-2006. (Appendix)

- Revise the Cooks Helper, Food Preparation Manual and Kid’s Cookbook, and develop web-based lessons.

- Research client needs and evaluate program impact through formal university research. This could include client focus groups and program evaluation as determined by federal, state and local NEP professionals.

Destiny – Create “What Will Be”


- NEP follows the nationally developed Community Nutrition Education (CNE) Logic Model which is located at http://www.ces-fsne.org/cne_lm_info.cfm.
The Community Nutrition Education (CNE) Logic Model, Version 2 – Overview

**Inputs**
- Activities
- Participation

**Outputs**

**Outcomes - Impact**
- Short Term
- Medium Term
- Long Term

**Assumptions**

**External Factors**

**Evaluation**
Focus - Collect Data - Analyze and Interpret - Report

The goal of community nutrition education is to provide educational programs and social marketing activities that increase the likelihood of people making healthy food choices consistent with the most recent dietary advice as reflected in the Dietary Guidelines for Americans and the Food Guidance System, with special attention to people with limited budgets.

Revision of the 2002 CNE Logic Model by a national program management and reporting workgroup with Land-Grant University, State Public Health, and CSREES/USDA representation.

Contact Person: Helen Chipman, National Coordinator, FSNE, CSREES/USDA: helen.chipman@ncslstate.edu

January 2009
NUTRITION, HEALTH & WELLNESS

FOOD SAFETY

Define – Overview

Every year, thousands of Nebraskans become ill from food borne illness. Some die. In the past six months, almost 1000 individuals became sick with Norovirus. Many of these were visitors from other states. Not only does food borne illness cost millions of dollars in healthcare costs each year, it may also cost the state tourism dollars. Ninety percent of the individuals teaching food safety in Nebraska are located in the Southeast District. Food safety training/awareness has become even more important with the emergence of avian influenza, increased food allergies and the threat of bioterrorism.

Discovery – Appreciate “The Best of What Is”

Current situation: current programs that work, successes, “what we do well”

- ServSafe, Employee ServSafe Impact—restaurants in Douglas County cannot achieve an excellent rating unless they meet a food safety training requirement. Managers in Lancaster County are required to all take food safety training, and 75% of their staff has to be trained yearly. Dodge County offers special recognition for restaurants that have managers taking ServSafe.

- Consumer outreach (media), phone calls, health fairs

- SuperSafeMark—A ServSafe course for supermarkets. In depth focus on delis, bakeries, and meat departments. We will be offering these classes later this summer.

- Resources for other professionals (RDs, local health departments, physicians, coaches, social workers)

- Developed and provided tools: power points, NRAEF ServSafe materials, Web Ex, other advanced technology methods of information dissemination. Using what is already available, and developing what is needed.

- Minimal duplication of services in a community
  - Providing education to restaurants while the local health departments provide code enforcements
  - Provide education to anyone with a food permit, while the Nebraska Restaurant Association provides us with discounted educational materials
  - Provide food safety training at local community colleges, while other teachers provide core classes
  - Provide consumer food safety advice, while hospitals provide clinical nutrition
Current resources: funds, facilities, tools, partnerships, etc.

- Majority of programs are funded by self-supporting fees (100% of ServSafe classes and SuperSafeMark classes)
- Relationship with the University Nutrition and Food Processing Departments, and their Specialists
- Some programs are grant/research funded—food safety research done with meals on wheels clients and their refrigerator temperatures. A small percentage now, but increasing yearly.
- Facilities vary from county to county, as do the functional set-ups
- Partnerships with local and regional health departments, Nebraska Restaurant Association, local community colleges, local hospitals, local groups for the aging and aged, schools, 4-H youth groups, Nebraska Department of Education, Nebraska Department of Health and Human Services, local and state agencies, local community groups, state commodity groups.

**Dream – Imagine “What Could Be”**

**Vision:** What we would like to have if resources were unlimited?

- Mandatory food safety classes in all high schools for students
- Utilizing current research to target high risk food service behaviors
- Incentives to train anyone who serves food to be trained in food safety
- High risk groups are pinpointed for extra food safety messages—educational materials for hospital patients (new parents, cancer patients, etc), nursing homes whose dietary aides work strictly with the elderly
- Being proactive instead of reactive for outbreaks—utilizing email lists and the internet to bring information quickly to all of the news sources across the state
- Classes on food allergies for the general public

**What do we know as professionals about emerging issues? What’s on the horizon?**

- Safe food supply – bioterrorism, natural disaster issues – for both consumers and food service settings. Includes food pantries, soup kitchen, concession stands, etc. Include more for food service managers on day to day surveillance.
- Avian bird flu
- Food allergies—classes for food service managers and their staff—evolve for day care providers, anyone serving food
- Antibiotic resistant food borne illnesses
- Genetic engineering/irradiation of foods and their safety and acceptance by the public
- Student recruitment involvement—presentations to high school students on the Culinology and Hospitality Management degrees
- Food safety for the baby boomer and REALLY elderly population
- Work with “big business” to partner in food safety training (Con Agra, USDA)
- Cover food safety expertise where it is missing in the state
Vision for programs: program delivery, education/teaching and research.
- To offer more programming via the internet
- More educational interaction with other professional/ourselves via blackboard

Vision for staff & professional development: training in emerging focus areas.
- Be able to send everyone teaching food safety to at least one national conference a year
- Being able to convey current research involving food safety knowledge as if becomes available
- Utilize a user-friendly Internet-based (staff access only) sharing site for program materials where each person could upload their own materials, saving program development time for program delivery time.

Vision for resources: funds, facilities, tools, partnerships, etc.
- Effective partnerships and collaborations with state and local agencies and health departments on food safety programs, possibly generating money for programming
- Money for food safety marketing—basic freebies (thermometers, magnets, posters); “advertising”—specific location targets—educational materials for FCS teachers/others to teach food safety. Generated from programming funds, grants or collaborations.
- Money to use for a possible Educator that would feed information to counties without a food safety Educator (like the Kansas person who emails answers to counties). Possible re-direction of a position or use of dietetic interns/grad students.
- Update old Extension educational materials as needed (EC’s, NebGuides, NebFacts)
- Use of technology to add resources that can be purchased by Extension Educators in other states.
**Design – Determine “What Should Be” – Stakeholder Input**

- Needs/Issues identification: describe the assessment process, who was involved, constituents, “building public support”. Working with our clientele through listening sessions to determine if we are meeting their needs. Utilize restaurant managers, coalition participants, professional membership groups, etc. Listening sessions and a survey of our clientele has already been done to focus the direction of programming.

- Location of Educators in the state necessitates the programming needs of their clientele. For example, a large Hispanic population in Omaha and Grand Island has caused us to offer food safety programming in Spanish. With more bi-lingual staff onboard now, we need to prepare more timely food safety programming. Food allergies and safe food handling are possible topics.

- Prioritize needs: describe the process and justification. What are the critical issues?
  - Getting the public, institutions (like hospitals and nursing homes) and press to consider us the “go to” people for food safety in the state. Continue to offer press releases and meet media needs.
  - Working with marketing/computer people from the outside to help with advertising and utilizing new technology. Pod casting, instructional videos on local website, more technology based information dissemination to meet the needs of many more than local participants.
Destiny – Create “What Will Be”

- Utilization of data that have been unused in the past—food borne illness data for the state from the office of communicable diseases.
- Continued research with Specialists to determine if we are meeting the needs of our clientele.
- Market to professionals specifically, so they are aware of the educational items we offer.
- Not reinventing the wheel. Food safety is just that. We will continue to provide food safety information, but we will send it out in different packages—based on the current needs of our clientele.

- We will continue to guide the media to provide unbiased information pertaining to bioterrorism and other emerging issues, such as the bird flu, to prevent unnecessary stockpiling and distress, as during Y2K.
- We will find new ways to teach food safety across the state, to areas not served by an Educator. We will also provide information that is cutting edge that other states will look to for guidance and use.
- Individuals and families in southeast Nebraska will show:
  - Decreased incidence of food borne illness
  - Improve their health and well being
  - Reduce the loss of income from individuals not being able to work due to food borne illness
  - Reduce the risk of economic distress to a restaurant, caterer or deli due to a food borne outbreak
  - Reduction in morbidity and mortality from food borne pathogens, to approach or meet goals described in *The Healthy People 2010* report.

- 50% of ServSafe participants will return to their establishments to train 75% of their staff.

- 75% of the public will indicate a change in behavior related to:
  - Practicing good personal hygiene including proper hand washing
  - Cooking foods adequately
  - Avoiding cross contamination
  - Keeping foods at safe temperatures

- 50% of individuals will gain awareness, knowledge and skills related to:
  - Practicing personal hygiene
  - Cooking food adequately
  - Avoiding cross contamination
  - Keeping foods at safe temperatures
  - Recognizing perishable foods
  - Emerging food safety issues such as irradiation, food allergies, and the Avian Bird Flu
  - Preventing bioterrorism

- Educators will offer workshops on food allergies for food service managers and employees. Participants in this class will learn what steps they need to take to satisfy legal requirements with the new Food Allergen Labeling and Consumer Protection Act which became effective on January 1, 2006. Twenty-four individuals participated in the workshops in the winter of 2006 and more are planned later in the year.
## Logic Model

### Nutrition, Health & Wellness: Food Safety

**SITUATION:** Providing a safe food supply is a goal of consumers, food handlers, food processors and food producers. Recent food borne illness outbreaks have brought food safety to the forefront for Nebraskans. Citizens have experienced food borne illnesses and related hospitalization, food service facilities and restaurants closed, processing facilities have been impacted by food safety issues, producers experience loss of consumer confidence of products as a result of breakdowns in the food safety chain. Emerging food safety issues (examples: bioterrorism, Avian flu) and new technologies impact the food safety chain. Food safety is a local, national and international issue that is interrelated and impacts Nebraska's citizens.

### ASSUMPTIONS:
1. Although CDC reports a decrease in most food borne illnesses, food borne illnesses due to improper food handling practices still occur.
2. Emerging issues impact the safety of our food supply (bioterrorism, avian flu, pandemic flu, emerging pathogens such as Norovirus, etc).
3. New food technologies (such as irradiation) change food processing parameters which in turn affect food safety.
4. CDC and FDA recognize the importance of education as an effective strategy in reducing food borne illness.
5. Extension can provide a major educational role in reducing food borne illness in Nebraska.

### ENVIRONMENT:
Extension has developed numerous partnerships within Nebraska and nationally and are recognized as educators of research based food safety educational programs.

<table>
<thead>
<tr>
<th>OUTCOMES-IMPACT</th>
<th>OUTPUTS</th>
<th>INPUTS</th>
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</thead>
<tbody>
<tr>
<td><strong>Long Term</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Reduce (eliminate) food borne illness</td>
<td>- incorporate food safety into food and nutrition programs developed for consumers</td>
<td>- Thermometer educational display</td>
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<tr>
<td></td>
<td></td>
<td>- need to develop educational program for senior citizens, meals-on-wheels recipients or caregivers/food providers of seniors</td>
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<tr>
<td><strong>Intermediate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 All food handlers (consumer, foodservice workers, food processors and livestock producers) will implement safe food handling practices for the reduction of food borne illnesses.</td>
<td>- ServSafe Curriculum</td>
<td></td>
</tr>
<tr>
<td>2. Meat processing and food service businesses will comply with food safety regulations and remain in business through the implementation of HACCP and other regulated food safety programs.</td>
<td>- HACCP Curriculum</td>
<td></td>
</tr>
<tr>
<td>3. Food service and food processing businesses will avoid shutdowns and economic loss due to food safety hazards or compliance with food safety regulations.</td>
<td>- HACCP Curriculum</td>
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<tr>
<td>4. Youth will adopt safe food handling practices and animal management practices to enhance food safety.</td>
<td>- Grant funded through NE Dept. of Ag</td>
<td></td>
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<tr>
<td><strong>Short Term</strong></td>
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<tr>
<td>1 All food handlers (consumers, foodservice workers, food processors and livestock producers) will increase their knowledge of safe food handling practices.</td>
<td>- ServSafe workshops</td>
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<tr>
<td>2. All food handlers will develop positive attitudes about the implementation of recommended practices (including HACCP).</td>
<td>- SuperSafeMark workshops</td>
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<tr>
<td>3. Youth will increase their knowledge of food handling practices and animal management practices to enhance food safety.</td>
<td>- HACCP for FoodService, School Lunch Managers, etc.</td>
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<tr>
<td>4. Extension Educators and food regulators (and other food safety professionals) will receive up-to-date food safety information.</td>
<td>- Temporary foodservice workshops</td>
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<tr>
<td><strong>Who reached</strong></td>
<td></td>
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</tr>
<tr>
<td>Consumers (home food handlers including youth and senior citizens)</td>
<td>- ServSafe Curriculum</td>
<td></td>
</tr>
<tr>
<td>Foodservice workers</td>
<td>- SuperSafeMark workshops</td>
<td></td>
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<tr>
<td>Food processors</td>
<td>- HACCP workshops (introductory and advanced)</td>
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<tr>
<td>Livestock producers</td>
<td>- Sanitation Workshops</td>
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</tr>
<tr>
<td>Youth Food inspectors/Regulators/Environmental Health Specialists and Extension Educators</td>
<td>- One-on-one consultations</td>
<td></td>
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<tr>
<td>- Financials</td>
<td>- Web sites</td>
<td></td>
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<tr>
<td>- Educational conference</td>
<td>- Educational conference</td>
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<tr>
<td>- In-services</td>
<td>- In-services</td>
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</tr>
</tbody>
</table>

**Consumers (home food handlers including youth and senior citizens)** - incorporate food safety into food and nutrition programs developed for consumers - news releases - web sites - Health fairs, Husker Harvest Days, etc. - exhibits, booths, etc. - extension publications - community lessons

**Foodservice workers** - ServSafe workshops - SuperSafeMark workshops - HACCP for FoodService, School Lunch Managers, etc.

**Food processors** - HACCP workshops (introductory and advanced)

**Livestock producers** - youth/school/4-H food safety programming

**Youth Food inspectors/Regulators/Environmental Health Specialists and Extension Educators** - Financials - educational conference - In-services

**What is done**

- extension publications
- extension educational programs
- news releases
- displays

**Educational Product**

- ServSafe Curriculum
- SuperSafeMark Curriculum
- HACCP for School Foodservice program
- Educational conference
- In-services

**What is invested**

- Thermometer educational display
- need to develop educational program for senior citizens, meals-on-wheels recipients or caregivers/food providers of seniors
- ServSafe Curriculum
- SuperSafeMark Curriculum
- HACCP for School Foodservice workshop developed
- Temporary foodservice educational programs
- Grant funded through NE Dept. of Ag
Define – Overview

Internet usage is increasing in Nebraska. This represents an opportunity for Extension to reach people with nutrition, health and food safety information via the Internet.

As recently as 2000, just 37 percent of households in Nebraska were using the Internet, placing Nebraska in the bottom third of states with Internet access. Over the course of four years, the percentage with Internet access jumped to more than 55 percent, placing Nebraska in the top half of states (37 percent in 2,000 vs. 55.4 percent in 2004) (Source: Nebraska's online usage rising, *Lincoln Journal Star, Sunday, December 11, 2005*).

At the same time, the number of people seeking diet, fitness and health-related information on the Internet is increasing. According to a May 17, 2005 report of the Pew Internet Life Project:

- Health searches expand in areas like diet, fitness and drug information.
- Eight in ten Internet users have looked online for health information.
- Speed of access and years of online experience are among the key trends that may influence online health searching.
  - 86 percent of Internet users with 6+ years of online experience have searched for information on at least one major health topic, compared to 66 percent of users with 2-3 years of online experience (November 2004 Survey).
  - 87 percent of Internet users with high-speed access at home have searched for at least one health topic vs. 72 percent of Internet users with dial-up access at home (November 2004 Survey).

"The typical health seeker has searched for 5 topics," according to the Pew Internet Life Project." About a third of health seekers have searched for 7 or more topics." Topics related to our Nutrition, Health & Food Safety priority issue areas were in the top 5 of the 16 topics covered in the Pew survey and increased significantly over the two years covered in the survey.

<table>
<thead>
<tr>
<th>Health Topic</th>
<th>Internet Users Who Have Searched for Info on It (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002 (%)</td>
</tr>
<tr>
<td>Specific disease or medical problem</td>
<td>63</td>
</tr>
<tr>
<td>Certain medical treatment or procedures</td>
<td>47</td>
</tr>
<tr>
<td>Diet, nutrition, vitamins or nutritional supplements</td>
<td>44</td>
</tr>
<tr>
<td>Exercise or fitness</td>
<td>36</td>
</tr>
<tr>
<td>Prescription or over-the counter drugs</td>
<td>34</td>
</tr>
</tbody>
</table>

Source: Pew Internet & American Life Project, December 2002 Survey (N=1,220); November 2004 Survey (N=537). Margin or error for comparing the two samples is +/- 4.6%. **Statistically significant differences are in bold type.**
The "health seeker" population as described by Pew is "characterized by a comparatively greater portion of people with college educations and Internet users with at least six years of online experience." Of note, is the fact that the age group using the Internet to seek health information the most is the 30-49 year old age group; the 65+ age group is using the Internet the least for health information. These differences and demographics regarding sex, age and type of Internet access are characterized in the following table.

<table>
<thead>
<tr>
<th>Demographic Group</th>
<th>Health Seekers (%)</th>
<th>Internet Population (%)</th>
<th>U.S. Population (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEX</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>54</td>
<td>52</td>
<td>51</td>
</tr>
<tr>
<td>Men</td>
<td>46</td>
<td>48</td>
<td>49</td>
</tr>
<tr>
<td>AGE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 18-29</td>
<td>24</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>Age 30-49</td>
<td>45</td>
<td>43</td>
<td>36</td>
</tr>
<tr>
<td>Age 50-64</td>
<td>25</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>Age 65+</td>
<td>6</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>EDUCATION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than a high school education</td>
<td>5</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>High school diploma</td>
<td>22</td>
<td>25</td>
<td>33</td>
</tr>
<tr>
<td>Some college education</td>
<td>31</td>
<td>30</td>
<td>23</td>
</tr>
<tr>
<td>College degree or more</td>
<td>39</td>
<td>36</td>
<td>25</td>
</tr>
<tr>
<td>ONLINE EXPERIENCE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 2 years of online experience</td>
<td>4</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>2-3 years of online experience</td>
<td>10</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>4-5 years of online experience</td>
<td>24</td>
<td>23</td>
<td>14</td>
</tr>
<tr>
<td>6+ years of online experience</td>
<td>60</td>
<td>55</td>
<td>32</td>
</tr>
<tr>
<td>TYPE OF INTERNET CONNECTION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dial-up connection at home</td>
<td>44</td>
<td>48</td>
<td>28</td>
</tr>
<tr>
<td>Broadband connection at home</td>
<td>53</td>
<td>49</td>
<td>29</td>
</tr>
</tbody>
</table>

Source: Pew Internet & American Life Project, November 2004 Survey (N=914). Margin or error the entire sample is +/- 4%. Margins of error for comparison of subgroups are higher.

The 2004 ConsumerStyles survey by Porter Novelli, a communications firm with expertise in social marketing and the source of all phases of research (under contract by USDA) for the new MyPyramid Food Guidance System revealed the Internet was a top media source for health and nutrition information. They found usage for this purpose didn't vary greatly among lower-income consumers and the general adult population. For example:

- 40 percent of low-income women aged 20 to 40 uses the Internet for health information daily to monthly.
- 51 percent of low-income women aged 20 to 40 turn most often to the Internet, compared with 47 percent of all U.S. adults.

In introducing the 2005 MyPyramid Food Guidance System, USDA chose to go with an Internet-based version for its initial introduction to the general public. This was due to the high number of
people they found having Internet access at home, through school or at libraries. Eric Hentges, PhD, Executive Director, USDA Center for Nutrition Policy and Promotion, provides the following statistics:

- 75 percent of U.S. households (204.3 million Americans) have Internet access at home (Source: February 2004 Nielsen/NetRatings Survey)
- 99 percent of public schools had Internet access in 2002 (Source: Department of Education's National Center for Education Statistics).
- 95 percent of public libraries provide access to the Internet (Source: American Library Association).

Discovery – Appreciate “The Best of What Is”

Counties in SREC District have had an Internet presence since 1996. County Web sites provide such offerings as Web articles, listservs, downloadable materials (PowerPoints, fact sheets, table tents, etc.) and helpful links. Statistics have been analyzed for one county where the Internet plays a major role in program delivery. Feedback from online forms indicates people are utilizing and benefiting from the Extension materials made available through the Internet.

Following is both a tabular summary and a graphical summary of the number of visits in relation to unique sites served and total visits. The University uses a program by Wusage to analyze Web stats. Following are descriptions for the two items described in this paper in relation to monthly stats (http://www.hostingmanual.net/general/wusage.shtml):

- **Unique sites served:** Every visitor to a Web site has a unique IP number associated with his or her Internet connection. The "unique sites served" figure represents the total number of those unique visitor IP#s that have visited a site (during a specified time period.)

- **Total visits:** This is the number of times a visitor "clicked in" to a Web site. It will be larger than "Unique sites served" if the same visitor (with the same unique IP#) clicked in more than once.
Recently, data were analyzed on the utilization of MyPyramid presentations offered to other educators through the Internet and was accepted as an extension EARS report, “University of Nebraska Among First in Nation to Develop MyPyramid Presentations for Use by Educators.” (Appendix F). During the first five months the materials were on the Web, 12,034 actual downloads of the PowerPoints were recorded; 613 feedback responses, which represented about 5 percent of the total downloads, were completed via the Web. These 613 responses indicated a minimum savings of 8,462 hours of PowerPoint development time (equivalent to about four years, based on fifty 40-hour weeks/year or an average of 13.8 hours per individual response). As this represented only a segment of potential users, total hours saved could be much higher. Though it wasn't possible to collect data on the overall number of people taught by using these materials, the total outreach was likely multiplied many times through sharing. Comments indicated Educators both saved development time that could be spent helping clientele in other ways and were prepared to give programs that otherwise might not have been given.

These findings indicate Extension serves an important role not only in direct face-to-face programming, but in helping other Educators deliver successful programs. People trust the research-based, un-biased information provided by Extension. A presentation on making materials available through the Internet, “Impact of Using the Internet to Share Local Solutions to Global Issues” has been accepted for a peer-reviewed poster session at the 2006 national Society for Nutrition Education meeting.

<table>
<thead>
<tr>
<th>Month</th>
<th>Jun ‘05</th>
<th>Jul ‘05</th>
<th>Aug ‘05</th>
<th>Sep ‘05</th>
<th>Oct ‘05</th>
<th>Nov ‘05</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique sites served</td>
<td>45,060</td>
<td>45,507</td>
<td>63,420</td>
<td>71,418</td>
<td>89,360</td>
<td>87,970</td>
</tr>
<tr>
<td>Total visits</td>
<td>73,358</td>
<td>67,589</td>
<td>94,508</td>
<td>106,356</td>
<td>125,802</td>
<td>130,727</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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<td>125,802</td>
<td>130,727</td>
</tr>
</tbody>
</table>
In another project, SREC Educators partnered with the Nebraska State Department of Education and the Lincoln-Lancaster Health Department in developing a PowerPoint on food safety for teens and tweens: Cold Pizza for Breakfast — MyPyramid Food Safety Tips for Teens and Tweens who Cook. In the first month the PowerPoint was made available to others on the Internet, over 1,000 downloads were recorded during the first month.

Two Educators from our District were asked to present on this PowerPoint and a PowerPoint on eating disorders at the 2006 state meeting of Family and Consumer Scientists. "Cold Pizza" also was selected through peer review to be presented at the national "Reaching At-Risk Audiences and Today's Other Food Safety Challenges" conference (Denver, CO; September 27, 29, 2006). A member of our team was selected to present a peer-reviewed poster session on technology, Impact of Using the Internet to Share Local Solutions to Global Issues, with Extension Specialist Linda Boeckner at the 2006 National Society for Nutrition Education meeting.

Our team recently learned a PowerPoint, Spending Your Calorie Salary: Tips for Using MyPyramid, was the National 2nd Place Winner in the 2006 Educational Technology category of the National Extension Association of Family & Consumer Sciences.

Our District has been involved with invited presentations on the new MyPyramid, due to our offerings on the Web. Presentations have been given to the Nebraska Dietetic Association, West Virginia Extension and Wyoming Extension.

An additional Internet-based program in which members of our District Nutrition, Health and Food Safety team have been actively involved is “Walk Nebraska.” (http://www.walknebraska.org) This Web site encourages walkers to complete a “virtual walk” on five different trails in the State of Nebraska. At key points along each trail “walkers” receive helpful tips to learn more about how to take care of themselves nutritionally, how to protect themselves from the sun, or how to use their physical activity to their best benefit. As they reach trail milestones, they see notable Nebraska landmarks and learn a little more about our beautiful state. Data is not available at this writing on this project.
Dream – Imagine “What Could Be”

Increasing the use of the Internet and computer technologies to share and deliver programs and educational materials is our dream. Potential benefits identified previously by our SREC team and shared with stakeholders during a SREC VIP tour and as part of a panel presentation at the 2005 national meeting of the Society for Nutrition Education by one of our team members follow:

### Benefits of Using the Internet and Computer Technologies for Sharing/Delivering Nutrition, Health & Food Safety Programming

<table>
<thead>
<tr>
<th>Saves money!</th>
<th>Saves time</th>
<th>Promotes higher quality programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Postage</td>
<td>• Quicker turn-around time</td>
<td>• Easy to obtain feedback from</td>
</tr>
<tr>
<td>• Envelopes</td>
<td>• Surveys</td>
<td>end-users</td>
</tr>
<tr>
<td>• Labor costs</td>
<td>• Distributing materials</td>
<td>• Can keep materials up-to-date</td>
</tr>
</tbody>
</table>

Stuffing envelopes

Delivering materials

Answering questions

Making handouts

• Reproducing materials

• Available 24/7/365

• Surveys

• Distributing materials

• Easy to work collaboratively

• E-mail

• Web pages

• Stores information on Web

• PDF files

• Commonly used links

• PowerPoints

• Easy to obtain feedback from end-users

• Can keep materials up-to-date

• People use “nice-looking” copy vs. copy of a copy of a copy ...

• Targets specific groups

Design – Determine “What Should Be” – Stakeholder Input

An Internet-based survey, described in the Introduction to the Nutrition, Health and Food Safety section, included the question: “What types of Internet-based resources and technologies from Extension would be most useful to YOU, as someone working in nutrition, health and food safety?” The technological section of the survey was developed in cooperation with Extension Specialist Linda Boeckner, PhD.

As prioritized in the survey, here is how our potential partners rated the usefulness of various technological offerings from Extension. This survey will be used as the basis for training for Extension staff in our District for utilizing technology in program delivery in the immediate future. Future surveys will be conducted as additional technology delivery systems become available to Extension.
Preferred Types of Internet-based Resources and Technologies Desired from Extension by Potential End-Users

(n = 60: respondents could check more than one response)

**Destiny – Create “What Will Be”**

We are aggressively pursuing opportunities to seek opportunities and update our skills in using Internet- and computer-based technologies as part of our program delivery. Plans have already been set in motion to offer staff training on developing and using PowerPoints at the 2006 Nebraska Extension NCEA conference. A dialogue has begun within our District about offering a password-protected Web site, perhaps utilizing BlackBoard technology, to share technology-related resources electronically. The findings of the SREC Educational Technology Team will be utilized in future planning. The updating of Extension Websites in accordance the University's strategy for branding offers an opportunity to reflect on becoming the best that we can be! Details and evaluation strategies are presented in the accompanying logic model.

**Key Indicators for Educational Programs in Teaching Through Technology**

The key indicators for our educational progress are:

- **Survey of extension staff in the area of Nutrition, Health & Food Safety as to increased use of technology**
  
  Indicator of whether extension staff are taking advantage of technology in delivering programs to clientele.

- **Monitor number of clientele utilizing programs offered through technology**
  - Other educators using our programs in their programs with clientele
  - Direct use of programs by clientele

  Indicates if we are being successful in using technology to reach clientele.
**Logic Model:** Extension staff will increase their knowledge and implementation of Internet-based technology to access information, develop materials, and deliver research-based programs to clientele

<table>
<thead>
<tr>
<th>Long Term</th>
<th>Intermediate</th>
<th>Short term</th>
<th>Who</th>
<th>What</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>● The incidence of illnesses and chronic conditions of Nebraskans with a food-related component will decrease (i.e. heart disease, diabetes, cancer, foodborne illness)</td>
<td>● 50% (8 out of a total of 17) of Extension staff in area of Nutrition, Health &amp; Food Safety in our District will report increased use of technology in teaching clientele by the next District review in 5 years</td>
<td>● 75% (13 out of a total of 17) of Extension staff in the area of Nutrition, Health &amp; Food Safety in our District will receive training for using technology to deliver programs by the next District review in 5 years</td>
<td>● Extension staff in the area of Nutrition, Health &amp; Food Safety</td>
<td>● County Websites</td>
<td>● Online curriculum (i.e. NEP, ABC’s for Health)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>● Professional audiences (i.e. foodservice personnel, family &amp; consumer science teachers, dietitians, early childcare professionals, teachers, etc.)</td>
<td>● E-newsletters (Food Reflections, Cook It Quick)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>● Consumer adult and youth audiences</td>
<td>● WebEx</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>● Limited income families and children through the Nutrition Education Program</td>
<td>● Non-credit courses</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>● Listservs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>● State NEP Website</td>
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<td></td>
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</tr>
</tbody>
</table>

**Assumptions**
1. The number of Extension clientele using technology will increase
2. Nutrition, health and food safety will continue to be important issues as they are both related to health care costs (which are rising) and because food is a common denominator—everyone needs to eat.

**Environment (External Factors)**
Tight budgets at the federal, state and community levels will make it increasingly important to leverage our outreach through the use of technology. At the same time, as more people enter the labor force and we become a 24/7/365 society, technology—such as Internet-based delivery of information—helps us deliver more programs to more people around the clock than traditional “come-to-meeting” programs alone. Technology also helps us share programs with other Educators who can help teach to important issues.

**Evaluation Plan**
1. Survey of extension staff in the area of Nutrition, Health & Food Safety as to increased use of technology. 2. Monitor number of clientele utilizing programs offered through technology: (1) other educators using our programs in their programs with clientele and (2) Direct use of programs by clientele.

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Southeast Research & Extension Center
Teaching consumers and industry professionals to sustain and protect natural resources for indoor and outdoor environments is what Extension Educators of the Community & Residential Environment (CRE) action team have done for Nebraskans for many decades. Whether it is teaching pest control operators how to safely protect a residence from termite invasion; professional landscapers and homeowners how to create sustainable landscapes; residence dwellers to recognize potential indoor air hazards and mitigation procedures; or acreage owners to safely manage a home well and septic system, learners gain knowledge and build skills through a variety of teaching formats including workshops, newsletters/articles, mass media, web sites and hands-on learning experiences.

**Define – Overview**

Within the CRE action team are four subgroups- Water Supply and Waste Management (WW), Environmental Horticulture (EH), Community Integrated Pest Management (CIPM), and Healthy Homes (HH). These four subgroups develop and present programming to a wide variety of audiences throughout the Southeast District and beyond, with the goal of protecting natural resources for both indoor and outdoor environments. Urban and suburban areas are impaired (through heavy metals in the soil, older housing stock, and a lack of adequate community greenspaces); these impairments are caused by a variety of sources. Addressing these impairments will ensure a safer environment for future generations.

The Southeast District has 52 impaired stream segments and 45 impaired lakes/impounded water bodies as designated by the Nebraska Department of Environmental Quality. Recreational use of lakes, streams and rivers has increased over time with the rise in population, especially in the metropolitan areas in the District. The Southeast District has a diverse agricultural component – both irrigated and non-irrigated crop production, plus beef, dairy, swine and poultry operations. Total Maximum Daily Load (TMDLs) standards for different pollutants will be established for
several waterbodies in the Southeast District in the next few years. Toxic algae blooms have occurred in many private lakes in the Southeast District, often due to high phosphorus levels from fertilizers and the runoff of livestock operations.

The underlying value of community greenspaces has been researched by several sources (see specific citations in the appendix) and shown to reduce crime, increase property values, contribute to community economic viability, and provide economic benefits to the homeowner, including reduced utility costs, through the strategic placement of shade trees. Buildings with high levels of greenery had 52% fewer total crimes, including 48% fewer property crimes and 56% fewer violent crimes. Workers without a nearby greenspace reported 23% more occurrences of illness in the prior six months compared with workers who could see trees and lawns. Workers who could see trees and lawns found their jobs more challenging, had greater enthusiasm, were more patient and less easily frustrated. Reducing the runoff of fertilizers and pesticides from managed landscapes, through environmental horticulture programming, prevents the degradation of surface and groundwater quality.

A majority of Nebraska’s population resides in the Southeast District, where high population in many cases intensifies environmental problems. Over 80% of Nebraska Real Estate Associates are located in the Southeast District, with a need for education on termites and other wood destroying organisms, plus drinking water wells and septic system management. Older housing stock occurs throughout the District, and can contribute to lead poisoning in young children, plus asthma and allergy problems in people of all ages. Finally, an EPA Superfund lead cleanup site exists in north Omaha.

A high density of small acreages exist in SREC, particularly around large populations centers. In Douglas, Lancaster, Sarpy and Washington counties alone there are over 18,515 acreage households. Acreage owners, many of whom have never lived in the country before, have a great need for education teaching them how to manage a rural environment.

Tremendous demand for CRE education is received from the general public at Extension offices across the state, but only 17 Educators & Assistants focus in CRE statewide. The Southeast District is home to a majority - 13 staff. They provide support to Extension Educators across the state through the use of mass media, newsletters, listservs and web sites.

CRE Extension Educators constantly seek emerging issues where the resources of the University of Nebraska system can be utilized to make a difference in the lives of Nebraskans. Southeast District Extension faculty and staff teach clientele to access information, use and manage resources wisely, thereby enriching the overall quality of their lives.

**Discovery – Appreciate “The Best of What Is”**

A. Our strength in CRE Water Supply & Waste Management is formation of the NE Onsite Waste Water Association and onsite wastewater training for professionals including pumper, installer and inspector certification training. Onsite Waste Water programming for homeowners featured system operation and maintenance education, as well as cost share protocols for NRD & NRCS installations and NPDES regulations. An Onsite Wastewater Curriculum-Based Education grant for $162,000 was received to support this programming.

Drinking Water Programming is also an area of strength, focusing on Water Wellness I - water testing and water treatment; Water Wellness II - well plugging, water testing, and wellhead protection. Private Water Well Initiative: Arsenic and Uranium in Drinking Water training for 39 Extension Personnel at in-service training in high-risk counties; at the NE Well Drillers Short Course
for 300 Nebraska Well Drillers, and at an American Water Works Association/Extension/ HHSS sponsored seminar for 38 engineers, water operators, and water utility managers. An Extension Initiative Private Water Supplies in Nebraska grant for $7,620 was received to support these programming efforts.

Water publications that have been written or revised during the last five years include- 9 drinking water treatment, 6 drinking water contaminant, 1 wellhead protection, 2 drinking water testing, 13 onsite wastewater treatment and 2 watersheds.

Surface Water Quality & Watershed education is also an area of strength and has included the formation of watershed councils at Cunningham, Standing Bear & Zorinsky lakes, Duck Creek, Shell Creek. A grant for $15,000 was received from the Nebraska Department of Environmental Quality (NDEQ) for Zorinsky Lake Watershed Information and Education programming. NDEQ also supplies salary funds for a surface water quality Extension Educator, who works closely with the watershed councils and community leaders to address erosion, sediment control and runoff. From 2001-2005 educational seminars on erosion and sediment control have been held for construction industry professionals. From 2001-2004, eighteen community lakes throughout the state have been refurbished as part of the Community Lake Enhancement and Restoration (CLEAR) Program. Finally, during 2004-2005, toxic blue-green algae monitoring and programming network was established with over 450 sample kits requested.

The Zorinsky Lake watershed

B. Our strength in CRE Environmental Horticulture is commercial professional training and curriculum development, commercial pesticide applicator training, ‘ProHort’, commercial horticulture clinics and Garden Center Updates, and support for Nebraska Turf Conference. Commercial grower programming, providing production and pest diagnosis assistance, for strawberry, grape, onion and vegetable growers is another area of strength. A grant for $13,000 was awarded for onion and alternative crop development. Finally, Master Gardener volunteer training takes place in Dodge, Douglas, Cass, Gage, Hall, Jefferson, Lancaster, Saline, Sarpy and Saunders counties. In 2004 & 2005, 696 volunteers went through Master Gardener training and provided 30,699 hours of volunteer service. A $10,000 At Risk Youth Gardening grant was received to support youth programming efforts and a $3,800 grant was received for in-service training and materials development.

UNL Extension has provided support for many new grape growers throughout SREC.

Education Programs – Community & Residential Environment 2e. 3
Southeast Research & Extension Center
Drought conditions in 2000, 2002-2004 led to increased demand for drought programming and growing acceptance of more sustainable landscape plants, such as ornamental grasses and buffalograss. Water conservation programming included ‘Make Every Drop Count’, water utility cooperative programming and participation in the Nebraska Climate Assessment and Response Committee.

C. Our strength in CRE Community Integrated Pest Management is termite education, including workshops for homeowners and hands-on training for termite control applicators. A variety of integrated pest management publications are available, often both in print and web versions, including Cockroach Control Manual, Termite Handbook for Homeowners, Termite Handbook for Termite Applicators, Integrated Pest Management in Schools: A How To Guide. IPM in Schools, a multifaceted program with a handbook to support training, pilot schools and web site is another strong success for the CIPM subgroup. A grant for $10,000 was received for a Pesticide Usage Survey that served as the first step in evaluating current pesticide usage in and around schools.

D. Our strength in CRE Healthy Homes is the Midwest Healthy Indoor Environment Symposium, a professional conference for builders, contractors, remodelers, residential housing managers, real estate licensees, inspectors, HVAC, radon and other housing professionals providing education about indoor air quality issues, including radon, mold, and energy efficiency. This program is developed jointly between the University Housing and Environmental Specialist and Extension.

Programming not anticipated in the last 5-year review that has successfully been addressed by CRE staff includes lead poisoning prevention education following the identification of a lead superfund site in Omaha. ‘Living Safely with Lead’ programming was implemented and delivered, and educational materials developed (brochures, CD-ROM, infant bibs with educational hang-tags, toddler t-shirts with educational hang-tags, growth charts, etc). Grants for these projects, including $187,000 Urban Lead and Groundwater Protection and $25,000 USDA CSREES Lead-Based Training grant, were received to support programming. Staff also facilitated development of public policy regarding lead issues.

E. Joint programming utilizing members of all subgroups includes public education events, such as Festival of Color (2000), FOC Landscape Design Workshop (2001), Husker Harvest Days, Landscape Connections (2002 & 2003); youth programming including Earth Wellness, Kids College, Garbology and WaterWorks; and educational displays like sustainable landscapes, backyard composting demonstrations and erosion prevention.
Programming for acreage owners is another area of strength and a joint effort by many CRE members. Strong growth of acreage developments in the urban/rural interface areas of Nebraska’s expanding population centers is producing an ever-growing audience interested in a wide range of issues associated with "rural" living. The Acreage Owners Expo, an annual, one-day symposium was held from 1999-2003. In 2004, a new style of programming, Acreage Insights- Rural Living Clinic, was instituted in response to requests for more in-depth education sessions. The Acreage & Small Farm Insights web site offers acreage owners a central location for acreage information and upcoming programs. Through online evaluations, 43% of web users list electronic newsletters as a preferred method of accessing acreage information so in 2003 the acreage team initiated a monthly, email newsletter, Acreage eNews, as a method of distance education delivery.

Each of these programming efforts benefit from the expertise of University campus Specialists; SREC Educators work in close cooperation with these Specialists to maximize program outreach and effectiveness.

Dream – Imagine “What Could Be”

Southeast District CRE Educators will continue to be “stretched” to provide programming well beyond the District boundaries. Making use of innovative educational delivery methods, such as Blackboard and WebEx/Breeze software, and polycom technology, as well as mass media, newsletters, listservs and web sites will allow us to reach larger audiences.

Water conservation and water quality is an area of great concern to many clientele. The Center for Applied Rural Innovation’s 2004 Rural Poll entitled “Nebraska’s Water: Perceptions and Priorities” found that 31% of rural Nebraskans believe the quality of their water supply has deteriorated during the past ten years. Steadily increasing population levels throughout the Southeast District and the potential for continued drought conditions will intensify these issues in years to come.

In the area of drinking water, our dream is for expanded, focused educational programming on wellhead protection/risk management, risk assessment, and safe drinking water BMPs adoption. Emphasis will be placed on current and emerging contaminants of highest priority. Planning and
action related to public water supplies will occur on the wellhead and watershed level. Private well users will make informed decisions related to the management of their wellhead and water supply. Attention will be directed toward the study of social, economic, environmental, or other factors that result in the adoption of sustainable environmental behavior change related to safe drinking water. Partnerships with state and local agencies, and industry will be enhanced; resulting in unified messages to consumers, efficient utilization of the state's expertise, and leveraging of limited resources.

In the area of wastewater management, our dream is to expand in-depth, curriculum-based education for industry professionals and agency representatives. Training will move beyond traditional septic and residential lagoon treatment systems, into the area of alternative systems. Alternative systems are one of the primary options that may be implemented in the rather large geographic areas of Nebraska not ideally suited for traditional systems. Alternative system risk management will be achieved through the implementation of EPA's Voluntary National Guidelines for Management of Onsite and Clustered Wastewater Treatment Systems. End user (homeowner) education will continue to be a high priority. A move toward alternative systems will most likely result in revisions to state onsite regulations. Current partnerships with state and local agencies, and industry will continue; resulting in unified messages, efficient utilization of the state's expertise, and leveraging of limited resources.

In the area of surface water, our dream is for sustained, focused educational programming on watershed best management practices and the reduction of high risk practices, such as conventional tillage vs. no-till, furrow irrigation vs. low pressure irrigations systems, etc. Expanded partnerships with state and local agencies and their financial support for development of toxic algae demonstrations, watershed education and stormwater management training materials will help further our efforts. Expanded use of University trained volunteers will broaden our ability to monitor the water quality of lakes & streams. Programming could be developed to teach Junior & Senior high school students and their instructors how to use water quality monitoring equipment. Their results could then be reported to an online database for recording and comparing water quality results statewide. With the continued importance of protecting surface water quality, grant funding by Nebraska Department of Environmental Quality for additional staff is a real possibility. The refocusing of staff from a county programming perspective, to a watershed perspective is an intriguing possibility as well.

B. Our dream for CRE Environmental Horticulture programming is to explore the use of distance educational delivery that allows a small number of Educators to reach large audiences, while still maintaining a core set of programs offered via a traditional classroom setting. Growing interest in alternative crops will lead to the refocusing of an existing Extension Educator toward the area of nuts, woody florals or fruits and vegetable production. Through program user fees, industry support and grant funding, regional research farms could be established for variety trials of fruits, vegetables and ornamentals, as well as landscape demonstration areas. Programming will emphasize preserving water quality and alternative crops, as well as water and energy conservation in the landscape. Long term, through sustainable landscape programming, community/neighborhood landscape planning will be encouraged instead of individual planning. Support to extend current grant-funded projects will be sought for inner city greenspace demonstrations and maintenance of urban water quality, i.e. Metropolitan Utilities District.
C. Our dream for CRE Community Integrated Pest Management programming is to continue our hands-on/in-depth presentation of termite education for professional pest managers, teaching them the proper use of more advanced termite inspection equipment. Partnerships with state and local government agencies will result in new state certification requirements for home inspectors working in the area of wood destroying insects and expanded Extension programming will be available, enabling them to comply with these new certification requirements. The pest control industry will provide support for these programming efforts. As urban center populations grow, an increased demand for CIPM programming will generate increased demonstration research by University Specialists that will be available for use during professional pest manager training; for example, comparing termiticides and their effectiveness.

D. Home energy efficiency is an emerging issue that will grow in importance over the next several years and our dream for CRE Healthy Homes programming is to provide additional education to homeowners, builders, contractors, remodelers, home inspectors, HVAC and other housing professionals. State certification requirements will be created for home inspectors in the areas of mold, radon and indoor air quality. Industry support and grants will enable the creation of a demonstration teaching facility for indoor air quality issues. Increasing population within the Southeast District will increase demand for Healthy Homes programming.

The team will work with researchers and other institutions to find funding opportunities from foundations and governmental agencies that will provide dollars for additional staff and resources to deliver targeted programs. Our team is committed to working with the departments on print and web resources to support programming efforts. Instead of adding additional staff through tax dollars, the possibility of an existing Educator changing to a part time grant writing focus will also be considered.

Design – Determine “What Should Be” – Stakeholder Input

All members of the SREC Community & Residential Environment team participated in assessing clientele needs and determining the team’s priority issues for the next five years. Issues raised by each individual group above can be found in the appendix. Information was gathered from the following sources:

- Nebraska Public Health Departments
- Nebraska Health and Human Services
- Indoor Air Quality Facts
- Nebraska Rural Poll
- Leslie Kline Lucas study
- IANR Listening sessions
- Pesticide Safety Education Program Data
- Review of published research and other literature regarding the psychological, social, environmental an economic benefits of CRE
An infestation of brown recluse spiders was found in an elementary school through the IPM in Schools program

CRE’s priority goal for programming in the next five years will be natural resource protection for indoor and outdoor environments. Within this goal several areas of priority programming exist. To achieve these goals it is important that print and/or web-based resources are available for customers and clientele. Areas of priority programming include the following (listed in no particular order):

- Increasing energy conservation, and reducing energy costs
- IPM education in sensitive areas, such as schools
- Acceptance of sustainable landscape plants and adapted plant selection
- Urban food production
- Termite Education for Professionals and Homeowners
- Urban Pest Management Conference
- Pesticide Safety Education Programs
- Protection of water quality and quantity
- Private drinking water quality; including arsenic, uranium, VOCs, nitrate, and others
- Onsite wastewater treatment system management; including design, installation, inspection, and operation and maintenance

**Destiny – Create “What Will Be”**

Ongoing programming, as listed in the “Appreciate ‘The Best of What Is’” section above, will be continued into the next five year period. Resources for these programs are listed in the Input section of the logic model, along with short, intermediate and long term outcomes. These programs are currently being evaluated using after program, follow-up and on line surveys, and/or pre & post testing.

We will work with Specialists to develop specific pieces of technology that will be transferred to clientele and request assistance in teaching new methodologies. Cooperation with business leaders, governmental agencies and other partners will be expanded to secure funding, bring new perspectives and increase effectiveness of overall outreach efforts.

Main Programming Areas for the next five years:
- Water Supply & Waste Management
- Environmental Horticulture
- Community Integrated Pest Management
- Healthy Homes
Water supply and waste management subgroup have reaffirmed that their issues, priorities, and plan of action were on target. It was emphasized that nitrate in groundwater continues to be a problem and should receive priority attention even though it is not a “new” or “emerging” issue. In addition, it was suggested that additional emphasis should be placed on homeowners’ understanding of groundwater, non-point source pollution, stormwater management and water quality protection at the wellhead and watershed level. It was suggested that partnerships with NRDs could be enhanced, with the agencies working to identify common priorities toward which they might work together.

Environmental horticulture subgroup has identified the protection of natural resources, especially water, from pollution by runoff of landscape pesticides and chemicals as a high priority. One way to achieve this is through the continued education of homeowners on the selection and use of adapted plant materials, and the creation of sustainable landscapes. Education of green industry workers on best management practices for landscape plants is also important, as increasing numbers of these workers are Hispanic or other nationalities. Energy conservation through landscape plantings is also important as energy costs continue to rise.

Community Integrated Pest Management subgroup has identified priority issues including the promotion of low toxic pest management methods to manage pests while reducing exposure of toxic chemicals to the environment, people and their pets. Citizens most vulnerable to effects of chemicals include children and the elderly, who are often exposed without their knowledge through treatments in schools, daycare centers, retirement and nursing homes. Educating pest control professionals as well as facilities managers will replace routine applications with lower toxic IPM methods. A second priority is to improve the quality of termite treatments by teaching homeowners and termite treatment applicators how proper treatments should be done.

Partnerships with agencies and institutions will be critical to the success of these programs.

Healthy Homes subgroup has identified energy as a critical issue for the next five years. They will develop programming with other work groups or action teams to present a holistic view of energy usage and conservation for housing, and other indoor air quality issues. Collaboration with groups like the acreage team, and their Acreage Insights- Rural Living Clinics, will reach new audiences. Work will continue is the areas of lead, radon and mold.
New programming for 2006-2011

1. Title- Private Drinking Water Initiative
   - Staff- Sharon Skipton, in partnership with University Biological Systems Engineering
   - Description- Professionals, Extension Educators, and private well owners in high-risk areas will increase knowledge and apply best management practices to reduce the risk associated with contaminants in drinking water. Next five year emphasis will be on arsenic and uranium - two contaminants that occur naturally in groundwater at unsafe levels; and nitrate and VOCs - two contaminants that occur in groundwater at unsafe levels due to human actions. In addition, attention will be given to emerging issues including endocrine disrupters, calcium and magnesium at minimum levels, etc.
   - Goal- Increase clientele knowledge and implementation of best management practices associated with drinking water contaminant management.
   - Impact- Reduce the risk associated with contaminants in drinking water.
   - Timeline- Begin in 2006

2. Title- Onsite Wastewater Initiative
   - Staff- Sharon Skipton, in partnership with University Biological Systems Engineering
   - Description- Professionals and rural residents will increase knowledge and apply onsite wastewater best management practices to protect the environment and human health. Next five year emphasis will include a homeowner education in high-risk watersheds and environmentally vulnerable areas; and industry professional CEU, certification, and endorsement training.
   - Goal- Increase clientele knowledge and application of onsite wastewater best management practices regarding onsite waste water management.
   - Impact- Protect the environment and human health
   - Timeline- Begin in 2006

3. Title- Statewide Training/Workshop for Watershed Councils
   - Staff- Steve Tonn
   - Goal- To provide leadership and advocacy skills training for watershed council members.
   - Impact- Watershed councils will have an increased understanding of the effects of erosion on natural resources

4. Title- Sustainable Landscape Management Series
   - Staff- Sarah Browning, John Fech, in partnership with University Agronomy & Horticulture
   - Description- Series of classroom and hands-on workshops addressing landscape management topics utilizing current resource investments at public demonstration gardens.
   - Goal- To increase homeowners’ knowledge of sustainable landscape management techniques.
   - Impact- Increased water conservation & selection of adapted plant materials.
   - Timeline- Begin in 2006
   - Evaluation- Post program evaluations, one-on-one interviews

5. Title: IPM in and Around Sensitive Environments: Schools, Daycare Centers, Retirement Homes, Nursing Homes, Homes

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Education Programs – Community & Residential Environment  2e. 10
Southeast Research & Extension Center
- **Staff:** Barb Ogg, Dennis Ferraro, in partnership with the University Pesticide Safety Education Program

- **Description:** Educate administrators, custodians, homeowners, and pest management professionals (PMPs) about low-toxic methods of controlling pests using a multitude of delivery systems: workshops, written materials and internet.

- **Goal:** Promote low-toxic methods of pest control in and around sensitive environments, like schools, daycare centers, nursing homes and retirement centers and homes where potential exposure is greatest to children and elderly who are most sensitive to chemicals.

- **Impact:** Persons making decisions about pest management will choose to manage pests using less toxic methods reducing exposure to sensitive individuals.

- **Timeline:** 2006

- **Evaluation:** Post program evaluations, one-on-one interviews
<table>
<thead>
<tr>
<th>Long Term- Conditions</th>
<th>Intermediate- Action</th>
<th>Short Term- Learning</th>
<th>Who</th>
<th>Outputs</th>
<th>Product</th>
<th>Inputs</th>
</tr>
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<tbody>
<tr>
<td>Water Supply &amp; Waste Management</td>
<td>• Quality of water resources will be preserved or improved to a level appropriate for its intended end use. Water resources will be managed for environmental, social, and financial sustainability.</td>
<td>• Water quality testing  • Proper water treatment  • Wellhead protection  • Inspection &amp; replacement of waste handling systems  • Reduced erosion</td>
<td>Well drillers, waste water management professionals, and homeowners will have an increased understanding of potential water contaminants and health, environmental, or financial risks associated with each.  • Watershed councils will have an increased understanding of the effects of erosion on natural resources</td>
<td>Mass media public outreach  Workshops &amp; conferences  • Online Waste Water Programming  Acreage Insights- Rural Living Clinics  Hands-on Termite School  Living Safely with Lead  Demonstration tours  Special events  Web-based distance education</td>
<td>Newspaper, radio and TV  Electronic newsletters  Web sites  DVD/Video series  Publications  Various curricula</td>
<td></td>
</tr>
<tr>
<td>Environmental Horticulture</td>
<td>• Properly managed landscapes will increase property values and provide energy savings for commercial and residential dwellers. Managed landscapes will provide users with increased social benefits, including stress reduction, faster hospital recovery times, improved self esteem, poverty reduction and crime reduction.  • Increased use of sustainable landscape management techniques to reduce the potential for natural resource degradation  • Reduction in landscape waste sent to landfills  • Improved quality &amp; quantity of community greenspaces Lower inputs- water, chemicals, labor &amp; dollars- by homeowners, industry professionals and growers</td>
<td>• Commercial horticulture professionals and homeowners will have an increased ability to recognize poor landscape management techniques  • They will also have an increased knowledge of potential for landscape chemicals to degrade surface and ground water</td>
<td>Acreage owners  Commercial horticulture professionals  Commercial growers</td>
<td></td>
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<tr>
<td>Community Integrated Pest Management</td>
<td>• Homeowners will live in a non-toxic environment. School facilities will provide youth with a safe learning environment.  • Increased ability to recognize insect &amp; wildlife pest problems  • Increased knowledge and use of effective, low toxic pest management practices in home gardens, landscapes and residences, schools and other sensitive locations  • Increased use of non- and low toxic methods of controlling pests  • Reduced non-target exposure to toxic chemicals in and around the home</td>
<td>• Pest control professionals and building managers for sensitive environments will agree that it is best to use nontoxic or low toxic methods first  • Low income families will have an increased understanding of the sources of indoor air contaminants and their possible health risks</td>
<td>Pest control professionals  School nurses and custodians</td>
<td></td>
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<td></td>
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<tr>
<td>Healthy Homes</td>
<td>• Indoor environments will be free of contaminants and other health risks.  • Increased ability to identify IAQ problems  • IAQ contaminant testing for radon, mold, lead, and various asthma triggers  • Reduced lead levels in abatement areas</td>
<td>• Low income families will have an increased understanding of the sources of indoor air contaminants and their possible health risks</td>
<td>Low income families  Audiences for all subgroups- Extension staff  Homeowners and small property dwellers</td>
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</tbody>
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Education Programs – Community & Residential Environment 2e.12
Southeast Research & Extension Center
Assumptions:
1. The majority of Nebraska’s population resides in the Southeast district. High population in many cases intensifies environmental problems.
2. Older housing stock occurs throughout the District, and can contribute towards lead poisoning in young children, asthma and allergy problems in people of all ages.
3. An EPA Superfund lead cleanup site exists in north Omaha.
4. A high density of small acreages exists in SREC, particularly around the large population centers of Omaha, Lincoln and Grand Island.
5. SREC water utilities tend to implement a “water growth” philosophy, rather than a “water conservation” philosophy to meet current and future needs.
6. A large number of state policy makers reside in the Southeast District, bringing our programming and activities under close scrutiny.
7. 80.2% of the total Realtors in Nebraska are found in SE District counties

Environment & External Factors:
1. Fee-based programming must be cost-effective and deliver tangible value to participants.
2. Flexibility in delivery is required to reach widest possible audience.
3. Only a small number of Extension faculty focus in horticulture, indoor air quality, pest management and water education, providing programming that extends well beyond SREC District boundaries.

Evaluation Plan: After program, follow-up and on line surveys. Pre & post testing or evaluation.
Remember yesterday’s values  
Live today’s dreams  
Invest in tomorrow…*

“We live in communities of leadership plenty—plenty of people with untapped talents who can use them to make their communities better places to live, work, and raise families. Strengthening this leadership potential is about establishing new ways of thinking and new patterns of behavior in a community—rather than hoping that if we just wait long enough or interview enough candidates, the right person will come along with all the answers.” (McDavid & Wise, 2004, p.1)

Community leadership is an essential component of positive, sustainable community change (Pew Partnership for Civic Change, 2006). The State of Nebraska continues to change; therefore, effective community and leadership development is an essential to the State of Nebraska’s future.

**Define – Overview**

One of the major changes currently occurring in Nebraska is a population shift from rural to more urban areas, resulting in diverse impact within the Southeast District. According to a report published by the Joslyn Castle Institute for Sustainable Communities (n.d), a part of the very eastern edge Nebraska, which constitutes a portion of the Flatwater Metroplex, will be home to more than 2 million people in less than 50 years if current population trends continue (Figure 1). If the projections regarding the Flatwater Metroplex are accurate, the population of the Southeast District will continue to grow.

![Figure 1: Map of the Flatwater Metroplex](image)
According to Dr. Randy Cantrell from the University of Nebraska Rural Initiative, Nebraska’s population grew by 8.4% during the 1990’s (personal communication, September 2005). The eastern region of Nebraska has the majority of metropolitan and large trade counties in the state, and most of the population growth occurred in these areas (Figure 2).

![Figure 2: Map of Nebraska demonstrating growing communities from 1990-2000 and county population density in 2000 (Map from “Depopulation: A Closer Look at Nebraska’s Counties and Communities,” 2005)](image)

However, population changes are further complicated by the fact that some rural counties in the Southeast District are declining. According to Cantrell, population losses were more commonly seen within the open country than within communities (Figure 3). Communities in the Great Plains and Midwest that were once healthy, vibrant and flourishing are now facing issues such as aging, a decreasing population base, shrinking per capita income and a lack of employment opportunities as well as underemployment. These issues have the potential to negatively impact communities and can lead to food insecurity and unstable living conditions for many individuals, including children (North Central Regional Center for Rural Development, 2005).

![Figure 3: Map demonstrating the percent change in Nebraska’s population changes from 1999-2000](image)
Citizens living in both urban and rural areas of Nebraska are concerned about the vitality of their communities and want to obtain viable employment in places where they choose to live (Institute of Agriculture & Natural Resources, 2003). Average wage and salary earnings throughout Nebraska vary by county (Figure 4). The 2004 American Community Survey revealed that Nebraska’s median household income was $41,657, which is below the U.S. Median household income of $44,684 (United States Census Bureau, 2005). Communities located in counties with increasing numbers of wage and salary jobs were more likely to see increases in the proportion of workers with full-time employment (Cantrell, R., personal communication, September 2005).

A map of Nebraska (Figure 5), displays the percentage of Nebraska’s population that traveled outside of their county to their place of employment in 2000 as well as a number of the four-lane highways and the portion of Interstate I-80 that goes through the Southeast District. Communities must determine how they can survive with commuting populations, especially when those traveling to work may not have as much commitment to “shop at home” and become involved in the community in which they reside.

Nebraska’s infrastructure (built capital as explained below) also contributes to the complexity of growth, vitality and sustainability. One interviewed constituent stated that the “demographics of economy will play strongly in the next 10 – 20 years. Communities along I-80 and major four-lane highways or close proximity to larger communities will have a greater advantage. The driving time will still be an hour, but that hour distance may not be (driving) to Lincoln” (or Omaha).

Population changes have increased the need to bridge the urban/rural interface. Citizens have expressed concern that Nebraska is becoming a state that is two generations away from the farm. Interviews with administrators in the Extension Division of the University of Nebraska–Lincoln
revealed a need for increased understanding, appreciation and collaboration between rural and urban regions around issues of mutual concern (E.A. Birnstihl and D. Hay, personal communication, December 4, 2004). Specific areas of mutual concern include:

- Legislative representation (30+ out of the 49 Legislators are from urban areas)
- Policy challenges in the areas of agriculture and natural resources
- Policy and funding challenges for education
- Water quality and quantity

Nebraska must address the need to bridge the urban/rural interface while investing in its citizens in order to thrive in the current knowledge economy, which is characterized by technology, change and innovation (Brown & Eisenhardt, 1998). According to Flora, Emery, Fey and Bregendahl (n.d) research on entrepreneurial communities (Flora & Flora, 2004) indicates that successful community and economic development are dependent on investing in all of the Community Capitals which include human, social, built, financial, natural, cultural and political capital (Figure 6).

The Community Resource Development (CRD) team in the Southeast District is helping address a number of Nebraska’s needs by helping individuals, organizations and communities develop their leadership capacity and technological capabilities as well as their human capital (knowledge, skills and abilities), social capital (networks and relationships) and financial (economic) capital.
Discovery – Appreciate “The Best of What Is”

Extension Educators within the Southeast District follow the state-wide Community Resource Development Action Team’s Mission: “Facilitating the mobilization of human, social and economic capital for individuals, businesses and communities in Nebraska.”

The Southeast Extension CRD team’s goal is to “Enhance the economic, community and neighborhood vitalization efforts to create more opportunities for future generations, improve the quality of life and to attract talented and educated people to build their lives in Nebraska.” To achieve this goal, the state-wide CRD team has established two objectives focusing on “We Teach”:

**Objective One, Human & Social Capital Objective:** “Community vitality will increase after local leaders enhance their human and social capital following participation in experiential leadership training delivered with community partners.”

- Various leadership programs are offered for diverse audiences in this District. LeadershipPlenty (LP), a research-based curriculum designed to develop and empower community leaders, is a key component of leadership training. Impacts of the LeadershipPlenty program include, (but are not limited to) one team winning the statewide NCIP (Nebraska Community Improvement Program) leadership award, as well as significant increases in community leadership participation of class graduates in roles as school board, hospital foundation, museum board members, city council and mayor. One class graduate, after realizing their county did not have a lodging tax, felt empowered to research the process and present the concept to the local governing board for consideration. She openly credits her participation in the LeadershipPlenty program for giving her the confidence to move ahead with this project. Due to her work, the county recently created a lodging tax which will regularly collect dollars to help fund tourism efforts in the future. At several locations a team of graduates from the current class plan and facilitate the next year’s class.

In addition to Leadership programming, other Social Capital impacts resulting from CRD team’s collaborative efforts with local, regional and state agencies/organizations include but are not limited to:

- Community public policy forums related to regional rural water issues and health system assessments.
- Asset mapping, community visioning and strategic planning in both rural and urban neighborhoods resulting in comprehensive plan input and preservation activities.
- Urban coalitions and facilitation that help neighborhoods to solve problems and build relationships with the University have impacts related to parenting education, community food pantries, community gardens, substance abuse prevention, environmental and health education, and the creation of community centers for immigrants.
- “Youth-Adult Partnership/Youth In Governance” and Nebraska’s Military 4-H Liaison are two examples of programming of Extension multi-team efforts (Youth and Family).

**Objective Two, Economic & Financial Capital Objective:** Individuals, businesses and communities will enhance economic and financial capital by participating in educational programs delivered with community partners.
Through collaborative programming, the CRD team provides high-quality programming including:

- E-commerce, information technology and alternative business ideas, for entrepreneurs, businesses, communities and local governments resulting in increased technology applications to enhance communication and profits.
- Multi-cultural training includes working with diverse audiences such as Employer/Employee Forums for Hispanic workers and businesses resulting in business operations changed, bilingual signs, bilingual school announcements and extended business service hours.
- Entrepreneurship training offered to local Nebraska businesses (including the Kimmel Center), as well as training international faculty from Tajikistan University resulting in sound business practices to increase profits.

Dream – Imagine “What Could Be”

In research sponsored by USDA/CSREES and funded by an NRI grants, data were collected from informants in 134 small rural communities randomly selected in nine North Central states. Results of this Midwest region study on housing and rural community vitality (S. Crull, C. Cook, M. Bruin, B. Yust, M. Shelley, S., Laux, J. Memken, S. Niemeyer, & B. J. White 2005) indicated that social capital was the most powerful indicator of community vitality, followed by businesses and housing inventory change, services, and county vitality.

The CRD team has the potential to assist Nebraska in its community and economic development initiatives by addressing the need to first develop human infrastructure, which is a vital component of successful and sustainable communities. According to Ayers, Barefield, Beaulier, Clark et al. (2005), this concept can be demonstrated by the Layer Cake Model (Figure 7) developed by Dr. Mark Peterson at the University of Arkansas.

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**Figure 7: Layer Cake Model**

The driving force is a shared vision of the community that taps all available resources to become reality.
The importance of building human infrastructure is further supported the Economic Development Pyramid (Darling & Peterson, 2002). The economic development pyramid (Figure 8) demonstrates the importance of supporting economic development through enhanced leadership capacity as well as entrepreneurial activities such as creativity, innovation, change and networking strategies. Extension professionals in the Southeast District will provide opportunities to assist individuals and communities develop leadership capacity, human and social capital as well as their economic potential.

![Economic Development Pyramid](image)

Figure 8: Economic Development Pyramid

Emerging issues result in the CRD Team’s vision of Building Leadership Capacity – Bridging Communities – Vitalizing Nebraska, as the basis of future programming:

- **Leadership** - As a result of educational programming for local government public officials, civic organizations, profits, non-profits and youth, rural/urban communities will be strengthened and vitalized through an enlarged pool of visionary and effective leaders.
  - The pool of leadership from diverse cultural backgrounds will drive decision making and volunteerism will increase.
  - Community leaders and public officials will use trends, demographics, and visioning to plan for futures, and policy development.
  - Self-determined regions will bridge Nebraska communities resulting in economic and political advancement.

- **Entrepreneurial Culture** – Develop an entrepreneurial spirit in Nebraska by helping individuals, organizations and communities through education and development.
  - Enhancing entrepreneurial thinking, behavior and activities.
  - Embracing change and innovation.
  - Reduce negative barriers.
  - Create support networks for businesses and organizations.
  - Increase collaboration with local and regional partnerships.
• **Information Technology** – With increased tele-literacy skills and information technology understanding, Nebraskans will demand broadband for their communities and increase IT application adoption.
  - Businesses will learn the value of using technology as a tool to expand their potential markets by enrolling in e-Business, e-Knowledge, e-Ag and other classes offered by Extension Educators
  - With affordable broadband, businesses will integrate Information Technology in their practices resulting in profits for businesses and high wages for employees/owners.
  - There will be an increased interaction with local governments as counties/towns provide secure Websites and provide information and IT applications in timely fashion.
  - In addition to educational programs delivered in person, Extension would expand its reach by providing educational opportunities via the Internet resources (including e-Extension), pod casting, and other technology opportunities
  - An “Alumni Network” of educational programming would be developed, maintained and utilized with appropriate technologies and database systems. The Alumni Network would be designed to improve impact reporting, communication with clientele and have the ability to market programs and resources to individuals who have previously participated in our educational efforts.

• **Business Development** - Both rural and urban economies will be diverse and thriving, resulting young families moving to Nebraska to live in safe and thriving communities.
  - Create new, expand or vitalize Businesses through educational programming, including Nebraska’s businesses will realize the importance to utilize resources within the state. Community vitalization efforts will include business transition as main-street business persons get ready to retire (and utilizing tools such as Bizfind.)
  - Encourage entrepreneurship. Work with communities to develop business incubators and/or business support networks for entrepreneurs and small businesses.
  - Broker knowledge for increased access to capital for businesses, including
    - Venture capital
    - Angel investors
    - Loans from banks, Small Business Administration, Rural Enterprise Assistance Project (REAP) and grants

In addition to program development, the CRD team’s vision for Professional Development and Programming Resources include, but are not limited to:

- Identification and participation in professional societies, educational opportunities, conferences and publications that extension professionals can target for professional development to increase knowledge base and skills, resulting in cutting-edge, high-quality programming/impact reporting based on current research and future trends.
- Increased teamwork and collaborative networks within and outside the University (including with the North Central Region) to provide an enriched foundation for grant funding potential and research based programming.
- Systematic approach by the Extension system to increase Specialist and focused Educator FTE in this area, as retirements move through the system in the next five years.
- The development and sustainability of programming, travel, technology and other related expenses will be provided through partnerships, grants, user fees and other
streams of revenue. Using information technology, info-preneurial endeavors could be designed to generate revenue by selling information, knowledge and related products via the Web.

- Access to ongoing technological expertise and support, including the appropriate software, hardware and programming will support technology-based endeavors.
- Access to marketing expertise will effectively and efficiently market programs.

**Design – Determine “What Should Be” – Stakeholder Input**

Nebraska does not always see itself as a unit of common interests. In many situations, there is no shared vision, which results in competition between communities, regions and local governments. The lack of a shared vision, cohesiveness and togetherness has the potential to threaten the future growth of Nebraska (Joslyn Castle Institute for Sustainable Communities, n.d).

The University must work to connect with rural communities and to develop the leadership capacity and critical thinking skills of Nebraskans. According to a recent Community Resource Development (CRD) Constituent Survey, the University must strive to, “make people more confident and competent in tackling critical issues without waiting for outside help.” (Vogt, 2006). To thrive, communities will have to change and become increasingly entrepreneurial.

Communities must work to both keep and attract young people. Results of the 2004 Nebraska Rural Poll confirm that younger persons are more likely than older person to be planning to move from their community next year (Allen, Vogt & Cantrell, 2004). Strategies designed to attract and retain young people in communities must be developed and implemented in order to avoid the out migration of youth from communities. For example, older residents must accept ideas from the younger generations and give them meaningful leadership responsibilities (David Koh, personal communication, 2005). Generations must cooperate and work together to shape the future of their communities. Promotion of "Youth-Adult Partnerships/Youth in Governance" and "Intergenerational Dialogues" can provide youth with a voice in their community, therefore giving them more potential as a future stakeholder in the community.

Communities will have to look “within.” (The National Center for Small Communities). Communities cannot count on business recruitment or outside investment to achieve success. Individuals must work together to create a vision, set priorities and work toward goals established by the community and/or region. (The National Center for Small Communities, 2003). Individuals and communities must become increasingly entrepreneurial in order to improve their chances success in the 21st Century.

The term “entrepreneurial” is used to describe individuals who are innovative, creative and have the ability to keep up with change in societies and organizations that are evolving at an increasingly rapid pace (O’Connor & Fiol, 2002). Research indicates that entrepreneurial individuals are even more important in the current knowledge economy (Brown & Eisenhardt, 1998). Individuals must be able to adapt to rapid change in order to advance themselves, their places of employment and their own societies and cultures. Further, countries as well as organizations can benefit by being able to identify individuals possessing entrepreneurial characteristics (Koh, 1996).

Communities must develop a positive entrepreneurial atmosphere that supports visioning, innovation, creativity and calculated risk taking. Communities must also invest in and leverage their human, social and economic capital in order to survive and thrive in the knowledge economy. The CRD Action team in the Southeast District will focus on developing the entrepreneurial spirit of
individuals, communities and organizations by Building Leadership Capacity - Bridging Communities - Vitalizing Nebraska.

However, the pace of Extension collaboration and programming is determined by the community. Extension personnel must cooperate with communities to implement the necessary educational programming and to establish outcomes and indicators. Further, community speed and eagerness may not be at the speed that practitioners desire to work in the community. (Cantrell, July, 2004)

**Destiny – Create “What Will Be”**

Remember yesterday’s values
Live today’s dreams
Invest in tomorrow’s families

--- Community Slogan of Bennet, Nebraska
(developed through the 2006 visioning process
conducted by members of the CRD Action Team)

“Community development is really all about developing relationships.”(Cantrell, July 2004)
Effective programming and collaborative efforts with agency partners and other Extension programming teams will take time and an investment of many other resources in order to create “what will be.”

- To address emerging issues, new programming will be developed. As presented in the Logic Model, Southeast District, Extension staff will focus on Building Leadership Capacity – Bridging Communities – Vitalizing Nebraska, with *Building Leadership Capacity* as the basis of future programming.

- Identification and participation in professional societies, educational opportunities, conferences and publications that extension staff can target for professional development to increase knowledge base and skills, resulting in cutting-edge, high-quality programming and impact reporting based on current research and future trends.

- Enriching program development and research capabilities with external collaborators, federal, state, and regional partners and other Universities that are responsive to the 21st century environment.

- Continue to strengthen teamwork and collaborative networks within the University system wide, including but not limited to
  - Department of Agricultural Economics
  - Department of Agricultural Leadership and Education
  - Center for Applied Rural Innovation
  - Nebraska Rural Initiative
  - University of Nebraska–Omaha College of Community Service and Public Affairs
  - University of Nebraska–Kearney
  - Public Policy Center
  - Nebraska Center for Entrepreneurship
  - College of Architecture

- Encourage a systematic approach by the Extension system to allocate Specialist and focused Educator FTE in the area of Community Resource Development as retirements move through the system in the next five years.
The development and sustainability of programming, travel, technology and other related expenses will be provided through partnerships, grants, user fees and other streams of revenue. Using Information technology, info-preneurial endeavors could be designed to generate revenue by selling information, knowledge and related products via the Web.

Access ongoing technological expertise and support, including the appropriate software, hardware and programming will support technology-based endeavors.

Access to marketing expertise designed to effectively market programs.

References


Logic Model – Building Leadership – Bridging Communities – Vitalizing Nebraska

SITUATION: Population in eastern Nebraska urban and near urban communities of the state is increasing, including diverse populations. Yet in the western edges of the District, especially in open country, de-population concerns are expressed – along with concerns about communities losing economic vitality. Concern about rural/urban disconnect has been expressed by influential decision makers. Many communities are expressing a need for leadership development. Some community development specialists suggest that building the human infrastructure of the community will result in economic vitality. Information technology is having an effect on communities, business and governments – yet issues related to connection and adoption of practices can be found.

<table>
<thead>
<tr>
<th>OUTCOMES - IMPACT</th>
<th>OUTPUTS</th>
<th>INPUTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>— Increased civic engagement resulting in increased community vigor and vitality</td>
<td>— Participants will utilize skills to identify and solve community issues.</td>
<td>— Youth</td>
</tr>
<tr>
<td>— Improved decision/policy making at the community, regional and state levels will result in wise use of resources and increase capacity.</td>
<td>— Participants will be able to identify resources and collaborate to carry out projects related to community and economic development in their community or region.</td>
<td>— Community members/potential leaders.</td>
</tr>
<tr>
<td>— Increased successful businesses lead to more job opportunities and improved economic conditions in rural and undeserved communities.</td>
<td>— Learners will understand and make decisions regarding demographic, cultural / social changes, meta-trends and globalization impact rural businesses and communities</td>
<td>— Leaders/decision makers.</td>
</tr>
<tr>
<td>— Communities embrace entrepreneurship and change.</td>
<td>— There will be an improved capacity for policy making, issues will be clarified, researched and analyzed, with alternative solutions formulated and prioritized.</td>
<td>— Elected officials, and policy makers</td>
</tr>
<tr>
<td>— Youth are empowered to remain/return to Nebraska</td>
<td>— Entrepreneurs, small businesses and local governments will use IT and telecommunication approaches and applications</td>
<td>—Entrepreneurs and small businesses/industry</td>
</tr>
<tr>
<td>— Increased use of high speed internet throughout all aspects of community and regions in the District leading to economic gains.</td>
<td>— Businesses and regions understand the benefit of networking and have established effective networks for community change.</td>
<td>— Practitioners</td>
</tr>
<tr>
<td>— Communities and businesses are connected into beneficial networks.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>— Community leaders and governmental officials become a continuous learning community of the University of Nebraska.</td>
<td></td>
<td></td>
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</tbody>
</table>
**ASSUMPTIONS:**
- To provide impact, UN-L Extension will need to collaborate as a team with partners within and outside the University.
- Extension staff need to strengthen professional skills to provide exemplary education.
- Local leadership varies. It takes time to assess the leadership within the community and local networks that have developed.
- The pace of programming will be determined by the culture and readiness of the community. Extension staff will need to accommodate the community pace.
- Regional networking of communities may be hampered by “historical” competition between communities.
- Program impact may require a long time before progress is demonstrated.
- Rural communities lag behind in “high-growth” entrepreneur businesses. Citizens need to be educated about the benefits of entrepreneurship and must be willing to change and invest – to become entrepreneurial communities.
- Successful entrepreneurs keep their wealth in their communities instead of sending it away (compared to outside corporations).
- Customers/citizens are at the point of wanting access to business and governmental applications 24/7/365. Tight budgets will bring increasing need to leverage outreach through technology.
- UN-L Extension Educators will help Nebraskans enhance their community and economic ability to compete in a knowledge-based economy.

**ENVIRONMENTAL & EXTERNAL FACTORS:**
- According to the 2004 Rural Poll, residents living in or near the larger communities see a change in their community for the better.
- Younger persons are more likely than older people to plan on moving from their community.
- There is an expanding number of “footloose retirees”
- Tight budgets in all sectors (business, government and communities)
- Changing demographics
- Information explosion, reliance on technology and rapid pace of change seems to be out racing the ability of current systems to supply a skilled workforce
- Utilizing technology (leveling the playing field) can be an opportunity for global collaboration if companies are creative and workers possess skills. A level playing field may also bring about changing demographics, downsizing, outsourcing, global competition, and the need for more worker/business owner education
- Farming and manufacturing communities adjacent to metros seem to grow into bedroom exurbs as the metro area spreads outward.
- There seems to be an emerging trend in growth of dynamic metro-exurbs, while poorer, stagnant rural areas can be found in the remainder of the state.

**EVALUATION PLAN:**

<table>
<thead>
<tr>
<th>Programmatic indicators</th>
<th>Number of courses, workshops, participants will be included in database. Short term evaluation will include pre-post tests to determine knowledge and skills gained.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business/governmental indicators</td>
<td>Change in business application knowledge base and best practice implications (% change based on evaluation) Changes in use of business plans, decision making tools, management tools, marketing plans, IT applications, use of capital investments, and in profit margins/wealth gained. Determine number of business start-ups, expansion and failures. Changes in IT% usage for businesses and government.</td>
</tr>
<tr>
<td>Community indicators</td>
<td>Number of new viable business support networks and changes in community interactions levels of businesses/entrepreneurs. Increase in regional efforts to collaborate on business efforts and market region. Positive change will be seen as a result of agency/community visioning will be recorded. Number of communities to invest in IT infrastructure.</td>
</tr>
</tbody>
</table>
The Southeast Research and Extension Center District is a 28 county unit in southeast Nebraska serving over 13,000 4-H youth members of organized community clubs. This number represents over 50% of Nebraska’s club membership. In addition to traditional club members, over 44,000 youth in the Southeast District are engaged in school enrichment, and over 600 youth in after-school programs. Over 51,000 4-Hers are involved in various 4-H programs in the Southeast District.

The District also thrives on the support from adult and youth volunteers. The willingness of parents and volunteers to help deliver 4-H programs to youth is an important component of 4-H. We look to our volunteers not only for program support, but to serve as advocates for the 4-H program. Sixty percent of the state’s enrolled 4-H volunteers, totaling over 10,000, are located in the Southeast District.

As a result of the 4-H youth development programs, youth feel connected to others. Their self confidence and decision making skills increase. They feel their lives have meaning and purpose. These feelings and skills will result in lower juvenile risk behaviors and stronger ties to the community.

We acknowledge and applaud that 4-H youth development educational programs create supportive environments for youth and adults from diverse backgrounds and experiences. Ethnically and economically diverse audiences are being reached through extensive school enrichment, after school and other out-of-school programs.

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As the University of Nebraska–Lincoln Extension looks to the future and its work with the next generation of youth, it is helpful to review the characteristics of the Millennials. These individuals were born after 1981 and are the first generation to grow up surrounded by digital media. According to Claire Raines (Managing Millennials 2002) the focus before the turn of the millennium shifted to children and families and continues today. Millennials like teamwork and parental involvement. They are one of the busiest generations and are accustomed to tight schedules, leaving little unstructured free time. The new generation experiences more daily interaction with other ethnicities and cultures than ever before. They have witnessed terrorism, heroism and patriotism in conjunction with the Murrah federal building bombing, Columbine High School and the terrorist attack of September 11, 2001.

Without question, 4-H educational programs for the future will need to have a large technology component. This generation has not experienced a time when computers were not available. In a study conducted by Dr. Bradley Barker, Science and Technology 4-H Specialist for Extension, over 96% of Nebraska 4-H families have access to computers in their homes and 92% of the families that responded to the study have internet access. With the National 4-H mission mandates including science, engineering and technology as a focus, the youth development team recognizes that technology will need to be incorporated and utilized for the delivery of educational programs to future generations. Science and technology have been identified as important new life skills of the 21st century.

The direction for the Southeast District’s youth development program was determined through research and focus groups of 4-H members, parents, volunteers and extension staff. Three focus areas were identified:

- Professional Development for 4-H Volunteers and Staff - to recruit and train more volunteers and extension staff to work with parents and 4-H youth. In-depth professional development opportunities will need to be planned and implemented.
- Recognition of 4-H Youth and Volunteers - to recruit and retain youth and volunteers in 4-H, a more inclusive recognition program for 4-H will be developed and piloted.
- Emphasis on Team-Based Educational Programs for 4-H Youth - to effectively work with the millennial generation, team-related activities and programs will be designed and implemented for 4-H members.
Define – Overview

Volunteering has always been a valued means of self-expression, a route to personal and community development, and vital to the success of the 4-H program.

Volunteers are essential partners in creating a positive environment by focusing on the strengths of youth and providing positive ways for youth to meet their four basic needs: 1) Youth need to feel and believe they are capable and experience success at solving problems and meeting challenges to develop their self confidence. 2) Youth need to know they are cared about by others and feel a sense of connection to others in the group. 3) They need to know they are able to influence people and events through decision-making and action. 4) Youth need to feel their lives have meaning and purpose. It’s clear that youth whose needs are met in positive ways are likely to grow into good citizens and contributing members of their families and communities. (Culp, Ken, Ph. D., Types of 4-H Volunteers, Fact Sheet, 2004).

Discovery – Appreciate “The Best of What Is”

Volunteers are essential to the continued growth and development of a successful 4-H program. Volunteers serve as judges, club or project leaders, chaperones, resource persons or promoters. Through the Independent Sector research, it has been found that volunteers across the nation give an average of 182 hours per year, with a dollar value listed as $18.04 per hour. In 2005, the total dollar value of volunteer time for our nation is estimated at $280 billion (www.independentsector.org/programs/research/volunteer_time.html).

The following are examples of professional development opportunities for Nebraska 4-H volunteers and staff:

- face-to-face (workshop, one-on-one, hands-on)
- satellite
- online, self-paced
- web-based, interactive
Training topics for professional development of staff and volunteers:

- youth development
- life skill development
- program management
- risk management
- leadership
- subject matter specific

Dream – Imagine “What Could Be”

The rate and number of adult volunteers in the United States has been increasing since 1993, while the total number of formal and informal volunteer hours has remained somewhat flat. In order to maintain this level of volunteerism, we must continue to educate individuals in order to give them the confidence in their ability that is required for positive volunteer experiences. (Saxon-Harrold, Susan K.E., Arthur D. Kirsch. Murray S. Weitzman, Michael T. McCormack and Aaron J. Heffron. Giving and Volunteering in the United States, 1999. Washington, D.C.: INDEPENDENT SECTOR, 2001.)

In 4-H youth development education, youth and adults will have opportunities to develop their unique talents and capabilities. We envision volunteers attending trainings on a regular basis to help build their competencies. Volunteers will be advocates for the 4-H program with community leaders and other valuable decision makers. They will help establish and build stakeholder support for the program.

The 4-H program is focused on teaching life skills and in developing life-long learners. Through volunteer development, we will be able to help our volunteers understand the value of being a life-long learner. Educated, well trained volunteers will be able to serve in a mentor role for new, less experienced leaders. The volunteer pool will include community residents, parents and 4-H members who will understand that 4-H is more than just competition.

Design – Determine “What Should Be” – Stakeholder Input

With the state of our current society, volunteers will understand risk management issues and work to keep 4-H members safe at all times. Volunteers will enhance 4-H learning through the use of technology. Nebraska 4-H volunteers will take on more leadership roles and be proactive in teaching the use of the experiential learning model.

Extension staff will have an active role in supporting and communicating with their volunteers. Extension will have an active role in providing support to the counties in the form of materials and programming needs for the volunteers.
**Destiny – Create “What Will Be”**

Volunteer and staff development will be designed and developed based on a needs assessment of volunteer core competencies. Competencies include skills in areas such as communication, program management, educational design and delivery, interpersonal skills, and youth development. An assessment survey will be sent out to a random sampling of Nebraska 4-H volunteers and will help determine future professional development opportunities in the Southeast District. Extension staff will communicate training needs and those needs will be met. Volunteer resources will be collected statewide, reviewed, updated and distributed.

Through the use of technology, additional training resources and opportunities will be made available to volunteers and staff. Professional development opportunities will be offered using the newest, latest technology available to the Southeast Extension District.

By focusing on developing competent volunteers through new training, an increase in communication from local extension offices will be attained. Volunteers will achieve a stronger relationship with staff and other volunteers, and build a solid communication network.

**Key Indicators for Professional Development for 4-H Volunteers and Staff**

1. Volunteers and staff will have increased professional development resources/training opportunities.

2. Volunteers will have improved and enhanced competencies including communication skills, experiential learning skills, interpersonal relationship skills and program design skills.
**Logic Model:**
**Professional Development for 4-H Volunteers and Staff** – to recruit and train more volunteers and extension staff to work with parents and 4-H youth. In-depth professional development opportunities will need to be planned and implemented.

<table>
<thead>
<tr>
<th>Outcomes–Impact</th>
<th>Outputs</th>
<th>Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Long Term</strong></td>
<td><strong>Intermediate</strong></td>
<td><strong>Short term</strong></td>
</tr>
<tr>
<td>Trained volunteers will be leading a growing volunteer driven Nebraska 4-H Program.</td>
<td>Staff will utilize a research base in their volunteer program by developing ways to meet identified needs of volunteers.</td>
<td>The Nebraska 4-H System will understand the needs and motivations of the current volunteer workforce through a needs assessment survey.</td>
</tr>
<tr>
<td>See table below for short term outcomes and inputs.</td>
<td>See table below for intermediate outcomes and inputs.</td>
<td>See table below for long term outcomes and inputs.</td>
</tr>
</tbody>
</table>

**Assumptions**
- Volunteers will participate in the study.
- Staff will serve on sub-committees.

**Environment (External Factors)**
- Time limitations for staff.
- Budget considerations.

**Evaluation**
Define – Overview

The Nebraska Southeast District Recognition Committee will develop a recognition program consistent with the National 4-H Council’s Recognition Model. The Model’s five types of recognition are: participation, progress toward self-set goals, standards of excellence, peer competition & teamwork.

We recognize as a District that we are taking the initiative to develop an outline for a recognition program and are aware we need to be inclusive with all 4-H staff across the state. The committee will present the outline to the state wide 4-H Youth Development Action Team to provide an opportunity for everyone to have input into the development of the new state wide recognition program.

Updating and revising the Nebraska 4-H recognition system will encourage and support the efforts of youth and volunteers in the Southeast District’s 4-H program. We acknowledge recognition programs motivate people. They energize people and direct individual activity to a higher level. Recognition programs emphasize personal goals, build self-esteem and makes 4-H program participants feel valued.

The recognition program will be a part of a comprehensive plan which rewards positive learning behaviors in youth. The recognition program will be based on the youth's involvement, participation and/or efforts. We recognize that individual progress must be recognized and individual enthusiasm must be encouraged not only with our 4-H members, but volunteers as well.

Discovery – Appreciate “The Best of What Is”

There are some existing recognition programs in place that can be a starting point for the new Nebraska 4-H Recognition program:

- Nebraska Career Portfolio
- County Achievement Nights/Award programs
- State and County Fair
- National 4-H Conference/ Congress
- Outstanding Leader Service Awards
Dream – Imagine “What Could Be”

Recognition committees and 4-H Councils at the local, district and state level will utilize this program for recognition of youth and volunteers. Utilizing the new comprehensive recognition program, more 4-H program participants will be recognized, and will provide a way to say: "You are a valued and important member of the 4-H program."

The State 4-H office and Nebraska 4-H Foundation will be an important part of the recognition program and supportive of funding, facilities and other resources. We anticipate all counties will enthusiastically participate in this statewide recognition program.

Ultimately, the recognition program will enhance retention and recruitment of 4-H members and volunteers, and encourage the formation of new 4-H clubs and projects.

Design – Determine “What Should Be” – Stakeholder Input

The recognition program will be appropriate and useful at all levels of 4-H. The recognition committee will design a recognition program to meet these priorities by looking at young people’s needs, age appropriateness, interests, attitudes and aspirations, as well as volunteers. The committee will seek to understand differences between people based on diverse backgrounds and experiences.

The state recognition program will be respectful of existing local tradition and recognition programs. It will encourage and support learning, and satisfy intrinsic and extrinsic needs. It will balance recognition for participation, progress toward self set goals, and achievement of standards of excellence, competition and cooperation. The recognition program will identify individuals and people working together in teams or groups.

Destiny – Create “What Will Be”

State and district in-service training on the new statewide recognition program will be provided for 4-H members, volunteers and Extension staff. In addition, a statewide marketing plan will be developed to help volunteers and staff understand the goals of the program. Outside financial assistance will be requested to help implement the new recognition program.

Key Indicators for Recognition of 4-H Youth and Volunteers

- Youth will gain life skills through membership in the Nebraska 4-H program.
- Youth will continue 4-H membership past the current median age level.
- The number of 4-H members and volunteers recognized in the Nebraska 4-H program will increase.
## Logic Model:
### Recognition of 4-H Youth and Volunteers
- to recruit and retain more youth and volunteers in 4-H, a more inclusive recognition program for 4-H will be developed and piloted.

<table>
<thead>
<tr>
<th>Long Term</th>
<th>Intermediate</th>
<th>Short term</th>
<th>Who</th>
<th>What</th>
<th>Product</th>
<th>Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nebraska will have a state-wide recognition program that will lead to more youth and adults being recognized. Youth will feel valued and important members of the 4-H program.</td>
<td>Acknowledgment and affirmation of the personal growth in individual youth. These will include the 5 types of recognition per the National 4-H recognition Model: - Participation - Progress towards personal goals. - Standards of excellence - Peer competition - Cooperation</td>
<td>4-H members</td>
<td>Provide training for 4-H members, volunteers and Extension staff through state or district in-services on the developed state-wide recognition program.</td>
<td>A state-wide 4-H recognition program.</td>
<td>Extension staff</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increase in commitment, motivation and dedication to the Nebraska program by volunteers and 4-H members.</td>
<td>Volunteers</td>
<td>Implement a state-wide marketing plan: (i.e., news conference, news releases, 4-H alerts)</td>
<td>Resources to support the recognition program: (i.e., personnel, funding, distribution).</td>
<td>Time to learn &amp; implement the program.</td>
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<tr>
<td></td>
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<td>Parents &amp; guardians</td>
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<td>Financial resources for fact finding.</td>
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<td></td>
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<td>Adults</td>
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<td>Grants</td>
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<td>4-H Alumni</td>
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<td></td>
<td>Commitment from administration.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Extension staff: county, district &amp; state</td>
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<tr>
<td></td>
<td></td>
<td>Partners: (i.e.,4-H Foundation, State 4-H staff)</td>
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</tbody>
</table>

### Assumptions
- Recognition programs will motivate volunteers and 4-H members to become more active in the 4-H program. Counties will support and implement the new programs.
- Administration will endorse and provide resources.

### Environment (External Factors)
- Reluctance to accept a new “state-wide” recognition program
- Sports and other curricular activities competing for the volunteer and youth’s time.
- Limited availability of resources.

### Evaluation Plan

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Education Programs – 4-H Youth Development
Southeast Research & Extension Center
Define – Overview

As the Southeast District looks to the future to work with the next generation of youth, it’s important to take into consideration the characteristics of the upcoming generation, the Millennials. The parents of this generation are very involved in their children’s lives and feel compelled to intervene on the behalf of their children when it comes to grades, sports or college campus visits. Millennials are typically team-oriented, banding together to date and socialize rather than pairing off. They work well in groups, preferring this to individual endeavors (Managing Millennials 2002).

The Southeast District’s youth development efforts in the next five years will be focused on developing and expanding team-based programs to meet the needs of this generation. We will utilize technology in the delivery methods that also appeal to Millennials (Blackboard, instant messenger, camera talk, interactive equipment) while developing this team-based approach.

Discovery – Appreciate “The Best of What Is”

There are some existing team-oriented programs in place that can be a starting point for the new focus in this area. Team oriented programs that currently exist are primarily concentrated at the state level. Some examples are:

- Animal Science Field Days.
- Quiz Bowl team competition.
- PASE (Premier Animal Science Events) and Life Challenge

Dream – Imagine “What Could Be”

The Southeast District’s team-based program approach will appeal to a larger audience of youth, and ultimately, increase membership numbers. Youth will become more excited about learning life skills though our updated, modernized approach to youth development. Youth will have more fun in group activities and 4-H will become the “cool” youth development program.

Design – Determine “What Should Be” – Stakeholder Input

Programs will be created to meet the needs of the Millennial generation, who like teamwork and have more parental involvement. The new focus should be based more on cooperative learning, teamwork and having fun rather than competition and winning. Educational programs will need to utilize technology that this generation is accustomed to and enjoys.
Destiny – Create “What Will Be”

Local, district and state youth development programs will be revamped to accommodate the team-focused approach. The new program will enhance online and face to face competition and learning. Programs will utilize a science and technology base.

The new teamwork emphasis will increase the enrollment and participation numbers in the 4-H program. In addition, youth will report an increase in teamwork and cooperation.

Key Indicators for Team-Based Learning for 4-H Youth

4-H members will learn cooperation and teamwork through team-related activities and programs.
### Logic Model:
**Emphasis on Team-Based Learning for 4-H Youth** – to effectively work with the millennial generation, team-related activities and programs will be designed and implemented for 4-H members.

<table>
<thead>
<tr>
<th>Outcomes–Impact</th>
<th>Outputs</th>
<th>Inputs</th>
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<tbody>
<tr>
<td><strong>Long Term</strong></td>
<td><strong>Intermediate</strong></td>
<td><strong>Short term</strong></td>
</tr>
<tr>
<td>• By looking at the needs and interests of the millennial generation we will increase the enrollment and participation in 4-H programs.</td>
<td>• Youth will become more excited about learning and participating in 4-H events.</td>
<td>County websites will have links to youth lead chat rooms and online team competitions.</td>
</tr>
<tr>
<td></td>
<td>• Youth have more fun in group activities and 4-H will provide for youth opportunities to socialize while participating.</td>
<td>• Staff will receive ongoing training in using technology and generational needs to deliver effective programs to the millennial generation.</td>
</tr>
<tr>
<td></td>
<td>• Youth will report increased knowledge gained through teamwork and cooperation.</td>
<td>• Development by staff of new and enhanced uses of team events to reach new youth audiences. Youth who participate in these events will develop teamwork, problem solving, and decision making skills.</td>
</tr>
<tr>
<td></td>
<td>• Number of youth reached through team participation will increase.</td>
<td>• Develop interactive online 4-H learning experiences for youth to share their learning experiences and knowledge with others.</td>
</tr>
<tr>
<td><strong>Environment (External Factors)</strong></td>
<td>Environment (External Factors)</td>
<td>Environment (External Factors)</td>
</tr>
<tr>
<td><strong>Assumptions</strong></td>
<td>1. Number of youth participating in 4-H Youth Development activities will increase because their needs, time allotment, and interests are being met.</td>
<td>There is often a resistance to change. Many of the 4-H youth involved today come from a long line of 4-H alumni who think the old 4-H is the best. If we want to continue to be a leader in Youth Development, 4-H needs to meet the needs and wants of our clientele, the millennial generation.</td>
</tr>
</tbody>
</table>
CROSS CUTTING PROGRAM:
WATER ISSUES

“Perhaps…the discovery of underground water would prove more valuable than finding a vein of coal,” noted Professor L.E. Hicks, according to Flat Water A History of Nebraska and Its Water. Hicks, a University of Nebraska geologist during the 1880’s, noticed that the drilling for much needed coal was more likely to find water. That prophetic observation remains true today, some 120 years later.

Water quality and quantity issues exist in southeast Nebraska, the most densely populated area of the state. Groundwater is an important source of drinking water for southeast Nebraska, but the large urban areas are also dependent upon surface water, which is unique to this part of the state. In fact, much of the population uses groundwater that is pumped from beneath the Platte River where the hydrologic connection to surface water is undeniable.

The most aggressive acreage development in the state is occurring in southeast Nebraska. Private wells provide water for most acreage development as well as for rural areas. It is unknown how many private drinking water wells exist in southeast Nebraska. Private wells were not required to be registered until after September 1993. Many active wells were installed prior to that date, and not all new wells are registered as required by law. The Department of Natural Resources (DNR), responsible for well registration, does not attempt to estimate the number of private wells. In fact, no data regarding private well numbers beyond those legally registered, could be located.

Southeast Nebraska’s groundwater resources of potable water are somewhat limited. The vast Ogallala Aquifer that serves western and central Nebraska does not extend into eastern Nebraska. Groundwater comes primarily from an area of glacial till. Sandstones of the Dakota Group are a primary source of groundwater. In some locations, groundwater in the Dakota Group is very salty. In other locations, groundwater contains contaminants at levels making it unsuitable or undesirable for human consumption. Obtaining adequate quantities of potable water is another challenge due to the variable nature of the Dakota Group sediments. It is important for Extension to focus on rural home owners who do not benefit from the protection afforded those living in regulated communities and water districts.

The density of urban and acreage development in southeast Nebraska increases the risk of non-point source pollution of surface water resources. Urban lakes are at risk from nutrient, sediment, and pathogen contamination in part from storm water drainage. Rivers and streams in southeast Nebraska are also at risk of contamination originating from urban runoff, failing septic systems, and agricultural activity. The rolling hills topography in southeast Nebraska puts surface water at risk for sediment laden runoff which may also contain nutrients and pesticides. The feeding and grazing of livestock add another potential risk to surface and groundwater assets.

Water is an equally important issue for agriculture in southeast Nebraska. The western portion of the District has the greatest concentration of irrigation wells in the state. Drought that is in it’s seventh year for some portions of Nebraska, is impacting crop production by limiting water availability.

particularly in Webster and Nuckolls counties of this District. Declining water tables in the heavily irrigated uplands has triggered initial stages of water restrictions, which could eventually have an adverse impact on farm profitability. Recent Nebraska legislation and negotiations with Kansas, Colorado and Wyoming are beginning to address the complex and often competing uses of both surface water and groundwater. Nebraska is very likely to loose irrigated cropland in order to meet minimum in-stream flow requirements along Republican and Platte rivers. Designation of fully appropriated watersheds along these two important rivers, including areas within the Southeast District, has imposed moratoriums on drilling new wells. The financial impact of these changes in water use will effect Nebraska communities as well as irrigated farming families. The supporting industry for irrigated crop production and the cash flow generated from higher land values and greater crop production are critical to Nebraska’s economy.

Much work has been done in regard to the water quality and quantity issues in southeast Nebraska. Southeast Educators help lead statewide educational programming in many water quality and quantity areas. Educators do this by partnering with faculty in the Department of Biological Systems Engineering and the School of Natural Resources to address issues. In addition, Educators collaborate with appropriate staff in local and state agencies. A few achievements worth noting include the development of drinking water and onsite wastewater publications, development and delivery of certification training for onsite wastewater professionals, development and delivery of training for well drillers, development and delivery of drinking water and onsite wastewater system operation and maintenance programs for homeowners, research and demonstration of nitrogen and irrigation water management, introduction to new irrigation scheduling technologies, certification for use of fertilizer and ag chemicals, and school enrichment programs that educate future leaders of Nebraska.

The plan of work for the next five years responds to the issues identified by Nebraskans in various needs assessments and surveys described elsewhere in the review documents. They fall into two broad categories for water: Water Quality Issues, and Water Quantity Issues.

**WATER QUALITY ISSUES**

**Safe Drinking Water Act Guidelines**

**Current Situation and Emerging Trends/Issues**

The quality of water supplied by public water systems is regulated by the U.S. Environmental Protection Agency (EPA) and the Nebraska Health and Human Services System (HHSS). Considerable resources are directed toward issues related to public water supplies. Regulations do not apply to private drinking water wells in Nebraska. Thus, regulatory agencies have not addressed issues related to private drinking water supplies to any great degree. There is a need to serve users of private drinking water supplies.

Nitrate is one of the most common groundwater contaminants in our rural drinking water supplies. Nitrate-nitrogen in groundwater may result from point sources such as sewage disposal systems and livestock waste facilities, from nonpoint sources such as fertilized cropland, parks, golf courses, lawns, and gardens, or from naturally occurring sources of nitrogen. The Maximum Contaminant Level (MCL) for nitrate-nitrogen in public drinking water is 10 ppm. Exposure to drinking water with a nitrate level at or above the standard is a potential health problem primarily for infants. Their immature digestive systems are more likely than adult digestive tracts to allow the reduction of nitrate to nitrite. This can lead to a condition known as methemoglobinemia. In addition, there have been studies linking nitrate in drinking water to cancer, including a recent study conducted by the Center for
Health Effects of Environmental Contamination at the University of Iowa. Kenneth Cantor, Ph.D., of the National Cancer Institute says it is unclear whether nitrates cause cancer. An Australian study implicated high nitrate in drinking water with increased birth defects. Uncertainty exists in nitrate risk assessment, and more research must be done to determine the connections between level of nitrate, duration of exposure, and health effects. Because potential health risks are often unknown or hard to predict, many drinking water standards are set at some fraction of the level of “no-observed adverse-health effects.” In general, the greater the uncertainty about potential health effects, the greater the margin of safety built into the standard. In the case of nitrate, there may not be a large safety factor. A 1977 report by the National Academy of Science concluded that “available evidence on the occurrence of methemoglobinemia in infants tends to confirm a value near 10 mg/L nitrate as nitrogen as a maximum no-observed adverse-health-effect level, but there is little margin of safety in this value.” At the time of this writing, 15 public water supplies in Nebraska were under Administrative Orders or Administrative Letter from HHSS for non-compliance with the nitrate-nitrogen MCL. Four of these communities are in southeast Nebraska, with others being distributed throughout the state. Additional community water supplies have nitrate-nitrogen above the MCL in all or some of their sourcewater. Compliance is achieved by treatment, dilution, or other means. While it is likely that many private drinking water wells in southeast Nebraska might also have nitrate-nitrogen higher than the MCL, there is no way to estimate the number. The quality of private drinking water is not regulated and water testing is not required. Testing the quality of drinking water from a private well is optional, and a decision made by the well user. Test results are considered confidential information and are shared only with the individual requesting the analysis.

Arsenic is a naturally occurring element present in rocks and soil. As water passes through and over soil and rock formations it dissolves many compounds and minerals including arsenic. The result is that varying amounts of soluble arsenic are present in some water sources. Chronic poisoning can occur when moderate or small amounts of arsenic are ingested over long periods, such as where groundwater containing arsenic is consumed daily for extended periods. Arsenic is a known carcinogen, and long-term ingestion may increase the risk of cancer. The MCL for arsenic had been 50 parts per billion (ppb) since 1942. Three expert panel reports on the science, cost of compliance, and benefits analyses on arsenic in drinking water indicated the EPA had underestimated the cancer risks of arsenic in drinking water. As a result, EPA revised the standard to 10 ppb. The new arsenic MCL became effective in January, 2006, although communities could apply for exemptions which could give them up to 9 additional years to comply. Over 80 public water systems in Nebraska have historic arsenic levels greater than 10 ppb. Communities are located throughout the state, with clusters in the Panhandle, southwest, and south central areas. Communities with historic arsenic levels greater than the MCL exist in the southeast counties of Hall, Hamilton, Merrick, Polk, Sarpy, Saunders, Washington, and York. It is likely that many private drinking water wells in these areas might also have arsenic higher than the MCL.

Uranium is a naturally occurring, radioactive mineral present in certain types of rocks and soils. Water passing through and over rock and soil formations dissolves many compounds and minerals, including uranium, so varying amounts of it are present in some water sources. Uranium was deposited in Nebraska by glaciers and volcanic ash. Thus, uranium contamination of groundwater comes from the aquifer from which the water is pumped. The EPA revised the Radionuclides Rule and included uranium with an MCL of 30 ppb. The new regulation applies to all community water supplies and took effect December 2003. Uranium concentration sometimes varies significantly over time. For this reason, the level considered for compliance is based on a running annual average, which is the average of the four most recent, consecutive quarters of monitoring. More than 30 Nebraska community water supplies were found to be out of compliance when the first year of quarterly monitoring was completed in December 2004. Communities are located throughout the state, but tend to be predominantly located in the Republican River, North Platte River or Platte River floodplains.
with others located in additional current or past waterways. Southeast counties of Saunders, Colfax, Butler, Saline, York, Merrick, Hamilton, and Hall have communities with uranium above the MCL. It is likely that some private drinking water wells in these areas also might have uranium higher than the standard.

High profile events such as that which occurred in Grand Island and North Platte are causing concern in regard to industrial solvents. Solvents are, for the most part, known carcinogens. Levels in the high profile cases far exceed MCL levels. The Nebraska Department of Environmental Quality (NDEQ) and HHSS have formed a work group to begin to address this issue. Members of the workgroup have expressed a high level of interest and support for Extension programming in this area.

Endocrine disruptors are synthetic or naturally occurring chemicals that interfere with the balance of normal hormone functions in animals, including humans. Potential endocrine disruptors can be present in the environment, including some drinking water supplies. Scientists have found that certain chemicals can disrupt the endocrine systems of wildlife. Thus, scientists are asking what effect endocrine disruptors, even at low levels, might have on humans. Research and regulatory policy concerning endocrine disruptors in drinking water is evolving.

**Implications for Extension and Recommendations**
Considerable national and state resources are being directed toward public drinking water issues. Information and education is being offered to help with decision-making and compliance. However, private drinking water wells are “falling through the cracks”, with fewer resources being directed toward the private drinking water issues. University of Nebraska–Lincoln Extension has historically taken a leading role in providing education regarding private drinking water. Extension Educators and Specialists must continue to do so regarding current and emerging issues including nitrate, arsenic, uranium, industrial solvents, and endocrine disruptors. Individuals using private drinking water voluntarily decide for themselves how to manage possible risks associated with their drinking water supply. Almost 1/3 (31%) of those responding to the Center for Applied Rural Innovation 2004 Nebraska Rural Poll believed their water quality had deteriorated during the past ten years. The goal of Extension programming should not be to advocate a specific “acceptable level of risk” or risk management strategy. Rather, the goal should be to provide information to help individuals make independent risk management decisions regarding their drinking water supply.

**Nebraska Onsite Wastewater Treatment Regulations**
(Revisions to Title 124)

**Current Situation and Emerging Trends/Issues**
Nebraska has an estimated 200,000 to 250,000 onsite wastewater treatment systems, with an estimated 1,200 new systems being added each year. Onsite wastewater treatment systems are a potential source of bacteria, pathogenic viruses, nutrients, and chemical contamination of groundwater, surface water, and the land. Wastewater is a leading cause of water borne disease. Proper treatment of wastewater is essential for protection of the environment and public health. Education of onsite wastewater professionals plays a key role in protecting water resources and public health in Nebraska.

Industry certification is a new requirement of NDEQ Title 124. In addition, Title 124 allows for endorsements, which may be added to a professional certificate, that authorize the certificate holder to perform special procedures requiring advanced levels of skills or training. Members of the industry have indicated they need and want training on alternative treatment systems. Alternative systems are one option that may be implemented at locations that are not suitable for septic/lagoon systems.
Rather large geographic areas of Nebraska are not suitable for these traditional systems, with many in southeast Nebraska. These include the areas with sandy soil and high water tables found near southeast Nebraska's rivers and sandpit lakes. It also includes areas with clay soil found in some southeast Nebraska counties including Lancaster, Gage, and Saline. In addition, some of the glacial till soil deposited in areas of southeast Nebraska, including portions of Douglas and Sarpy counties may not be particularly suitable for traditional systems.

Presently, alternative systems are not readily available due to the lack of industry training and experience with these types of systems, and the unresolved issue of system maintenance. The challenge of improper and inadequate maintenance may be even greater with alternative treatment systems than traditional onsite systems, due to additional features. All parties involved in the industry recognize the importance of having onsite system owners perform the proper maintenance. This can be achieved using managed systems approaches, in which responsibility for operation and maintenance is shared beyond the owner/operator; implementing the EPA's “Voluntary National Guidelines for Management of Onsite and Clustered Wastewater Treatment Systems”. Also, certified professionals now must acquire 12 professional development hours of continuing education in a two-year period to maintain certification. The Environmental Quality Council indicated that distance education would be very helpful to Nebraska onsite professionals as one way to fulfill a portion of this education requirement.

Implications for Extension and Recommendations
New regulations and increased awareness is creating a need for education and training of onsite wastewater professionals. Extension is currently positioned to assume an active role in the delivery of sustainable onsite educational programs. Extension Educators and Specialists should work with NDEQ, Nebraska On-site Waste Water Association, and other agencies to develop and deliver appropriate training. In addition, Extension Educators and Specialists should be involved in discussions regarding system management; and should develop and deliver homeowner training as needed.

Water Quality and Total Maximum Daily Loads
Current Situation and Emerging Trends/Issues
The Southeast District has 52 impaired stream segments and 45 impaired lakes/impounded water as designated by the NDEQ. These impaired water bodies are found throughout the District in both urban and rural areas. The recreational use of lakes, streams and rivers has increased over time as the population, especially in the metropolitan areas of the District has increased. Total Maximum Daily Load (TMDLs) standards for different pollutants have been established for certain District lakes and more will be established for additional lakes and streams in the
Southeast District. Sediment, fecal coliform bacteria and nutrients are the primary pollutants negatively impacting the creeks, streams, lakes and rivers in the District. The establishment of TMDLs will intensify the efforts to improve the water quality of the creeks, streams, lakes and rivers.

**Implications for Extension and Recommendations**

The number of impaired stream segments and lakes/impounded waters emphasizes the need for the increased adoption of Best Management Practices (BMPs) in both urban and rural watersheds. The establishment of TMDLs will trigger the need for increased monitoring of bodies of water, greater awareness of potential pollutants and runoff pollution prevention education.

Extension has established a volunteer monitoring program for lakes. This type of volunteer monitoring program could possibly be expanded to include streams and other water bodies. Extension would be well equipped to provide monitor training for volunteers. Extension is a valuable resource for researched based information on BMPs for both rural and urban watersheds. Extension’s established partnerships with other agencies, organizations, farmers and homeowners will be especially valuable in establishing demonstrations and other learning opportunities.

The Southeast District has been in the forefront of promoting no-till and conservation tillage since the 1980’s. That focus has helped Nebraska become the leading state in no-till corn acres. Fifteen of the 34 counties with greater than 30% no-till corn are in this District, and 7 of the 14 with greater than 50% no-till soybeans are also in this District. A Nationally prominent research facility for reduced tillage is located at the Agricultural Research and Development Center (ARDC). It is important that these resources and success stories support continued work to address silt and bacterial problems in watersheds where TMDLs have been established.

Another key issue that has water quality implications is livestock production. Any farm the deals with grain or forage production is tied to livestock production. It is a segment of agriculture that Nebraska is most dependent upon. Livestock contribution to TMDL for sediment and bacterial degradation will be addressed. The Agricultural Issues Livestock Team has specifically addressed livestock and environmental issues in their report.

**Urban Watersheds**

**Current Situation and Emerging Trends/Issues**

The National Pollution Discharge Elimination System (NPDES) is a national program created under the Federal Clean Water Act. The NPDES, Phase I and II storm water regulations set forth by the EPA and the NDEQ require the urbanized areas of Omaha and Lincoln as well as other first class cities in the Southeast District (Beatrice, Hastings, Grand Island, and Fremont) to manage storm water discharges for quality and quantity. These cities are required to obtain a permit addressing six minimum elements and the BMPs that will be used to comply with these six minimum elements. Nonpoint source or runoff pollution prevention education is an important component for meeting the requirements of a permit.

**Implications for Extension and Recommendations**

The emphasis on managing storm water runoff for quality and quantity will require collaborations with agencies and organizations. Extension has strong working relationships with federal, state and local government agencies and non governmental organizations which will prove beneficial in developing educational programs to reduce runoff pollution and manage storm water. Families, homeowners and businesses will need to make changes in their behaviors and practices in order to reduce runoff pollution from their homes and businesses. Extension is in a key position to help youth, homeowners
and business owners learn about BMPs to reduce runoff pollution. Multi disciplinary educational efforts by Extension Educators and Specialists will be needed to help people learn and adopt BMPs.

**Nitrate and Irrigation**

**Current Situation and Emerging Trends/Issues**

Nitrate is a water soluble compound, carried through the soil by rainfall and irrigation, eventually reaching the aquifer in many cases. The combination of coarse soils, shallow aquifer and intensive gravity irrigation led to rapid contamination of the aquifer along the Platte River. Extension has been working with Natural Resources Districts (NRD) on the nitrate issue since the late 1970's, initially along the Platte River from Lexington to Columbus. By the late 1980's, nitrate contamination of wells was beginning to emerge as a problem even in upland areas where the soils are fine textured and the depth to water is often over 100 feet.

Today, six of the ten NRDs that are fully or partially within the Southeast District, have nitrogen management areas. Mandatory education programs in those NRDs teach the University approach to nitrogen management. Where irrigation is common, water management is taught, also using University recommendations.

**Implications for Extension and Recommendations**

Since nitrate is dependent upon water for movement into the aquifer, we are focusing on that interaction in Hall and Merrick Counties, as well as the highly irrigated counties of the Upper Big Blue NRD. Technologies that reduce application rate or improve water distribution, such as gravity to center pivots, Sub-surface Drip Irrigation (SDI) and surge valves are being researched and demonstrated. Nitrogen fertilizer education is more the focus in other NRDs that are experiencing high nitrate levels.

A focused educational program on irrigation efficiency is directed toward Hamilton, York, Polk, Clay, Fillmore and Adams counties due to the high percentage of irrigated acres. The District currently has four Educators working closely with irrigation Specialists and the NRD to educate farmers on new technologies related to irrigation scheduling. The project will expand into the Little Blue NRD based on requests and availability of faculty to deliver educational programs in this area.

The management of nitrogen is more important in the other areas of the District where much fewer acres are irrigated. BMP are demonstrated and relevant topics are studied within the on-farm research projects. Most of the NRDs with nitrogen irrigation education requirements look to Extension for support.
WATER QUANTITY ISSUES

Issue: LB 962

Current Situation and Emerging Trends/Issues

LB962 was passed by the legislature in 2004. It amended the Nebraska Ground Water Management and Protection Act to include a more proactive approach to the State’s integrated management of surface and groundwater use. Every year starting in January 2006, the DNR must make a determination of which rivers are considered to be over appropriated or fully appropriated. This designation by DNR is based on the examination of river basins to determine if there is a sufficient supply of water over the long term to meet existing uses and allow for new uses.

The definition of an over appropriated basin is where existing uses exceed the supply, surface water flows can be expected to decline and groundwater elevations can be expected to drop until either there is no water to use or the cost of using the water is too great to result in beneficial use. A fully appropriated basin is defined as one in which existing uses of both surface water and hydrologically connected groundwater supplies are equal to, but do not exceed the available water supplies over the long term. The decision that a basin is over or fully appropriated triggers a moratorium on new surface and groundwater uses. This includes a moratorium on construction of new wells yielding greater than 50 gallons per minute and on the expansion of irrigated acres in the hydrologically connected area. In addition, it initiates a process by the DNR, the affected NRDs and appropriate stakeholders to develop an integrated management plan.

Integrated management plans are required to sustain a balance between water uses and water supplies. The goal of management plans must be to achieve and maintain economic viability, social and environmental health, safety, and welfare of the river for both the near term and the long term. Existing uses must be certified and water use tracking systems need to be developed. The plan should include a comprehensive water monitoring system that would allow for the identification of any water supplies that could provide water for a new use without adversely affecting an existing user. If such water supplies are available, new uses could be allowed. If additional water supplies cannot be identified, the plan must require that new uses of water will be offset. One method of providing an offset could be by the retirement of existing uses. To enable offsets, the transfer of water from one type of use and/or user to another could be included in the plan. Any transfer must meet the condition that the transfer does not harm existing users. Other practices that reduce the consumptive use of water also could be used to provide offsets.

As long as an area is not over appropriated or in an area subject to the restrictions of an interstate compact, the NRD is not required to make existing users reduce their use of water. However, management options such as allocations, metering, and reduction of acres are tools that NRDs may use in an integrated management plan to reduce existing use so that new uses can be achieved.

In areas that were determined to be over appropriated, the basin-wide plan must provide for a reduction of water use to the 1997 level of use within the next 10 years. If this reduction does not achieve a balance between uses and the available water supplies, further reductions will be required.

On July 16, 2004, when the law took affect, the areas for which the DNR had already made a determination of the need for an integrated management plan under the old law were automatically determined to be fully appropriated. These areas included the entire Upper, Middle, and Lower Republican NRDs and all of the North Platte NRD except Pumpkin Creek, which was already subject to an integrated management plan. On September 30, 2004, the DNR declared the entire South Platte
NRD, Twin Platte NRD and Central Platte NRD as fully appropriated. On November 3, 2004 the DNR declared a portion of the Upper Niobrara White NRD as fully appropriated. In addition, on September 15, 2004, the DNR determined that portions of the North Platte NRD, South Platte NRD, and Tri-Basin NRD were over appropriated. As a result, stays were placed on new water uses in those portions of the NRDs. These stays will continue to be in effect unless they are removed as a result of the implementation of an integrated management plan. Any adverse impact of lifting the stay on water uses existing at the time of the determination must be offset by the integrated management plan.

In the Republican Basin, the DNR and the Tri-Basin NRD have already approved a plan and are currently drafting rules and regulations. The DNR and the Middle Republican NRD have drafted a plan, which is expected to be finalized by the end of the year. The Upper Republican NRD and the DNR are currently drafting the details of the plan. The Lower Republican NRD is working with the DNR on a plan for their district. In the Platte Basin, the DNR, the North Platte, South Platte and Upper Niobrara White NRDs and their respective stakeholder groups have met to establish goals and objectives and develop the framework for the rules and regulations of their respective plans. The NRDs involved in the over appropriated areas are working with DNR on a basin wide plan.

**Implications for Extension and Recommendations**

Stream appropriation determinations and moratoriums on new wells do not directly apply to wells pumping less than 50 gallons per minute. Thus, private drinking water wells are not likely to be directly impacted by LB 962. In addition, LB 1226, passed in 2006, amended LB 962 so that municipalities with groundwater transfer rights are guaranteed their total permitted amounts. Thus, they are not subjected to NRD control under integrated management plans. Current over and fully appropriated water basins do not, for the most part, lie within the Southeast District geographic region. Thus, Extension in the Southeast District can take a more proactive rather than reactive approach to drinking water program education and information regarding the issue. The goal of Extension drinking water programs should not be to advocate or question the need for or implementation of LB 962, but rather to inform water users about LB 962 and its implications. As consumers become informed citizens they will be better able to actively participate as stakeholders in their watersheds. Efforts should target agricultural water users.

**Drought**

**Current Situation and Emerging Trends/Issues**

The Drought Monitor provides an overview of conditions averaged across time scales and impact indicators. The result is a summary of conditions for drought information. Two new experimental products were made public which serve as timescale-specific supplements to the Drought Monitor. Both assess conditions based on a blend of several drought indicators, and are depicted relative to the local historic record.

The Short-Term Blend approximates drought-related impacts that respond to precipitation (and secondarily other factors) on time scales ranging from a few days to a few months, such as wildfire danger, non-irrigated agriculture, topsoil moisture, range and pasture conditions, and unregulated stream flows.
The Long-Term Blend approximates drought-related impacts that respond to precipitation on time scales ranging from several months to a few years, such as reservoir stores, irrigated agriculture, groundwater levels, and well water depth.

A report in Water Current, Winter 2005, Vol. 38, No.1 stated that five years of drought have diminished the state’s groundwater resources. The University’s statewide groundwater level monitoring program collects aquifer water level data from more than 5,400 wells across Nebraska.

Assistant geoscientist Mark Burbach compared changes in aquifer levels from spring 2000 to spring 2005. Burbach said, “It’s very easy to see large areas of the state showing groundwater level declines of up to five feet. In some areas corresponding to heaviest concentrations of irrigation wells, declines of up to 20 feet over the past five years are not uncommon.” Many of the largest declines are in the heavily irrigated Platte, Republican, Lower Loup, Blue, and Elkhorn river basins, as well as further west in Box Butte and Cheyenne Counties. Areas in Valley, McPherson, and Gosper counties showed a minimal rise in groundwater.

HHSS tracks Nebraska public water supplies imposing water use restrictions as a result of water level, infrastructure, or resource conservation. Public water supplies issuing voluntary or mandatory water use restrictions numbered 59, 32, 23, and 30 for years 2002 through 2005. Restrictions focused on irrigation of urban landscapes. Six public water supplies in southeast Nebraska have imposed voluntary or mandatory water use restrictions as of the time of this writing.

Implications for Extension and Recommendations
Drought and declining water levels could have a direct impact on private drinking water wells, with shallow wells being at greatest risk from potential water shortages. Public system voluntary or mandatory water use restrictions will continue to have an impact on the management of urban landscapes. Private drinking water shortages could have a similar impact on rural landscape management. Irrigation accounts for the largest single use of water, with use increasing during periods of heat and drought. The primary goal of Extension’s educational program regarding drought should be to educate consumers on efficient crop and landscape irrigation. In addition, Extension should provide science-based information to public water suppliers considering voluntary or mandatory water use restrictions so that their management strategies will be based on BMPs appropriate for Nebraska landscapes.
Big Blue River and Little Blue River Watersheds

Current Situation and Emerging Trends/Issues

The upland farms south of the Platte River from Hastings to Beatrice fall into three general watersheds, the Upper Big Blue River, Lower Big Blue River, and Little Blue River. As you move from west to south and east, the landscape becomes hillier and is characterized by varying degrees of groundwater availability. The water resources and landscape have defined the type of agriculture in these areas, with a high percentage of irrigated row crop production in the Upper Big Blue, generally exceeding 60% of farmed acres. The Little Blue and Lower Big Blue counties generally have a third of their acres irrigated.

One of the areas of the state that has experienced serious groundwater declines from time to time is the Upper Big Blue basin. The water table has declined 10.5 feet since 1998, triggering Phase I of irrigation water controls. Phase I requires a report of irrigated acres and water use. If the decline continues 3 more feet, water allocation will be triggered.

Implications for Extension and Recommendations

The high percentage of irrigated acres in Hamilton, York, Polk, Clay, Fillmore and Adams counties justifies a focused educational program on irrigation efficiency. The District currently has four Educators working closely with irrigation Specialists and the NRD to educate farmers on new technologies related to irrigation scheduling. The project will expand into the Little Blue NRD based on requests and availability of faculty to deliver educational programs in this area.

Republican River Compact

Current Situation and Emerging Trends/Issues

The water issue that has garnered most of the attention lately is the Republican River Compact with Kansas and Colorado. Nebraska reached an out-of-court settlement with Kansas in December of 2002, clarifying which sources of water will be regulated by the Compact and defining procedures for assessing compliance based on two-year and five-year running balances of flow in the Republican River watershed. The first five-year period runs from 2003 through 2007, although drought has triggered the two-year assessment.

Provisions of the Compact have imposed a moratorium on well drilling in the Republican River basin, including areas of Webster and Nuckolls counties in the Southeast District. Furthermore, to meet Nebraska’s obligation to Kansas, irrigators along the Bostwick canal system in Nebraska were paid to forgo their irrigation water right in 2006. While the immediate impact reduces water from the canal system, the long term impact may also restrict water from other regulated sources, such as groundwater that is deemed hydrologically connected to the River.
Implications for Extension and Recommendations
The Republican River issues force farmers to make complex decisions about crops and irrigation water management. The University has been studying limited irrigation for several years, primarily at the West Central Research and Extension Center. Extension has developed tools to help farmers with these complex decisions. Most of that educational effort is being led by Specialists and Educators out of the West Central Research and Extension Center (WCREC) and Biological Systems Engineering (BSE).

Educators in the Southeast District are supporting the educational effort in the lower reaches of the Republican River. They are active in many of the associated issues, such as control of noxious weeds that rob water from the River system. A successful cooperative effort is being coordinated through the local Resource Conservation and Development Council.

Platte River Cooperative Agreement
Current Situation and Emerging Trends/Issues
Nebraska entered into an agreement with Wyoming, Colorado and the U.S. Department of the Interior in July 1997 to address Endangered Species Act concerns along the Platte River east to Chapman, Nebraska. The Agreement outlines a process that would provide habitat and stream flow that meets U.S. Fish and Wildlife Service demands, avoiding contentious battles between Platte River users and the federal agency. Parts of the agreement call for acquisition of habitat between Lexington and Chapman and willing conservation of water by users along the Platte.

The Cooperative Agreement impacts the Southeast District through Central Platte NRD action in Hall and Merrick Counties. Since the Agreement calls for “willing” participation, the NRD is promoting conservation practices that reduce the pumping of groundwater that is hydrologically connected to the Platte River. Extension’s educational programs on SDI and new technologies for irrigation scheduling are needed for adoption of practices that will meet the reduced pumping goals.

Implications for Extension and Recommendations
This is an issue that affects Hall and Merrick counties in our District. It has a complex, negotiation component that is operating without need of Extension involvement. As the process develops and farmers in the area opt to reduce water consumption there will be needed Extension programming on maximizing net income with limited water resources. We have faculty resources to deal with this issue, but will need to bring in WCREC and BSE resources for a coordinated program.

Lower Platte River Corridor Watershed
Current Situation and Emerging Trends/Issues
From Columbus to Plattsmouth, the Platte River changes dramatically. The River picks up flow from the Loup River and Elkhorn River systems, which change the issues from concern about low flow to concern about flooding. None the less, concerns remain about water quantity, since 56% of Nebraska’s population resides in the 7 counties along the east end of the Platte River. Well fields associated with the Platte River represent a significant percentage of the drinking water for this population. Some degree of regional planning for water resources is being carried out by the Lower Platte River Corridor Alliance (LPRCA). Members of the alliance include the relevant NRDs, state agencies and the University Conservation and Survey Division. The implications of continued
population growth in this area are outlined in “Flatwater Metroplex Report” authored by W. Cecil Stewart of the Jocelyn Institute.²

**Implications for Extension and Recommendations**

An awesome challenge presents itself for people responsible for planned management of water resources in this area. With a multitude of agencies and municipalities having interest and control over the development, there is a great need for coordination. The LPRCA appears to be well-suited to provide the coordination. The members can coordinate legal and financial aspects of development and have some resources for public relations and education.

Extension faculty with expertise in drinking water and wastewater management can benefit residents in these counties. Faculty need to continue to be engaged with the Alliance to deliver education programs. Our particular strengths are with rural water users who will have significant issues with wells and septic systems.

**Conclusions**

Water issues are prominent in the current public debate due to the extended drought and ramifications of law suits on the Republican River. The Southeast District faces critical issues for agricultural and private uses of water, for water quality and quantity. The agricultural areas of the District are affected by competing uses of surface water and the potential decline of groundwater. The projected growth of the Metro area ensures that water quality and quantity area likely to be major issues for the foreseeable future.

The University and Extension are key players in helping Nebraskans deal with water issues. The University has been engaged since the late 1800's, primarily through the work of the Conservation and Survey Division and more recently through Extension. Strong partnerships have been developed with the Natural Resources Districts that rely on the University for research and education. Successful programs such as the Mid-Nebraska Water Quality Demonstration Project, Central Platte Nitrogen Management Demonstration Project, the Nebraska Agricultural Water Demonstration Project, Certification Training for On-site Waste Water Professionals, and numerous water festivals in conjunction with public schools in the Southeast District, have laid the foundation for continued public education as research answers emerging questions. A common feature of those programs was the solid collaboration among University departments and state and federal agencies.

Research on water issues is important to the Southeast District. Much of the District relies on unregulated, untested private water supplies. Optimum use of water resources is important for profitability and sustainability of irrigated agriculture and the communities that depend upon that industry. Water use efficiency research is crucial to irrigated agriculture. The South Central Ag Lab is leading the way with state-of-the-art facilities for researching sub-surface drip irrigation (SDI) and accurate measurement of soil water and crop water use.

The Agriculture Research and Development Center (ARDC) near Mead has a long history of research into techniques that reduce soil erosion and protect surface water quality. ARDC serves as an important laboratory and training center for educators, consultants and farmers who are learning the latest science that applies to crop production, including efficient use of water.

The recent phenomenon of toxic lake syndrome has been investigated by the University. Partnerships between Extension and researchers in the School of Natural Resources has helped discover the causes of toxic lakes and is educating the public about their role in prevention of this serious problem. More environmental issues are certain to emerge as the Metro population expands and we will depend on research from our partners in Biological Systems Engineering and the School of Natural Resources.

The Southeast District has faculty focused on a broad range of water issues. It is important for the future of water education that District faculty maintain working relationships with researchers in University departments and the public institutions that are charged with managing public water resources.
ENGAGING OUR CLIENTELE: 
DIVERSITY

Diversity is defined as having variety in several characteristics. For this review, issues related to the ways Southeast District Extension responds to diversity in ages, races/ethnicities/cultures, and socioeconomic statuses will be examined. It is recognized that diversity is an issue that falls within all programming areas but also needs to be highlighted separately. The Southeast District Diversity Team views diversity from two perspectives:

1. External, which examines the Southeast District’s counties, communities, and clientele.
2. Internal, which examines the Southeast District’s staff and staffing issues.

Current Situation – External Issues

Income
The 2000 census indicated that persons living within the Southeast District’s 28 counties had a per capita income in 1999 of $20,621 as compared to $19,315 for Nebraska. The per capita income by county in the Southeast District ranges from $16,394 to $22,879. Statewide, the range by county for per capita income is $10,951 to $22,879. Of the 65 counties not part of the Southeast District, 38 have a per capita income lower than any county in the Southeast District.

USDA Economic Research Service estimated 2003 county-level poverty rates showed that over two-thirds (19) of the Southeast District counties had poverty levels lower than 10% with the remaining counties (9) ranging from 10.1% to 12.1%. The rate of poverty for the whole of the Nebraska population was 10.0%. A number of programs target limited resource families in the Southeast District. Building Nebraska Families (BNF), Nutrition Education Program (NEP) and other programs reach many lower income families. In addition, after school programs provide opportunities for varying types of education for youth including those from lower income families.

Surveys collected from Southeast District staff indicate that middle income audiences for the most part comprise the primary audience. Furthermore, staff indicated that upper income families generally do not utilize programming but serve as our connection to resources and clientele in the communities.

Awareness and Accommodation
The awareness and accommodation of needs of clientele is a critical issue and will continue to be monitored on an ongoing basis. Staff reported that special needs are being met when necessary. Offices have access to equipment to accommodate various physical disabilities through University of Nebraska—Lincoln. Several counties reported that specific programs are offered to accommodate people with disabilities. For example, a horse club provides opportunities for youth with special needs to participate, county fair judging is adjusted for ability levels, interpreters are available to facilitate communication with participants who are hearing impaired, and translators are available for participants who are non-English speaking.
Ethnicity/Race/Culture
The U.S. Census 2000 data in the chart that follows show that the total population of the Southeast District counties is 1,197,460 which accounts for 70% of the state’s population.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>U. S. Census 1990 and 2000</td>
<td>Southeast District</td>
<td>Nebraska</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Population</td>
<td>1,078,339</td>
<td>1,197,460</td>
<td>Total</td>
<td>1,578,385</td>
<td>1,711,263</td>
<td>Total</td>
</tr>
<tr>
<td>Not Hispanic or Latino:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White alone</td>
<td>983,720</td>
<td>1,031,289</td>
<td>86.1%</td>
<td>1,460,095</td>
<td>1,494,494</td>
<td>87.3%</td>
</tr>
<tr>
<td>Black or African American alone</td>
<td>55,754</td>
<td>66,014</td>
<td>5.5%</td>
<td>56,711</td>
<td>67,537</td>
<td>3.9%</td>
</tr>
<tr>
<td>Native American Alone</td>
<td>4,852</td>
<td>5,375</td>
<td>0.4%</td>
<td>11,719</td>
<td>13,460</td>
<td>0.8%</td>
</tr>
<tr>
<td>Asian or Pacific Islander alone</td>
<td>10,541</td>
<td>20,011</td>
<td>1.7%</td>
<td>12,026</td>
<td>22,324</td>
<td>1.3%</td>
</tr>
<tr>
<td>Some other race alone</td>
<td>704</td>
<td>1,136</td>
<td>0.1%</td>
<td>865</td>
<td>1,327</td>
<td>0.1%</td>
</tr>
<tr>
<td>Two or more races</td>
<td>N.A.*</td>
<td>14,531</td>
<td>1.2%</td>
<td>N.A.*</td>
<td>17,696</td>
<td>1.0%</td>
</tr>
<tr>
<td>Hispanic or Latino:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White alone</td>
<td>12,822</td>
<td>24,599</td>
<td>2.1%</td>
<td>20,463</td>
<td>38,767</td>
<td>2.3%</td>
</tr>
<tr>
<td>Black or African American alone</td>
<td>647</td>
<td>875</td>
<td>0.1%</td>
<td>693</td>
<td>1,004</td>
<td>0.1%</td>
</tr>
<tr>
<td>American Indian and Alaska Native alone</td>
<td>378</td>
<td>821</td>
<td>0.1%</td>
<td>691</td>
<td>1,436</td>
<td>0.1%</td>
</tr>
<tr>
<td>Asian or Pacific Islander alone</td>
<td>331</td>
<td>349</td>
<td>0.03%</td>
<td>396</td>
<td>443</td>
<td>0.03%</td>
</tr>
<tr>
<td>Some other race alone</td>
<td>8,590</td>
<td>28,515</td>
<td>2.4%</td>
<td>14,726</td>
<td>46,518</td>
<td>2.7%</td>
</tr>
<tr>
<td>Two or more races</td>
<td>N.A.*</td>
<td>3,945</td>
<td>.3%</td>
<td>N.A.*</td>
<td>6,257</td>
<td>.4%</td>
</tr>
</tbody>
</table>

When looking at past and current population figures from the U.S. Census Bureau, it is apparent that the white population continues to be the predominant race not only in the state but in the Southeast District. Statistics also demonstrate that all races remain fairly stable except for those of Hispanic/Latino origin. The Hispanic/Latino population is growing more rapidly than any other ethnic group within the Southeast District.

The 2004 Extension accountability report data suggest that all Southeast District Extension staff reach an ethnically diverse audience. The highest percentage of contacts was with white audiences.

2004 Educational Contact Totals for Southeast District Staff

<table>
<thead>
<tr>
<th>2004 Educational Contact Totals for Southeast District Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>442,757</td>
</tr>
<tr>
<td>100%</td>
</tr>
</tbody>
</table>

Age
The age range with the largest population in Nebraska is the 35-54 age group as estimated by U.S. Census Projections 2005. This age group comprises 28% of the total state population. In 25 of 28 Southeast District counties the second largest age group is 45-54 (13.7%). Douglas, Lancaster, and Sarpy Counties’ second largest population group are those in the 25-34 age range. Eighteen out of the
28 counties within the Southeast District have 15% or more of their population who are 65 and older. Statewide, 12.6% of population is 65 and older.

**Urban and Rural**

There continues to be a shift in the population from rural to urban/metropolitan areas within Nebraska and within the Southeast District communities. The U.S. Census data for 2000 indicate that the rural population has remained fairly steady from 1990 to 2000 but the metropolitan population has continued to grow. The most urbanized counties in Nebraska are located in the Southeast District.

Nebraska population estimates for the 2005 U.S. Census Bureau indicate the cities surrounding Omaha and Lincoln are the fastest growing in the state (Omaha World Herald, June 24, 2006). Gretna grew 106.4% between 2000-2005. Elkhorn and La Vista grew 34% during that time period. Hickman and Papillion grew 25% between 2000-2005. Omaha grew by 6.3% and the neighboring counties of Washington and Cass grew by 4.8% and 3.7% respectively.

**Emerging trends/issues – External Issues**

The issues that became the focus for the Southeast District Diversity Team to address were those areas which seemed to have the most change or might have the most impact within the next five years. All of the issues are important but addressing those that are the most emerging seemed to be a way to better focus time and resources.

**Ethnicity/Race/Culture**

Based on trends, census data projected the Hispanic/Latino population in Nebraska to increase by 25% from 2000 to 2004. In the Southeast District counties from 1990 to 2000 the Hispanic/Latino population increased 160%. Significant increases (higher than state average increases) in minority population were as follows, according to race and the number of counties showing a significant increase in that particular minority population: Asian, 5 counties; Black/African American, 2 counties; Native American Indian, 1 county; Hispanic/Latino, 3 counties and mixed race, 6 counties.

**Age**

According to state population projections (U.S. Census Projections 2005), the most significant population increase in Nebraska in the next 5 to 15 years will be in the age groups that range from 50-65 years old. Those 65 years and older will also show an increase but will not be as significant as the increase in the 50-65 age groups.

**Urban and Rural**

The trends indicate that there will continue to be an increase in the urban population and a decrease in the rural populations (U.S. Census 2000, reported September 2003). In the Southeast District, the projection from 1990 to 2020 indicates a 33% population increase in the urban areas. In contrast, trends indicate a decline in the overall population in rural communities. Projected county populations indicate that 11 of the 28 Southeast counties will decrease in population. The 17 counties that are projected to increase in population are those considered urban areas or located closest to metropolitan areas.

As the urban population increases, it appears there is a parallel increase in diversity in ethnicity and race. In contrast, there is a decrease in the rural populations overall with indications of a decrease in the white population but an increase in other ethnicities and races. Ten Southeast District counties had a decrease in the white population from 2000 to 2004 estimates, while minority populations showed a projected increase or at least maintaining of population numbers during the same time period.
The following information is reflective of population changes in the 28 Southeast District Counties from 1990 to 2004:

- 10 counties showed a significant increase in population (8.6 – 30.4%); 5 were rural counties and 5 were urban counties. The 5 rural counties were adjacent to urban counties.
- 9 counties showed a decrease in population (4.9 – 21.7%); all 9 counties were rural with none being adjacent to an urban county.
- Significant increases in minority population are referred to in the Ethnicity/Race/Culture section above.

**Implications for Extension – External Issues**

According to statewide and national population projections, there will be continued growth in the urban population, the 50-65 year old age groups, and in the ethnic minority populations. Projections imply that some of those emerging groups will be different than groups currently being served therefore it is implied that they will have different needs.

**Recommendations – External Issues**

The three emerging areas identified in this document that will be addressed under the recommendations section are: 1) increased audiences of Hispanic/Latino origin, 2) increased number of clientele in the 50-65 year old age ranges, 3) and a growth in the urban population paralleled with a decrease in rural population. Southeast District Extension staff need to:

- Partner with the diversity committees from other districts with a strong consideration for working with the Northeast District committee. They are currently involved in the review process and reflect similar emerging areas.
- Receive and provide ongoing professional development in the area of ethnic diversity.
- Challenge each work group to develop programming, staff development, and partnerships within each of the targeted issues. This needs to include methods for reporting evaluation and accountability. This will particularly be critical in the area of ethnic diversity especially for the Hispanic/Latino population.
- Consider refocusing one or two current staff members to coordinate and provide leadership for developing a comprehensive program addressing the growing ethnic population. This staff might serve in a partial appointment in this focus while maintaining some of their current focus or make this their major focus. Depending upon the percentage of the focus, this staff could serve in a district, multi-district, or state capacity. Their role might include staff training, identifying staff training, needs identification, etc.
- Identify a staff member to coordinate and provide leadership for developing a comprehensive program addressing the growing ethnic population. This staff member might serve in a statewide capacity.
- Secure monetary resources to expand programming to meet the needs of each of the diverse audiences. This would include but not be limited to: providing funding for staff, curricula, professional development, re-examining and adjusting delivery methods, and so forth.
- Change program and delivery methods to meet the needs of those groups within the emerging areas. Focus groups with these populations should be conducted to gather information to include but not be limited to: educational topics, preferred method of delivery, meeting location, marketing strategies, and so forth.
• Form external advisory groups to tackle issues related to each emerging population to help provide and implement recommendations of the focus groups as well as those from the advisory group.
• Encourage advisory group and focus groups to address the issue of hiring minority faculty and staff. What does Extension need to do? Why can’t we hire minorities?
• Expand and build collaborations and partnerships to help provide and increase research, resources, and curricula.
• Market educational expertise through collaborations and partnerships with outside agencies.
• Identify UN–L faculty who have expertise in the cited emerging issues for guidance and direction.
• Create an environment within Extension to provide opportunities for sharing ideas for working with diverse audiences.

Current Situation – Internal Issues
Staff
The Southeast Research and Extension Center faculty and staff combined are 94.85% White/Non-Hispanic, 1.47% Black/Non-Hispanic, and 3.68% Hispanic. They are 72.06% female and 27.94% male. Within the University the combined faculty and staff are 90.36% White/Non-Hispanic and 9.64% minority. They are 51.76% male and 48.24% female.

The average age for Extension Educators is 50, and the median age is 53. The average age of the Extension Assistants is 39, the median age is 37. This does not include the county paid staff for which this information is not available.

Emerging trends/issues – Internal Issues
Staff
There are several emerging issues that are going to need to be addressed simultaneously. With the median age of Extension Educators being 53, projections are that there will be a large group of staff retiring in a short period of time and probably within the next five to ten years. In addition the demographics of the current staff do not currently reflect the emerging demographics of the population of the Southeast Research and Extension Center counties. These demographics include the urban shift as well as the dramatic increase in the Hispanic population.

Implications for Extension – Internal Issues
• With the retirement of experienced staff there will be a need to hire and train new staff with the intent of keeping Extension viable. Focused Educators (staff) to meet needs geographically (urban) and demographically should be recruited. All Extension staff, whether they are new hires or more experienced staff, will need to receive professional development training and education that will better equip them to respond to the needs of the rapidly changing populations. The populations identified in the external issues include: 1) increased audiences of Hispanic/Latino origin, 2) increased number of clientele in the 50-65 year old age ranges, 3) and a growth in the urban population paralleled with a decrease in rural population.
• With increasing emerging population needs and a lack of additional funding for positions, there will need to be continued and increased collaboration and assistance from other agencies and organizations that might have common areas of interest.

**Recommendations - Internal Issues**

• Based on needs assessments and priority programming issues, develop a staffing pattern to fit the changes in the three emerging areas.
• Implement a flexible transition plan for filling vacant positions as staff retires to provide an ongoing, uninterrupted, viable, relevant Extension program which is current with the emerging needs in the District. Assess and identify needs of each position prior to vacancy by looking. This is currently being done but will need to be ongoing utilizing multiple strategies which might include a map which show current program offerings, a map showing where focused areas are currently located and demographics highlighting population, ethnic diversity, rural, metropolitan, etc. This is complicated but needs to be addressed with the current issue of staff retirements in the future.
• Market Extension to help build a strong candidate pool for filling positions.
• Encourage partnerships and networks in all work group areas to leverage additional financial support for staffing.
• Seek grant or special funding to expand a specific targeted issue.
• Offer ongoing professional development to all Extension staff and administration, in order to recognize, understand, and respond to changing programming needs.
• Use current research from the Change Agent States Project for diversity as well as other research to develop our model for diversity staffing. The Change Agent States Project initiated by the National Association of State University and Land Grant Colleges is a catalytic step in beginning the transformation of the land grant system to support diversity. Research from this project as well as other issues facing extension in the area of diversity can be found in the *Journal of Extension*.  

Engaging Our Clientele – Diversity 4a.6
Southeast Research & Extension Center
ENGAGING OUR CLIENTELE: EDUCATIONAL TECHNOLOGY

“If Cooperative Extension is to expand its role as a "brand name" quality source for unbiased, research-based information and education, it must be cognizant of the growing Digital Divide throughout the United States and be a proactive source of change.” (2005 Elbert & Alston Survey of Extension administrators)

The University of Nebraska–Lincoln Southeast Research and Extension Center (SREC) faculty and staff strive toward the advancement of information technology through transformational extension teaching and learning which is vital to the future of Nebraska. In order to achieve measured success, in the area of technology over the next five years, we must have a clear understanding of what technologies are available and what the expectations are for using those technologies.

Current Situation
Access to the Internet and other digital technologies has rapidly become a necessary tool to function in today's information-rich society. In order for an individual to advance economically, educationally, and socially, being digitally connected is even more vital. "A large number of Americans regularly use the Internet to conduct daily activities; people who lack access to these tools are at a growing disadvantage. Therefore, raising the level of digital inclusion by increasing the number of Americans using the technology tools of the digital age is a vitally important national goal." (U.S. Department of Commerce, 2000)

Internet usage is increasing in Nebraska. This represents an opportunity for Extension to reach a broader audience with resources and educational opportunities. As recently as 2000, just 37% of Nebraska households were using the Internet, placing Nebraska in the bottom third of states with internet access. In four years, Nebraska households with internet access jumped to more than 55%, placing Nebraska in the top half of states (Source: Nebraska's online usage rising, Lincoln Journal Star, Sunday, December 11, 2005).

The Nebraska Information Technology Commission reports as of May 1, 2006, 93.37% of the State’s population centers have broadband accessibility:

<table>
<thead>
<tr>
<th>State of Nebraska</th>
<th>Population Total</th>
<th>Population w/Access to Broadband</th>
<th>% Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Population</td>
<td>1,324,719</td>
<td>1,322,445</td>
<td>99.83%</td>
</tr>
<tr>
<td>Rural Population</td>
<td>386,544</td>
<td>275,327</td>
<td>71.23%</td>
</tr>
<tr>
<td>Total Population</td>
<td>1,711,268</td>
<td>1,597,772</td>
<td>93.37%</td>
</tr>
</tbody>
</table>

Population figures are from the 2000 US Census and agree with figures posted on the Nebraska State Highway Map. Map locations with no stated population are not included on this chart (See Appendix) Urban Population figure is the sum of all the population centers. The Total Population is the sum population of all Nebraska Counties. The Rural Population is the difference between the two, calculated down to each county level.

Nationally, Internet penetration has reached 73% for all American adults. The survey also found Americans who have broadband connections at home has now reached 42%, up from 29% in January 2005 (Source: Pew Internet Life Project - April 2006). Ninety-nine percent of public
schools in the United States had Internet access in 2002 (Source: Department of Education's National Center for Education Statistics). Ninety-five percent of public libraries provide access to the Internet (Source: American Library Association).

**Extension Clientele**

In 2005, Elbert & Alston survey of Extension administrators indicated 4-H youth development should serve as a mechanism for technological innovation. This idea was supported in a study conducted by Kolodinsky, Cranwell, and Rowe (2002) who reported 4-H teens training senior citizens on the Internet resulted in a positive learning experience for both groups. A recent study by Barker & Meier (2005), found 96% of Nebraska 4-H youth have access to computers and that 92% had the Internet at home. This research also clarified 4-H youth were looking for more project areas in technology and basic computer skills.

The 2004 ConsumerStyles survey by Porter Novelli, a communications firm with expertise in social markets and the source of all phases of research (under contract by USDA) for the new MyPyramid Food Guidance System revealed the Internet was a top media source for health and nutrition information. They found usage for this purpose didn't vary greatly among lower-income consumers and the general adult population. For example:

- Forty percent of low-income women aged 20 to 40 uses the Internet for health information daily to monthly.
- Fifty-one percent of low-income women aged 20 to 40 turn most often to the Internet, compared with 47% of all U.S. adults.

In introducing the 2005 MyPyramid Food Guidance System, USDA chose an Internet-based version for its initial introduction to the general public. This was due to the high number of people they found having Internet access at home, through school or at libraries.

Although the rate of Internet penetration among rural households (54.1%) is similar to urban areas (54.8%), the proportion of Internet users with home broadband connections remained much lower in rural areas than in urban areas according to the U.S. Department of Commerce (2004).

As explained in a report co-authored by the Departments of Agriculture and Commerce (April 2000), cable modem and DSL technologies were found to be less likely to serve rural areas for varied reasons including lack of population density and geography. However the report concluded wireless technologies such as satellite and MMDS (fixed wireless) are promising technologies for increasing broadband use in rural areas. They are better suited at present than cable or DSL for providing high speed Internet access in areas where population density is low. The report found even at this early stage of wireless deployment, rural households are slightly more likely than urban households to have satellite or MMDS.

In 2005, the Center for Applied Rural Innovation conducted a survey of rural Nebraska counties to determine the perception of rural respondents regarding computers and Internet connectivity issues. The survey was divided by district and metropolitan counties were not included (shown in grey).
SREC - Rural Counties

- Fifty-eight percent of respondents were using dial-up connections at home.
- Thirty-five percent had DSL connections at work.
- Sixty-one percent reported using the internet for work or business was important.
- Persons with higher levels of income are more likely than persons with lower incomes to have acquired Internet access.
- Information searches and email are the most important reasons for having an internet connection.
- In general, rural Nebraskans say their satisfaction with various features of their internet connection has increased during the past ten years.
- Persons living in or near the larger communities are more likely than persons living in or near the smaller communities to say their satisfaction with the speed of their internet connection has increased during the past ten years.

Extension Faculty and Staff
In the 2005 Elbert & Alston survey, Extension administrators were uncertain if the university Extension system in the United States, as a whole, was adequately prepared to address the current digital divide. Additionally, they stated county Extension offices should be equipped and staffed to serve as centers of learning for technology. Moreover, they indicated a need for Extension personnel to receive more training in the area of information technology. They felt Extension personnel must be highly equipped and trained if they are to act as change agents in society, serving as models of innovations and practice (An Evaluative Study of the United States Cooperative Extension Service's Role in Bridging the Digital Divide, Journal of Extension, October 2005).

Emerging Trends/Issues
In 2006, Jim Emal, Professor and Director, Strategic Technologies, University of Nebraska and Ann Byers, Community IT Manager, Nebraska Information Technology Commission published a list of emerging technology trends.

- Technology is becoming more personalized.
- Technology is enabling instant communication.
- Technology is becoming more mobile.
- Technology is facilitating the creation and sharing of content.
- Technology is increasingly being used to facilitate social interaction and collective action.
- Micro-commerce will become more widespread.
- Video, voice, and data will further converge.
- Devices will increasingly communicate their (and our) location and status.

A changing world. “Technology will continue to change how we communicate, socialize, and work, creating a more personalized, instant, mobile, creative,

Implications for Extension
Survey of SREC Faculty & Staff
Summary: In the fall of 2005, University Specialists and SREC faculty and staff participated in a roundtable discussion on educational technology. This resulted in the development of an on-line survey for SREC faculty and staff to help determine current usage and needs for educational technology. Feedback from staff was very positive with 102 surveys submitted.
Clearly, the biggest issue among those surveyed was the need for on-going technology training opportunities. Only 47% of staff believed they were adequately prepared to use technology in a teaching situation. Fifty-six percent reported they do not have all the technology resources and skills to do their jobs. Yet, 99.9% of SREC faculty and staff believe keeping up with new technologies is critical if extension is to remain a viable resource for Nebraskans.

The survey found staff preferences for training were regularly scheduled training updates with hands-on training. Technology updates at meetings/retreats or on demand also scored high compared to the status quo. More than 25% of respondents need training opportunities or want to learn more about 27 different technology software applications. Forty percent requested help to learn more about graphics editing, desktop publishing and database web applications. Thirty percent desired advanced skills using Microsoft Word, Excel, University Web templates, Web surveys, graphics editing/arcsoft, PowerPoint, GPS software/devices and more.

Several survey respondents expressed willingness to help work with staff to help teach basic technology applications such as word processing, spreadsheets and more.

Of 102 staff surveyed, improved connectivity was rated the lowest need among the majority of Extension offices in the SREC District.

See Appendix: 2006 SREC Educational Technology Survey of Faculty and Staff.

**Recommendations**

*Professional development is key to effective technology integration and increased student learning. Educators must have ongoing technology training and support to learn how to integrate technology tools into their teaching strategies (US Department of Education, 1996).*

If technology is to be utilized as an educational tool, Educators must possess the confidence, understanding and skills to effectively incorporate technology into their educational practices. Properly trained extension faculty and staff ensure that both the University and the citizens of the state of Nebraska receive maximum return on their technology investments.

1. Develop a proactive approach for extension faculty and staff to adapt to and utilize evolving educational technology. The key to this strategy will be to develop plans supporting the efforts of the five-year plans for the SREC Issue Teams and efforts to engage clientele while remaining flexible to adapt to changing technology. The strategy must address the evolving needs of both extension staff and clientele.

   a. Work Group. Establishment of a SREC Educational Technology Work Group comprised of District staff and Extension Specialists. This collaborative team will develop a vision, mission, goals, and objectives focusing on the use of technology for extension teaching and learning. The action team will monitor trends in educational technology, evaluate the changing needs of learners, and continually re-evaluate/modify plans to meet the changing demands of clientele and staff. The Work Group will also explore the possibility of an urban survey for counties not included in the 2005 CARI study.

   *Fiscal Impact Consideration:* Minimal impact if travel is limited and on-line technologies utilized for work group planning. Resources can be explored through technology grants offered by Extension. The urban survey may require funding.

   b. Coordinator. Appoint an educational technology coordinator for SREC. The coordinator will ensure the action plan is implemented and serve as a catalyst for communication between staff, action team members and administration.
Fiscal Impact Consideration: The position may require a change of appointment or percentage of appointment dedicated to the position.

2. Implement sustainable professional development opportunities. Every staff member in the Southeast District must have easy access to professionals with expertise in technology and pedagogy.

   a. Reduce the barriers to on-going professional development. Extension leadership must reestablish relationships within Communications and Information Technologies (CIT) to support on-going professional development training and resources for extension staff.

   Considerations: SREC does not determine staffing or programming policies for CIT. At the time of this report, CIT does not offer on-going technology training, but a recent training for extension faculty and staff on WebEX (NUSkills) may lead to more opportunities for CIT to offer training.

   b. Establish relationships within other University departments for staff training, resources and support. This may include Information and Technology Services on the main University campus, College of Engineering & Technology, College of Education and Human Sciences, J.D. Edwards Program

   Considerations: Due to limited funding and reduced support for professional development resources for extension staff from CIT, SREC leadership must broaden the scope of resources available to Extension staff for technology assistance, and educational technology professional development.

   c. Peer-to-Peer Coaching. Extension staff are willing to mentor and work with peers who wish to integrate technology or have specific technology questions. A resource list of extension mentors will be developed and made available on the SREC Web site. This list could expand to include the Institute of Agriculture and Natural Resources (IANR) faculty and staff with expertise. This will involve an extra commitment by staff willing to serve as mentors.

   Consideration: Mentors will be making an extra commitment to help staff with technology resources and training. Volunteer mentors would be able to create an educational objective and evaluate impact to include on their Annual Report of Faculty Accomplishments.

   d. Peer-to-Peer Sharing. The Educational Technology Action Plan team will develop and implement an on-line bulletin board forum for staff to communicate new ideas, share resources and resolve technology issues. This sharing will create a virtual learning community for extension staff.

   Fiscal Consideration: Depending on the technology used for the forum, minimal costs are expected if SREC explores software that is readily available. Moderators for the on-line forum will be staff volunteers and CIT technology specialists.

3. Reduce obstacles that hinder progress and success. It is difficult to focus on integrating technology to support learning if Educators and staff cannot overcome basic technological equipment and facilities issues.

   a. Assess the technical support staff allocation for the District. Lancaster and Douglas-Sarpy Counties have their own county paid technical support staffs. Dodge, Washington and Saunders counties are supported by staff at the Agricultural Research and Development Center (ARDC). The remaining counties must rely on one technical support staff member who is housed at CIT. This individual also supplies virus and computer support for four other units.

   b. Continue to improve internet access for county offices. All county offices should have wireless capabilities and high-speed access to the internet.

   c. Cost-sharing. SREC has aggressively offered county cost-share which has aided in Extension staff staying current with computer hardware, laptop computers and PowerPoint projectors. This strategy should continue when the District and state budgets allow.

   Consideration: University Computing Services recommends replacing 25% of computer hardware each year in order to stay current.
d. Administrative/Campus support. Encourage leadership, support and sustainable technology resources within CIT.

Fiscal Consideration: Develop a budget where SREC staff can participate in training to keep pace with ever-evolving technology and clientele needs.

e. County Web Template. Extension staff must have access to an easy-to-use, reliable, sustainable Web site resource for county offices. The county Web sites have not been evaluated, revisited since implementation of the first design. Since that time the University has implemented standards for all University Web sites. The current design of the county Web sites does not meet the University’s standards.

Considerations: Funding will be required for the technical support staff and cost-sharing of equipment. Priorities and funding of positions within CIT are not determined by SREC faculty and staff. However, SREC leadership should continue to work with administration to address the professional development and sustainable technology needs of Extension faculty and staff. It is imperative SREC Web sites comply with the University standards with a sustainable Web resource.

Outcomes

“If we teach today as we taught yesterday, we rob our students of tomorrow.”

–John Dewey, noted educator

Lifelong learning applications using digital technologies and distance education offer limitless possibilities for extension. By following the recommendations outlined in this report, the Southeast District will evolve and improve in order to support the vision of the University as a place where good practices and technological tools help Educators teach and learners learn...better.

Sources:


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ENGAGING OUR CLIENTELE:
MARKETING AND PUBLIC RELATIONS

On-going evaluations of existing University of Nebraska–Lincoln Extension in the Southeast District heretofore referred to as Extension programs indicate the efforts are relevant programs which are responsive to community needs. These educational programs have also been evaluated by participants to be of excellent quality. The directions laid forth in this review of the Southeast District will continue the mission of providing high quality educational programs to benefit the Nebraskans we reach.

Current Situation
A 2003 study conducted in Douglas and Sarpy Counties by Leslie Associates, Inc. revealed a level of identity confusion among the public in regards to Extension. The results showed that while the majority of the general public had an awareness of various programs such as 4-H youth development and Backyard Farmer, many of those same respondents were not aware that they were delivered by Extension, or in some cases had even heard of the organization. In fact less than one-half (43.8%) of the interviewees had heard of Extension. Based on personal experience, the members of this team feel our name is more widely recognized in rural areas of the District, but as a result it is believed that many, who do recognize 4-H and Extension, hold the stereotype that we are an organization which serves primarily agricultural constituents.

Emerging Trends/Issues
Over the next five years, a number of factors appear to be in position to make the marketing of Extension increasingly important. As these elements progress in Southeast Nebraska, Extension must be in a position to address the impact they have on our visibility and image, or as a system we run the risk of becoming perceived as irrelevant and unnecessary.

Those trends include:

- The implementation of term-limits for Nebraska legislators could have reaching impacts on Extension. Many who know and support our efforts will be leaving office. It is crucial that Extension have a strategy to maintain and build a positive image among Nebraska’s state senators.
- As urban centers within the District continue to grow, the stigma as Extension as a solely agricultural entity threatens to negatively impact our image.
- County funding of Extension is not mandated. As counties consider ever-tighter budgets, it is important that local decision-makers view our programs as crucial to their communities without being duplicative of efforts of others in the community.
- While most faculty/staff of Extension recognize the need to increase our efforts regarding marketing and PR, very few have expertise in this area.
- In this information age, it is more important than ever for Extension to be recognized as a provider of unbiased, research-based information. There is, as a result of the surplus of information, an increased risk of consumer misinformation if this is not effectively conveyed.

Implications for Extension
Extension’s marketing is crucial to its impact in the communities across the District. Our funding is at the discretion of decision makers at both the county and state level. Those elected officials must view
our programs as relevant to the needs of the constituents whom they represent or the funding source is further jeopardized. The responsibility for educating these decision–makers lies at the state, district and local levels.

It is crucial that all citizens of Southeast Nebraska understand that Extension is an unbiased resource, and something that positively impacts their life. For many of them, Extension has already touched their lives, but if they are unaware of that, they will not advocate on our behalf, or recommend us to others.

Considering recent changes in our name and logo, the visibility of Extension within our District is at a crucial time. If stakeholders do not associate our organization with the programs we deliver, or worse yet, do not recognize us at all, how can they be expected to value the programs we bring to their communities?

With the timing of the trends listed above, this is a crucial moment in the viability of Extension. Proactively addressing these issues, in particular the impending changes in the State Legislature, can position the Southeast District to become much more widely recognized as the essential resource for residents.

**Recommendations**
The vision of this team is an atmosphere within the District in which all citizens in Southeast Nebraska recognize and seek out Extension as a provider of educational programs relevant to their needs.

As the Leslie Associates study brought to light, the vast majority of Extension programs are viewed by participants and the public who are aware of them as valuable. That same study showed however, that in many instances, even those benefiting from the educational programs offered do not connect them with Extension. This failure by decision makers and clientele to connect the programs to the organization falls upon the entire District.

This team recommends a multi-tiered approach to improving our public identity. Those tiers consist of delivering a consistent message to current users of our programs, expanding the knowledge base of our users to include the vast array of educational opportunities available through Extension, reaching out to clientele with no prior knowledge of Extension, and staff development.

**Consistent Message**
One potential reason for our prior public awareness shortcoming is the lack to this point of a consistent message. In the past decade Extension has experienced a number of changes in the name and logo which represent our organization. We now have a consistent name, University of Nebraska–Lincoln Extension, which has been provided us by Administration. We also have a universal logo, which reinforces the link between the University and Extension. Over the next five years, this name and logo must remain constant and should become focal points for all faculty and staff across the District. These features should be steady, so that a person calling the office or attending a program in any county in the District hears a similar message. Ideas for implementing this consistency across the District include:

- Answering the telephone with a similar message, perhaps “University of Nebraska–Lincoln Extension in ______ County.” This emphasizes the link to the University and to our respective counties, without being so long it sours the caller.
- Use of the logo on any media, printed or electronic produced by Extension.
• Every Extension faculty and staff member begins all programs with a five-minute introduction video highlighting aspects of Extension beyond the realm of the purpose of that day’s event.
• An Extension logo should appear on certifications and licenses for which Extension provides training. Ideally, this mark will become a symbol of pride, along the lines of something from Better Business Bureau that lawn care companies display on their vehicles and restaurants display in their entries.
• The Extension logo should be printed along with the 4-H Clover on window clings and other gifts given to sponsors in every county in Southeast Nebraska as well as on awards given to youth in the 4-H program.
• Make available more business attire (ties, blazers, polo shirts) which establishes a link between staff/faculty and Extension.

Scope of Extension
The Leslie Associates study showed even those who have used our programs were unfamiliar with the scope of educational programs offered by Extension. We must do a better job of acclimating clientele to the variety of resources available to them through Extension. Suggestions for broadening clientele’s vision of Extension include:

• The development of a PowerPoint slide show or video highlighting the impacts of successful Extension programs locally as well as on a district and state level. Similar to the scrolling ads shown before movies, these slides would loop constantly on the screen before the start of a program.
• Counties which produce program specific newsletters (i.e. 4-H, Master Gardener) will be encouraged to include a regular feature highlighting another program of Extension.
• SREC should expand on the “umbrella concept”, the idea that the many programs of Extension fall under one umbrella. Whether you are a Master Gardner, a 4-H member, ServSafe participant or any other beneficiary of an Extension program you are under the same umbrella. Development of programs and promotional materials with the “umbrella concept” will expand the understanding of the range of educational programs offered.
• If it is not already being done, the Extension logo should appear in conjunction with other, program specific brands. For example, 4-H window clings should contain both the clover and the Extension mark.

Marketing to New Clientele
There still exists a substantial population who has never knowingly utilized the educational resources of Extension. Within that group are two categories of clientele, those who truly have not been impacted and a much larger group who have in all likelihood benefited indirectly from an Extension program, but who remain unaware of that fact. Examples of the latter might be someone who dines at a restaurant which has participated in ServSafe, the parent of a student who has completed a 4-H school enrichment project, or a homeowner whose lawn is maintained by a commercial applicator who has completed training through Extension. While those people have never attended an Extension class, they have in fact been impacted by the educational outreach of Extension. Until we educate them about the impact Extension has on their life, those people will certainly not be advocates of Extension, nor are they likely to seek out additional learning through Extension.

Recommendations to increase awareness of Extension among all citizens of Southeast Nebraska are:

• The designation of having been certified or educated by Extension should be viewed as a symbol of distinction, similar to having been recognized by the Better Business Bureau. Restaurants, lawn care companies, childcare facilities, etc should be provided with appropriate
materials to document their affiliation with Extension educational programs. Those entities should be encouraged to display those things on entries, yellow page listings, company vehicles, etc., to show the product or service they provide has been enhanced by Extension.

- The “umbrella concept” described above can also be used in print, radio, Internet, and other types of media to educate the public of the impact Extension has already played in their lives. e.g. “If you have ever eaten at one of the following restaurants, the food you ate was safer because the management completed ServSafe training through Extension.”

- Unit administrators are encouraged to explore the possibility of tapping into the resources of undergraduate students in the Marketing Program of the College of Business Administration (CBA). Using the knowledge of those students could provide a cost-effective manner with which to identify new methods of promoting Extension to previously un-reached audiences.

- The creation of a marketing page on the SREC and/or Extension website(s) is recommended. This page would allow faculty and staff to share marketing ideas with one another. A monthly marketing tip (perhaps from the aforementioned CBA students) would also be included on this webpage.

- A marketing publication will be designed. The target for this piece will be audiences with no prior knowledge of Extension. The piece, being developed by members of this team will focus upon Extension’s relationship with the University and the wide scope of programs offered across the Southeast District. The “umbrella concept” will again be used, with an over-arching message of our mission: “We Teach!” Subsequent pieces can be developed for each action team area focusing on more specific programs and the impact they have on the district and state.

- Time must be allocated by administrators, campus, and county faculty and staff to address the knowledge base of staff members in the Nebraska Unicameral. The impending enforcement of term-limits will result in the loss of numerous legislators, several of whom are supporters of Extension. Through educating staff members who will in many instances remain when a new Senator takes office, we can maintain or increase the understanding these decision makers have of Extension and its impact in the state.

Staff Development
As was previously acknowledged, the majority of Extension professionals have training in subjects other than marketing and public relations. This team recommends that all Extension staff/faculty be offered media training. The focus of these sessions will be to provide the members of Extension the tools needed to deal with media in stressful situations, to utilize the media to spread the word about programs, and to encourage more use of the media to share programming successes.

It is also recommended that SREC form a Marketing Committee. This committee, with rotating membership representing the entire District, would network with CIT to design and implement some of the materials discussed in this paper, to plan and evaluate the aforementioned media training in-services, and to ensure that the District’s marketing strategies remain fluid and adapt to best serve our vision.
ENGAGING OUR CLIENTELE:
STUDENT RECRUITMENT

In the academic year 2004, the College of Agricultural Sciences and Natural Resources (CASNR) saw a slight decrease in undergraduate enrollment (-3.5%) at the beginning of the fall semester. However, the graduate programs in CASNR experienced an increase of 2.6% or approximately 24 students for a total graduate enrollment of 632. Overall enrollment at the University of Nebraska-Lincoln has followed a similar pattern with fall enrollment decreasing by 116 students or roughly 2% from 2004 to 2005. Despite the increase in the size of the freshman class of 2005 (an additional 300 students for a total of approximately 3,500 students), in the last two academic years the University has graduated some of its largest classes -- 4,336 and 4,446 in 2004 and 2005 respectively. Simply stated, the increase in the freshman class is not compensating for the loss of graduating students.

Current Situation
Each Extension faculty member has a portion of his/her appointment designated for student recruitment. Due to programming responsibilities, faculty members devote a varying amount of time to recruitment. A committee of individuals interested in student recruitment has been formed to help move our District forward in this area.

The counties closest to the University campus are in our District so it makes sense for us to actively communicate with students in the area. Communication from the University campus to Extension offices in the District and vice versa regarding recruitment and related activities needs to be strengthened. This District has Extension Educators and Assistants specifically focused in youth development, 4-H and after-school programming. We also have six individuals working as student recruitment contacts in cooperation with the Extension Liaison from University Admissions. These resources position the Southeast District to assist University and CASNR with student recruitment activities. This report will show our vision of how the Southeast District can enhance student recruitment efforts in the next five years.

Emerging Trends/Issues
In the area of recruitment within the Southeast District several issues/trends will influence the way in which the goals of this committee are reached. Dealing with a new generation of youth and the characteristics associated with this generation will play a role in the way we attempt to communicate information to them. In addition, the cost of University tuition will be an issue as costs continue to rise here and in surrounding states. The perspectives of both students and guidance counselors on Extension and University recruitment overall will play a role in the way in which recruitment contact continues.

Millennial Generation
The current generation being actively recruited in the next five years has been dubbed the Millennial Generation. University Dean of Admissions, Alan Cerveny, defines this group of prospective students as smart, ambitious, incredibly busy, ethnically diverse and primarily female. These students have seven high level characteristics that will influence the success of recruitment initiatives from Extension and the University in general.

1) Special – This generation has a consumer mentality and high expectations that could come in the form of entitlement. These students want to feel sought after. Millennials also will require that their special needs are addressed with individual plans. It is important to recognize in
planning recruitment activities that parents will be partners in the college choice.

2) **Sheltered** – Millennial students have lived structured and highly supervised lives. Students want to interact with faculty and staff who care about them and will engage and stimulate them in the academic process.

3) **Confident** – In this generation, the overall attitude has changed to a more positive tone -- “good things will happen if you make the right choice.” Potential students want to know that they will make lifelong friendships and that they can make a difference on campus.

4) **Team Oriented** – Millennial students have been involved in teams since childhood and are cooperative team players. Recruitment of key students in the school will be important for other students attending. Students want to know that they will have opportunities for involvement both inside and outside the classroom.

5) **Conventional** – Students from this generation are accepting of authority and are most generally inclined to follow the rules. These students prefer acting in groups and trust in ‘brand names.’

6) **Pressured** – Potential students in the Millennial generation list their top worries as grades and college admission. They are pressured to succeed and have long-term plans for security, stability and life balance. They are seeking a college education that can help them achieve this lifestyle and fits into their life plan.

7) **Achieving** – More than any previous generation the Millennials are bright, morally earnest and industrious. They feel no need to rebel and do not label themselves as a radical generation. Millennial students see the academic reputation of the school as a critical attribute, and they will be looking for unique educational opportunities.

**College Costs**

Cost is certainly an issue emerging as a major deciding factor for prospective college students. The University office of Scholarships and Financial Aid estimated that in-state undergraduate tuition for a full time student would be $5,620 in 2005-2006. In comparison with other land grant universities in the Midwest, the University ranks within $50 of the tuition cost at Iowa State. The University of Missouri ranks much higher charging $7,415 for in-state tuition in 2005-2006. Both Kansas State University and the University of South Dakota are comparable for in-state tuition within roughly $500. When looking at the percentage increases in tuition within other institutions, the University is holding at a 6.7% and 5.6% increases for in-state and out-of-state tuition respectively. Of the other land grant universities previously mentioned, none has a percentage increase in either in-state or out-of-state tuition lower than those at the University.

Although many states adjoining Nebraska have programs providing tuition assistance for students, Nebraska’s cost per credit hour (figured on a 15-hour registration) is more economical than Kansas State, South Dakota State, Iowa State and Colorado State.

**Student and Counselor Perceptions**

In early 2005, 393 students in agriculture education (FFA) classes at 10 different schools in the Southeast District were surveyed to determine their intent to attend college in Nebraska and if their desired course of study would relate to agriculture. In reference to this issue, of the 50% students surveyed who answered “no” to the question “Does your degree/career involve agriculture, science or natural resources?” the top ranked reason was “I hate science.” This presents a challenge for Extension
personnel working to help students understand the relationship between area of study and career choice, specifically when Extension has strong connections to the College of Agricultural Sciences and Natural Resources.

From the perspective of the students, this survey reflected that these students were less than impressed with recruitment efforts from the University. Of the students responding, 55% ranked the University as having poor to mild recruiting efforts. When asked how we can increase student recruitment efforts, the top three responses from students were (1) “come talk to us” (2) “tell us what you have” and (3) “lower the cost (of tuition).” As seen in these responses, students do not feel that they have contact with the University. In addition, 90% of students responded that they had never had personal contact with a University recruiter.

In January of 2006, guidance counselors in the Southeast District were surveyed to determine information needs on recruitment and opportunities for connection between local Extension offices and the schools. The majority of the surveys returned indicated that although they knew their local Extension office existed, they were unaware that information on the University and admissions could be obtained there. Several instances were shared where the Extension offices regularly provided information, though this information was not always related to recruitment of students. Students in the current recruitment class live very structured lifestyles and need help understanding how to get from ‘point A’ to ‘point B’ in their educational goals. One request of the University as a whole was an evaluative tool to help students determine a major or a career that would be good for them. (All survey and statistical data can be found in Appendix).

**Implications for Extension**

While people do not always recognize what “Extension” is, they often recognize the term “4-H.” A survey done by Leslie Associates in 2003 showed that 96.6% of respondents had heard of the 4-H program while only 43.8% had heard of Extension.

This is an alarming statistic as our work with youth is crucial to their associating a face with the University. Extension needs to be more visible as a University affiliate at county and state fairs, Ak-Sar-Ben, as well as FFA, FCCLA and other youth events. This need is evident in the survey responses of both agricultural education students and the guidance counselors.

We know that the potential students in the Millennial generation need to feel sought after and to feel that faculty and staff care about their progress in their college career. In addition to setting up University displays and signs at youth events, University faculty (including Extension staff) can present information to prospective students on careers and majors, showing the University’s active interest in them.

Extension is in a position to form positive relationships with school guidance counselors and serve as a direct link to the University during times when the University Admissions Recruiter is unavailable. More than any generation before them, today’s potential student needs to be wooed and convinced of the benefits of the University, as do their parents. The community contacts with both parents and potential students through the Extension staff in the county provide a unique opportunity for Extension to create a link to the University as the academic institution of choice.

Being a link for the University to the people of Nebraska requires that the connections between the University and Extension become much stronger through clearer communication of events and recruitment protocol. The Southeast District because of its proximity to the University has obvious
potential for creating a strong relationship between University staff and Extension staff, and from Extension staff to potential students and their parents.

Extension’s work in recruiting directly supports University resources such as faculty whose funding is dependent on tuition revenues. As a part of the University, Extension has a responsibility to participate in the recruitment of new students.

**Recommendations**

**Plan of Work**

To enhance the success of student recruitment our team has formulated one major goal with three underlying objectives. The goal is based on input gathered from high school students, guidance counselors, Extension faculty and admissions personnel regarding student recruitment. We feel it imperative that Extension focuses on those areas it will best be able to control and influence.

Following are this group’s plan of work for the area of student recruitment as well as recommendations from this group to others (not in Extension) involved in the student recruitment process.

The goal of the student recruitment group is

> To enhance the productivity of student recruitment efforts as conducted through cooperation between the University and Extension for the ultimate benefit of the student.

The objectives through which the above goal will be reached are:

- **Objective 1**: Southeast District Extension staff will recognize key resources, information and protocol necessary to participate successfully in recruitment activities.

  **Plan of work for Objective 1:**
  - Develop an on-line monthly newsletter for Extension staff which provides tools and information necessary for student recruitment.
  - Determine a protocol that Extension staff can follow to know whom we need to contact in order to sign up students, offer scholarships and arrange for a personal contact, etc. Specific information on whom to contact regarding scholarships needs to be available in writing from the CASNR Dean’s Office.
  - Obtain an Undergraduate Bulletin for each office in the Southeast District.
  - Develop an on-line faculty/department recruitment directory to help us point potential students to specific faculty for information on majors and careers.
  - Collaborate with Jill Brown and career education trained Extension Educators to train 7-10 Extension staff willing to speak in schools. This commitment will last for one year and the staff will speak to 3-5 schools.
  - Coordinate with Jill Brown, Laura Frey and Lila Tooker to develop recruitment presentations and/or to allow presentations they have already developed to be placed on the Southeast District website so all counties have access to them.
• Place the on-line recruitment directory of faculty/departments, recruitment newsletter, career recruitment presentations, and any additional recruitment information on the Southeast District website for all counties to access.

Objective 2: Southeast District Extension staff will establish positive relationships with potential students, parents, teachers and University staff to provide quality recruitment experiences and information.

Plan of work for Objective 2:
• Create student recruitment/career displays that are uniform for the District (available statewide) or purchase pre-made displays from someone in Career Services/Administration to be used at county fairs and other Extension or school events.

• Build a relationship with guidance counselors, science teachers, family and consumer sciences teachers and agriculture education teachers through on and off-campus opportunities facilitated by Extension staff, as well as regular communication of campus-related information and/or events.

• Utilize the Talisma contact management database in place at the University to build contact with potential students and help them develop a stronger connection with the University. The list will be sent out to each county twice a year with suggestions on recruitment activities to do with county youth. In addition, Extension staff will be able to invite youth not on the list to the activities. For those students from this list admitted to the University, Extension staff would have the opportunity to host an Academic Signing Day to announce students having committed to attending the University.

• Continue to provide on campus opportunities for tours with 4-H members, leaders, Extension Boards, and others within the counties.

Objective 3: Southeast District Extension staff will identify appropriate ways to evaluate their efforts in reaching potential students.

Plan of work for Objective 3:
• Develop a District-wide database through the Southeast District website to maintain contact information on any student in the eighth grade or lower, as the Talisma system is only capable of holding prospective student information on those at the freshman level or higher.

• Form an advisory council to guide the way in which the District’s annual budget for recruitment is disbursed. This council would include three Extension Educators focusing on career education, the three members of the recruitment review team and the District Director. They will work closely with approximately 24 student recruitment contacts in the District. Additional input will be provided by Laura Frey from CASNR Recruitment, Jill Brown from CASNR Career Services and Lila Tooker, the University Recruitment-Extension liaison.

• Develop a survey for a five-year follow up with former 4-H members in the Southeast District to determine the influence of recruitment based experiences in 4-H on their recent/current educational and professional life choices.
• Utilize a guidance counselor survey on a yearly basis to be in contact with these individuals and determine the improvements made in the relationship between Extension offices and school counselors.

Recommendations for Recruitment Staff
The following recommendations for University Admissions staff and the recruitment staff of both CASNR and CEHS have been gathered through contact with Extension staff and residents within various counties in the Southeast District.

• Revitalize the content of NU Preview to make it more attractive to high school juniors by adding in active sessions and tours.

• Notify Extension staff of recruitment-based events on campus 4-6 months in advance, in order to notify students, register attendees in a timely fashion and develop excitement around the opportunities offered.

• Take all aspects of the student into account when assessing potential student abilities in a future college career, rather than basing pursuit of the student on college entrance exam scores alone.

• Have student recruitment materials printed and displays assembled in time for the beginning of county fairs.

Conclusion:
We believe the plan outlined here will allow the Southeast District to participate actively in the recruitment of potential students. Cooperative efforts between Extension staff and those University staff members active in recruitment will be necessary to reach the most students in a positive, productive way. This plan provides a structure under which these efforts can take place successfully.

Extension staff members have continually worked to provide students, parents and school personnel with a University contact in each county. The plan of work set forth here proposes to celebrate those efforts and continue to (1) identify key resources and recruitment protocol, (2) build quality relationships between University and school personnel and (3) evaluate the efforts of Southeast District Extension staff in recruitment activities.
ENGAGING OUR CLIENTELE:
URBAN INITIATIVE

“A healthy and vibrant urban extension program will strengthen rural extension efforts and the system as a whole.”

Dr. Chester Fehlis, retired Texas Extension Director and former chair of Extension Committee on Organization and Policy (ECOP)

Current Situation
The mission of University of Nebraska–Lincoln Extension is to help Nebraskans enhance their lives through research-based information and education. Extension delivers this information through publications, direct teaching, satellite programs, the Internet, media (print and electronic) and through the 4-H youth development program (traditional, independent, school enrichment and out of school programming).

The 2000 Census indicates that approximately 850,000 people reside within Nebraska’s three most populous counties, Douglas, Lancaster and Sarpy Counties. In addition to population figures, a majority of the 118,000 4-Hers in Nebraska reside in the SREC; 33,400 4-H youth reside in the three listed counties. The urbanization of Omaha, Lincoln and the surrounding suburban communities demands that Extension position itself with strategies to address issues facing these communities. With nearly one-half of the state’s population, and the stakeholders who represent that constituency located within these growing urban centers, it is imperative that Extension leverage staff and resources in order to be relevant, responsive and respected within this unique urban audience. To quote Dr. Chester Fehlis, retired Texas Extension Director and former chair of Extension Committee on Organization and Policy (ECOP), “A healthy and vibrant urban extension program will strengthen rural extension efforts and the system as a whole.”

The 2000-2008 IANR Strategic Plan emphasizes the need to “refocus some IANR programs to give increased impact to urban stakeholders” (p. 7). Formalization of an Urban Extension Initiative will provide this new focus for Extension in Douglas, Lancaster and Sarpy Counties. As other Nebraska communities, such as those along the I-80 corridor experience continued growth, this model for urban extension will serve them well in adapting to better meet the needs of their changing clientele. This growth within communities can be seen along the I-80 corridor in the tri-city area of Grand Island, Kearney and Hastings as well as in the Fremont area.

Emerging Trends/Issues
For Extension there are multiple challenges both in the programming area and in the fiscal area. Programming is a continual effort to enhance the lives of all citizens in our communities. For extension that means enhancing the lives of our citizens in the areas where we have expertise. The paid staff and volunteer staff are excellent at evaluating these programming efforts.

A part of this challenge is the rapid change in technology. Our challenge is to meld the use of technology with the hands-on personal experience extension offers to our audiences. Today there are three major clientele groups; one that doesn’t or won’t use technology to learn, a second group who use the mix of technology, although they still want that personal touch, and finally those who really want to learn via some method of technology. The key point is that an increasing number of clientele...
have instant access to information through the internet, cell phones, Blackberries, cable or satellite TV and iPods. People are searching for new information all the time; how they handle and process information will impact their lives. While Extension introduces considerable educational information it also has a role in the process to verify, validate and confirm the accuracy of information from other sources.

In our process of providing non-biased research based educational information we must deliver information in the manner that our clientele would like it received. This is part of the force behind the national eXtension initiative, finding the technology and using it effectively, as well as all the other methods extension has and will use to deliver our message. The delivery methods utilized will vary, however these methods must be high touch, i.e. provide the opportunity for interaction. People like high touch even in a highly technical atmosphere; relationships are as important as the information; personal attention denotes high quality; all extension staff must be caring; and quality customer service is critical. Programming will be delivered through partnerships, within neighborhoods and within specific areas of interest.

The financial challenge is ever looming. With all levels of government evaluating how and what they fund, we must carefully select the areas of education we will provide to the public. We must also look to generate more dollars through grants, fees and contracts. Extension staff has moved that direction but we must continue to work toward becoming more self sufficient. Moving in the direction of self sufficiency means that we will spend more time generating dollars. This time will take time away from teaching. The view of this team is to move the funding responsibilities to specific staff and let the Educators and Assistants/Associates continue to do the teaching. A more diverse funding stream will be more important in the future.

The political situation is also different within the SREC. The majority of the state senators live in the Southeast District. This places our District in a fish bowl; which means extension is more visible therefore we must always produce high quality programming. In addition, with term limits now in place there will be 21 new state senators in 2007. They will need to be educated concerning extension and time will need to be spent building relationships.

The ethnicity of the population within the SREC is changing rapidly. As the population continues to change, the foundation for our programming, our staff and our marketing will also need to change to stay relevant (Diversity Report).

Accountability in government and education is increasingly important. We will increasingly need to show program impact to the public and public decision makers. Public relations will be an ever important part of our daily work. (Marketing Report)

**Urban Initiative**

As a means to review and evaluate urban extension programs around the country, Extension Educators participated in numerous tours and fact-finding visits. Faculty visited Extension in urban centers in Missouri, Texas and Wisconsin. Many programs were studied. One idea already implemented was an urban educator in both the Douglas/Sarpy and Lancaster units. These positions are responsive to community neighborhoods and university outreach needs within Nebraska’s urban centers.

The goal of urban programming is to improve urban residents’ quality of life by providing greater access to the Land Grant University through Extension opportunities. As part of those identified needs the goals and objectives of all urban educators will have two distinct educational aspirations: 1) expanding the visibility of Extension among urban clientele and, 2) building the capacity within
residents to plan and progress toward positive changes which will impact the future of urban neighborhoods.

**Goal 1: Expanding Visibility**

Extension programs within urban environments have clearly defined objectives and impacts. Many citizens in Nebraska’s population centers are unaware of those outcomes or the extensive resources which can be obtained within their communities through Extension. One goal will be to educate various audiences within these urban centers of the availability, relevance and impact of the vast array of programs being conducted by the outreach component of the University in their communities.

Target audiences for this educational mission include, but are not limited to:

- Neighborhood Associations
- Community Organizations
- Community Centers
- Ethnic Centers
- Schools
- State Legislators and their staff
- Mayors and City Councils
- County Commissioner/Supervisor Boards
- Media Outlets
- Planning and Zoning Boards

The objectives of urban extension fall within the educational goals which are defined by the priority areas which have been identified by Extension’s leadership team, and the action plans which exist state-wide. Within these goals are potential objectives:

- Identify and obtain grants and other sources of funding to enhance programs.
- Leverage resources by enhancing partnerships with other agencies, urban universities and the federal government.
- Reach urban audiences through intensive public information campaigns, media work, large scale events and expand e-learning opportunities. However we must be able to deliver the quality programs we market.

**Goal 2: Building Capacity**

Community capacity building is an essential function of an urban extension program. Development within any community, urban or rural consists of many components. A successful urban community educator will be a driving force in the awakening and revitalization of urban neighborhoods. Many neighborhoods possess the resources necessary to recapture the positive and minimize the negative aspects within their neighborhood, but are searching for a nucleus organization with the ability to centralize those efforts and initiate change. Extension can become that organization for Nebraska’s urban centers by:

- Build partnerships and collaborative efforts.
- Facilitate steering committees in drafting strategies for change.
- Provide educational support for technology, economic and personal development within a neighborhood.
- Educate and develop future neighborhood leaders.
- Allow neighborhood leaders to develop and thrive.
- Recognize cultural and ethnic needs and approaches.
• Reach new diverse and minority audiences that reside in our urban areas.
• Make urban neighborhoods safe, healthy places to live and work.
• Give young people and adults a chance to become community leaders.
• Apply research based science to address urban problems (food, environment and health).
• Educate and utilize a huge pool of talented volunteers.
• Find common ground and opportunities that exist between urban and rural communities.

Partnerships
The limited resources of an urban Extension Educator, paired with the large populations in these urban centers and the existence of numerous agencies which are not present in more rural settings necessitates the fostering of existing partnerships and the formation of new partnerships both internally and externally with the University of Nebraska system. Fostering partnerships is critical in an urban setting to identify, develop, and maintain needed programs within the community.

Implications for Extension
Extension’s theme is “We Teach.” We teach to help our clientele improve their quality of life. We are a provider of quality scientific and research based information to community leaders and individuals. This information creates a synergy that provides feedback on discerning future needs. We validate information for our clientele. We facilitate, partner and engage our clientele.

If Extension continues to produce high quality non-biased research based information we will have strong support. By working through this model we will create that synergy.

Recommendations
• Support the new ECOP National Committee on Urban Issues, dialog concerning the issues raised by the committee, and implement the needed recommendations.
• Support Extension staff’s attending the next National Urban Extension Conference to be held May 7-10, 2007 in Kansas City, MO. Encourage staff to make conference presentations.
• Continue to be an organization that produces high quality programming, while maintaining the high touch and personal approach.
• Expand and strengthen partnerships with other agencies, organizations, businesses, and government entities.
• Continue to develop and work a solid public relations plan. Marketing of extension is critical.
• Continue to provide and promote professional development to strengthen staff educational focus.
• Work to create a support organization such as Ag Builders and Family Community Partners in the urban area -- an “Urban” Builder.
• Promote extension and position ourselves so we are at the table when issues are addressed where university resources can be utilized.
• Expand our programming areas of expertise for emerging audiences.
• Work to expand the IANR’s urban focus through the golf management, hospitality and restaurant and tourism, and small animal degrees.
• Create an extension resource library (electronic) that can be shared between the urban offices as well as with all counties.
• Extension staff diversity is important as the mix of the Nebraska population changes.
• Teach cultural awareness, serving the broader audience.
• Extension needs to market the message that we strengthen the state of Nebraska as a whole.
• Use technology effectively in our teaching and delivery of programming.
• Move to increase the sharing between the two largest urban offices related to media work and marketing to create “one” look, which also has the potential to save time.
• Explore the potential of different funding streams to support extension in an urban setting.
• Refer to the recommendations of the other writing teams, specifically the diversity, marketing and technology teams.
• Continue to visit other urban centers to study programs and build relationships with urban educators.

Acknowledgements:

• The SREC has the largest population and the two largest urban centers.
• Increasingly diverse populations will require a diverse staff with knowledge about communicating/working with diverse audiences.
• Smaller percentage of the urban population knows about Extension. Many educational institutions and agencies compete with Extension, therefore more need to strategically market Extension.
• The SREC is the home of three of the four University of Nebraska campuses and the Nebraska Unicameral.
• Within the urban centers there are over 50 languages spoken with large groups speaking these languages representing different cultures increasing the importance of the diversity of staff.
• The planning goals of the 2007 National Urban Extension Conference were one of the resources addressed in the writing of this report.

Sources:


Dr Chester Fehlis, retired director of Texas Extension and former chair of ECOP, speech 2002.
INTERNAL ISSUES:
SOUTHEAST RESEARCH & EXTENSION CENTER
ADVISORY COMMITTEE REPORT

The Southeast District Advisory Committee meets quarterly with the District Director to discuss issues important to the success of our educational programs and our work environment. The fourteen member committee is selected to represent different geographic areas of the District and balances program interests, length of service, gender, age, rank and appointment type. For the past three years the committee has used the Gallup study results to establish projects to enhance the growth, wellness and satisfaction of employees. The Southeast District Advisory Committee set an overarching goal for the Gallup project.

Goal: Use the Gallup Study to enhance the growth, wellness and satisfaction of employees.

2003-2004 Gallup Plan The results of the first Gallup study were distributed to all staff at the fall faculty meeting. An online survey and questionnaire was used to determine which items people felt we should place as priority for improvement. The faculty advisory committee read the survey comments and developed and implemented the following plan.

Priority Question Q1 - I know what is expected of me at work.
Objective 1. Discuss and define clearer roles and responsibilities of Educators and Assistants especially as they relate to regional programming.
Objective 2. Define the core competencies for Educators.
Objective 3. Implement an enhanced training and mentoring program for new employees.

Accomplishments: CED administrative team and the District Directors introduced several documents in the 21st Century Notebook that described the role and responsibilities and expectations. These roles were discussed in small group settings and during faculty evaluation conferences. Beginning in 2005, SREC added administrative support for new Educator/Assistant training. We placed an Extension Educator in the District office one day a week to develop training programs and help train new staff.

Current Discussion related to Retention Retention of staff, particularly Extension Assistants, is important internal issue. A tremendous investment is made in the hiring and training of each new staff member. That investment is lost when new staff stays only a few years and programming efforts are affected at the time delay in hiring and training new staff. This problem is a particular issue for SREC because a larger job market in eastern Nebraska provides a higher standard of compensation for entry level positions and a great ability to change jobs. Reasons sited by staff for leaving University of Nebraska–Lincoln Extension include:
- long work hours
- isolation – only one Educator or Assistant in a county
- too much time spent managing the office and not programming
- Assistants – poor salary for long hours
- needed guidelines to balance work and family and job
- needed guidance on role of an Educator and role of an Assistant.
**Priority Question Q3 and I10** - At work, I have the opportunity to do what I do best every day. My organization delights in making the best use of employees’ backgrounds and talents.

Objective 1. Encourage individual strengths inventories.
Objective 2. Develop an organizational asset map.
Objective 3. Share strengths and assets with all faculty and staff.

Accomplishments: The 2003 spring faculty meeting we learned about mapping individual assets and sharing assets from Dr. John Allen. Plans are to share skills and assets with each other via Blackboard. Using the Appreciative Inquiry process at the 2003 fall conference we focused on our strengths and assets. It was evident from the discussion that individuals are very passionate about education and they value helping people and enjoy working in a focused area.

**2004-2005 Gallup Plan** The results of the second Gallup study were distributed to all faculty and staff at the 2004 fall Conference. With the close of South Central Research and Extension Center we now have about 20 new staff in the unit since the last survey was administered. Using the Gallup study materials an online survey was administered to about 130 individuals. The faculty advisory committee studied the responses and developed the following plan.

**Priority Question: I1** I always trust my organization to be fair to all employees. 
Goal: Increase the feeling of trust and the perception of fairness.

Objective 1. Improve supervisory leadership skills of Educators who supervise Assistants.
Objective 2. Make professional development opportunities available to everyone.

Accomplishments: Each year two unit leader meetings have been scheduled and resources shared on supervision of staff. The Statewide Fall conference featured a supervision workshop. Work needs to continue on these goals. A limited amount of extra money is available to staff who wish to attend workshops.

**Current Discussion related to Perceptions of Fairness** Diversity of resource availability is an issue because the District contains the state’s largest counties and also some of the smallest. Educators in larger counties often have more time and support to be focused Educators than Educators in smaller counties. Extension offices in large counties have many resources to draw on, including greater numbers of support staff, larger county budgets, larger programming audiences and more volunteers to assist with programs, plus access to marketing and public relations support, television, radio and print media outlets. Counties with low population have very limited county budgets, support staff and a much smaller programming audiences. Finally, tradition or clientele expectations regarding types of programs and program cost differ between urban and rural counties, often resulting in a decreased ability by rural counties to generate programming fees or to expand to more innovative programming.

**Priority Question: Q4, I7 and I2** In the last seven days, I have received recognition or praise for doing good work. I feel valued by my organization. At work, employees are always treated with respect.

Goal: Increase recognition by the organization and peers. Increase opportunities for staff to know each other better.
Objective 1. Create an awards committee to put forward names of individuals for awards through the University, professional organizations and community groups.

Objective 2. Pat on Back - Enhance an organizational culture where co-workers encourage each other by giving complements, cards and pat’s on the back.

Objective 3. Plan events where staff can spend time getting to know each other and building stronger relationships.

Accomplishments: The SREC awards committee was formed and worked to nominate several individuals for Extension, University and association awards. A social committee was formed and they planned a tailgate party prior to a football game. At the fall District Conference, the Pat on the Back committee gave a skit and distributed the book – *How Full is your Bucket* by Tom Rath and Don Clifton to every faculty and staff member. Everyone was encouraged to recognize their peers.

**Priority Question: I9 and Q7** My District Director always makes the best use of employee's skills. At work my opinions seem to count.

Goal: Increase involvement in planning and decision making of faculty.

Objective 1. Keep a current list of skills or skill inventory for use in making assignments to committees and events.

Objective 2. Increase the committee structure of the District to include planning of events, conference and development needs.

Objective 3. Involve more people on committees and track that involvement with an Excel spreadsheet making sure committee assignments reach a good demographic, experience and discipline mix.

Accomplishments: During the five year review we have tried to involve every faculty member in two discussion groups. Several ideas for new committees have resulted from the review discussion including a student recruitment steering committee, a marketing committee and a technology committee.

**Implications for Extension and Recommendations:**

*Improving Resources Equity* Working to minimize the inequity between county resources will continue to be an issue for SREC in the future. SREC’s District Director actively acknowledges the differences between county resources. Counties with limited resources have received equipment cost-share funds, for new computers and other equipment, while larger counties purchase new computers by generating their own funds through program fees.

Technology can also help bridge the county resource gap in some respects; for example, distance communication tools, such as telephone conferencing, satellite, PolyCom or Breeze software, can reduce travel requirements for staff with limited mileage budgets. Periodic training or updates for staff to effectively use these tools will be needed.

Developing multi-county partnerships that share resources like equipment could also prove effective for counties with limited resources. Diversifying income by obtaining grants and charging user fees will help replace equipment and buy educational materials need for new programs.

To maintain or increase county budgets, Extension staff must work with county supervisors to recognize the vast Extension resources available to their constituents. Staff reports to stakeholders need to include programming done within a county by staff housed outside the county. Increasing county supervisors’ familiarity with the ‘focused Educator’ concept and making them understand that
they are reaping the benefits of staff not stationed in their county could also foster better relationships. Continuing to provide VIP Days for county supervisors on campus helps improve the understanding of how research helps local communities.

**Retaining Quality Staff** Regarding staff retention, clear expectations of Extension Assistants have been outlined in the 21st Century document under Roles and Responsibilities and in the Core Competency publications. Continuing to communicate those expectations will be important to staff retention. Creating salary equity between state and county paid Extension Assistants would also be beneficial. Recruiting more interns to summer Extension positions will create a larger pool of potential staff, and could increase diversity within Extension staff. As increasingly higher levels of performance are expected of Extension Assistants, a change in position title system-wide from Extension Assistant to Extension Associate would indicate their important contributions to Extension.

**Improving Climate Through Gallup** In the Spring of 2006 a new Gallup survey was taken. Results will be available this fall. The District Advisory Committee will continue to set goals to improve the work climate and enhance the growth, wellness and satisfaction of employees. Keys to this success will be:

- to involve a wide variety of faculty and staff on important projects to complete the goals set out in the 5 year program review and the Gallup study.
- to provide regular communication towards our progress on these goals. Communication should be a mixture of written communication, large group meetings, regional meetings and one on one conversations.
INTERNAL ISSUES:
RESEARCH ISSUES

“You cannot step twice in the same river, for other waters are continually flowing in.” Heraclites

To understand today’s research issues in the Southeast Research and Extension Center (SREC); it is helpful to understand how research appointments have changed. SREC’s current structure for research has evolved and continues to evolve through a series of dialogues and experimentations with various models. While some forms of research no longer exist, others have become stronger and new opportunities have opened doors to new partnerships. Building on these changes we can create a very flexible and invigorating approach to research serving southeast Nebraska. Throughout, the goal has been, and continues to be, to develop and support research that will best benefit SREC clientele. The focus is to foster interaction among clientele, SREC educators, researchers and specialists at all stages of the process from the needs identification, through the research project and finally the delivery of the educational program.

Research related to SREC was a topic of discussion in the 1987, 1994 and 2000 Reviews. The 2006 District review provides an exciting opportunity to formally evaluate the current situation and plan for the future. This section provides a historical overview about the philosophy that created the R & E center concept which is unique in Extension nationwide. It also outlines issues from past reviews. Following the overview is a discussion of the current SREC research situation, emerging trends and a discussion of implications for Extension.

Historical Overview
The University of Nebraska–Lincoln is the land-grant institution in Nebraska and the Institute of Agriculture and Natural Resources is that portion of the institution with the mission of teaching, research and extension. One way the University differs from some other land-grant universities is in our system of research and extension centers which are an integral part of the University and IANR (Shelton, D., 1990).

Each research and extension center was established in a slightly different manner. In 1904, a University substation was established in North Platte in response to a legislative resolution for a facility west of the 100th meridian. In 1909, a forerunner of the Panhandle Center was established in response to another legislative resolution for a facility west of the 102nd meridian. The Northeast facility was established next in 1956 as a response to local clientele, and with their support through a fund drive and a donated farm. The last two centers (South Central and Southeast) resulted from Cooperative Extension’s reorganization plan in 1967 which divided the state into five cooperative extension districts (Shelton, D., 1990).

In 1967 the District supervisors were moved from the central office on the Lincoln campus to offices in the Districts. Their titles were changed from District supervisors to District Directors. In 1970 the District director for southeast Nebraska moved to a designated District office located in Miller Hall. The reason for the District director of southeast Nebraska remaining on campus was that Lincoln is the geographic center of the District (Shelton, D., 1990).

In 1984, all the names were changed to Research and Extension Center to better describe the function and activities (1987 SREC Review).
The overall role and mission of the research and extension centers is to enhance the profitability and quality of life for Nebraska’s citizens by conducting research relevant to the geographic area of the center and disseminating the results of research and other appropriate information through an effective extension delivery system. Since 1990 a common appointment for center-based faculty is a joint 50 percent research and 50 percent extension appointment. Most faculty feel the joint appointment is an excellent arrangement because research results can be immediate incorporation into extension programs and extension programs help to identify potential areas of research (Shelton, D., 1990).

The day to day activities, budgeting, and facilities for the programs at the Centers are managed by the District directors, at times in consultation with the department heads. Faculty evaluation, salary determination, and professional development matters are all conducted jointly by the center director and the department head. One reason this concept works quite effectively is that the center directors are considered to be administratively equivalent to department heads, with both being referred to as unit administrators. However, it does mean center faculty have two immediate supervisors (Shelton, D., 1990).

In Nebraska, distinct lines do not separate extension and research activities as is often the case in other institutions. This system offers a number of advantages such as:

- Research results are immediately incorporated into extension programs, and extension questions or problems often provide the basis for new research projects.
- Specialists provide leadership for research and monitor research at all levels.
- Educators communicate research needs to specialists and partner with them on projects.
- Interdisciplinary programs and research occur when faculty from different disciplines are located together or work together regularly.
- Faculty located in a certain geographical area can target local issues and concerns, both in research and extension programs and the two complement each other.

In 1970 the first two specialists were added to the SREC District. By the end of 1972, five District specialist faculty included the disciplines of farm management, soils, urban youth, horticulture and animal science. All specialist positions were 100% extension appointments. Later the horticulture position became a 75% extension and 25% research split appointment. Because of budget cuts in 1983, the 25% research component became part of the Horticulture Department. In 1985, Mussehl Hall was designated as the permanent site of the Southeast Research and Extension Center. All faculty with 100% FTE in SREC were to be housed in Mussehl Hall. Extension specialists with partial appointments were housed in their subject matter departments on campus (1987 Review Document).

**1987 SREC Review Team Report**

For the 1987 Review SREC had 10.75 FTE center faculty positions.

- 100% FTE positions included: farm management, soils, 4-H and youth, forestry (3 people), community resource development and farm business (2 people). All positions were housed in Mussehl Hall.
- Partial appointments represented horticulture (75%), animal science (2 positions 35% and 25%), entomology (50%), weed science (25%), irrigation (40%) and crops (25%).

The 1987 Review document suggested that future appointments of SREC specialists should have at least a 25% research appointment. The research appointment may be based in the subject matter departments for more efficient use of equipment, technicians and other resources but the research work will target the needs of southeast Nebraska, while not being limited to the geographic area. The research should be applied research. Four issues were identified:

- All future specialist appointments will have their total extension appointment in SREC.
• SREC needs to be strengthened with more extension specialist in order to have a strong interdisciplinary approach to extension programs/problems.
• The team approach is best for a strong interdisciplinary approach. Thus the specialist should be housed in the Southeast Research and Extension Center with the support dollars.
• In the future joint, Agricultural Research Division and Cooperative Extension Service appointments are most desirable for Southeast Research and Extension Center specialists (SREC Self Study Recommendations, 1987).

In the 1987 review, an extensive survey was conducted of faculty and administration. Results of that survey showed educators and department heads had two opposite views of the research/specialist issue. Educators felt the District specialists should be closer to clientele needs. They felt specialists should monitor research at all levels to avoid duplication between Districts and departments. Department heads felt research needs could be met through the departments, with the exception of urban research. They also felt Southeast Nebraska did not have unique research needs. They noted the need for urban research is primarily in entomology, plant pathology and horticulture. It is advantageous for the research components to remain in departments because of facilities, equipment, supplies and the opportunity to consult with colleagues. Extension educators are able to contact specialists in departments just as easily as they do specialists in SREC.

1994 SREC Review Team Report
The 1994 SREC Review Team document stated that research needs for the SREC District are met very well through the existing arrangements between specialists and departments. SREC had 12.2 center faculty including: horticulture, entomology, 4-H youth, water resources, weeds, community development, forester (2 people), farm business (3 people), farm economist, soils, cropping systems, beef, horticulture assistant and computer liaison. The extension appointments were in the SREC budget and the position descriptions listed both the department head and the District director as supervisors. The present system of assigning specialist to the District, with some housed in the center office, is apparently working well. The research component, assigned to departments, is apparently working well also. Department heads and faculty seem satisfied with the present arrangement (SREC Self Study Document, 1994).

The faculty suggested the following research needs: 1) Family/Youth issues, 2) Housing, 3) Animal waste and odor control and 4) Municipal sludge disposal on farm ground (SREC Self Study Document, 1994).

On-farm research and demonstrations have provided active, important and effective educational opportunities for specialists and extension educators in SREC. To continue this educational effort, a need was expressed for an extension/research technologist to lead this effort and to “free-up” the specialists. The on-farm research is beneficial because it fits the goal of extension to strive toward “train the trainer” programs that have a multiplier effect on our audience.

The review visitation team reported an understanding of the importance of on-farm research and extension programs coordinated by extension and research technologists. However, the team did not receive sufficient information to comment extensively on the request or an extension technologist for on-farm research. The review team encouraged the faculty to expand on the need for this position and to indicate what interactions this position would have with the extension assistant requested in the water quality section of the document.

Changes in Specialist Appointments
The Southeast Research and Extension Center is an anomaly among the research and extension centers in Nebraska (2000 Review). In 1998, SREC began the process of transferring specialists to their department homes. In 1998, the cropping systems specialist was assigned to the Agronomy Department. The logic behind this organizational variation in the
Southeast District is based on the District headquarters location on the East Campus and the theory that full departmental appointments encourage intellectual discourse and collaborative programming that should strengthen both the research and extension agendas of these faculty members (2000 Review).

During 1999, the horticulture appointment was transferred to the Horticulture Department with priority given to SREC programs in the job description. The agricultural economist took a job at another university. The soils specialist and the entomologists retired. The water specialist changed positions at the University. The beef specialist position was transferred to the department. Providing an emphasis on SREC was mentioned in the job descriptions of the beef specialists and the cropping systems specialists. In the 1999 budget reallocation the foresters went to the Forestry Department and the support staff person resigned. Remaining at the District center was the director, the 4-H youth specialist and one office service staff member.

When extension appointments were transferred into academic units, a number of concerns were expressed, especially by extension educators in the District. If specialists were not held accountable to the District’s administration, it was argued, they would be less motivated to conduct research related to issues identified in the District (2000 Review). In addition they could become a less visible and less available resource for extension programs in the region. Job descriptions for these specialists were rewritten to specify they would give “high priority” to SREC research and extension programs (2000 Review).

2000 SREC Review Team Report This self-study process engaged the efforts of a specialist from another university to hold six focus group sessions (educators, specialists, administrators) related to research. The findings include:

- The Southeast District has talented and capable educators who are respected by clientele and campus staff. SREC faculty are very supportive of an integrated research and extension program in SE Nebraska.
- Relevant research based programming efforts are underway in SE Nebraska.
- The location of SREC/District provides opportunities for collaborative relationships with many University research specialists.
- Campus faculty are highly regarded for their subject matter expertise.
- SREC lacks distinctive visibility – other districts are recognized as a hub of extension and research activity.
- Although one of the intentions of the staffing and administrative changes in Southeast District was to have many more campus experts and specialists available for extension programming, there is little evidence to suggest that this has worked. There is the perception that fewer campus staff resources are available to extension educators in southeast Nebraska.
- Priorities of campus staff seem to have changed. In general, helping extension educators carry out extension programs or applied research in southeast Nebraska seems to have declined as a priority. These issues may not be unique to SREC but rather a trend in higher education and university research.
- Working relationships between campus and field staff are limited and there is no coordinated plan for outreach in the District.
- Department heads felt that staff were available in even greater numbers and even more specialized to give answers.
- Specialists were concerned that they were not familiar with the agricultural priorities in the Southeast District.
Suggested responses included:

- Providing professional development opportunities for educators interested in enhancing their research methodology skills.
- Sponsor issue-based meeting opportunities for specialists, educators and other faculty members during which research needs and projects can be identified.
- Continue the work of the District issue teams beyond this immediate review process and clarify with specialists and department heads the expectation that faculty members will participate in these teams.
- Aggressively seek participation by campus faculty in District planning activities through personal invitation, regardless of their formal relationship with SREC.
- The Review Team urges the director of SREC/District and IANR department heads/chairs to work together to provide opportunities for the clientele/faculty of SREC/District to give input to the identification of research issues impacting SE Nebraska. Involvement of SREC/District is essential in providing adequate access by the SREC/District educators and clientele to crucial research based information.
- It was suggested by several individuals that the development of a team to address urban issues in a multi-disciplinary, multi campus, research/extension format would be beneficial.
- It is recommended that the agricultural issues team engage its members and its stakeholders in reviewing the District’s needs for programming in relation to the extension resources available. Through this process, priorities should be set regarding subject areas both to be addressed and to be eliminated.

Academic Issues
Current academic trends and changing situations impact the difference between SREC and the other Research and Extension Centers.

- Three specialists have Southeast District responsibilities in their job descriptions including the beef specialist, agronomy specialist and the weed specialist (shared with the Northeast District). Department Heads are the immediate supervisors for the specialists. The District Director has input into the evaluation.
- Because the SREC Headquarters is located on the University’s East Campus, SREC will not have distinct visibility or be viewed by stakeholders as a hub of research activity, however, it does put us in close proximity to a variety of research faculty.
- The population base and geographic area of SREC is so large and so diverse that assigning a few specialists to SREC would lock us into too narrow research areas and make it more difficult for the District to address emerging needs.
- Promotion and tenure resides in the academic departments and it is advantageous for the specialists to develop close working relationships with other professors.
- Scientists need to publish in “high powered” peer reviewed journals for promotion and tenure. Committees give more credit to peer reviewed journal publications compared to other types of publications.
- Because SREC does not manage a research facility, if an Extension Specialist uses departmental equipment, resources and facilities, the department will want the credit for the work.
- Even with the development of a research advisory committee (District director, department heads, specialists, educators, and clientele) the academic department who conducts research and controls the resources and personnel will be credited for the work.
- Work loads are increasingly heavy and academic expectations growing. Planning and communication suffers as a result of busy schedules. Few individuals want to meet as an advisory committee and would prefer meetings targeted to specific research issues. Academic obligations for specialists make staying connected to local producers difficult.
• SREC does not have the “academic clout” of departments which stems from national recognition of research and publications.
• Experienced extension educators have strong relationships with specialists. As a large number of experienced educators retire it will take time for new educators to build the same relationships. The personal invitations to participate in program efforts, District meetings and planning sessions may not occur.
• SREC is near the University of Nebraska–Omaha and University of Nebraska–Medical Center and the main campus of University of Nebraska–Lincoln. Faculty with a research project may choose to work with masters and doctoral students on projects instead of educators. This may also mean that SREC faculty need to cultivate relationships with graduate students looking for research projects.

Emerging Trends
Roles and responsibilities of Educators and Specialists have changed a great deal in the past 15 years. When you consider the evolution of Extension and how we will do business in the future SREC is taking the leadership to implement these changes as evidenced in the following examples:
• Several individual educators have worked diligently to develop special relationships with the individual specialists. For Example, when the new irrigation specialist was hired in Biological Systems Engineering, two SREC educators organized an agricultural tour that visited several producers to discuss emerging issues. This effort has resulted in a strong partnership which now includes on farm research trials and a joint grant project.
• One educator coordinates crop management and diagnostic clinics by working with researchers on appropriate demonstrations and programs for professionals attending the clinic. Each year several hundred ag professionals are trained in the latest research. This educator also coordinates a winter agronomy research symposium for educators and producers.
• SREC has made great progress relative to applied or on-farm research. We now have three organized groups and an excellent website where on-farm research results are available 24/7 (http://farmresearch.unl.edu). The participants in these on-farm groups serve as advisory groups for agricultural efforts.
• On-farm research demonstrations are located at the South Central Agriculture Laboratory and Crop Management and Diagnostic Plots are located at the ARDC.
• The Ten Ways to Improve Profits by $20/Acre program is an example of a curriculum that was developed as result of applied on-farm research conducted in SREC.
• One specialist helped us evaluate two of the SREC On Farm Research programs. The evaluation resulted in journal articles and a NebGuide. The on-farm research project was featured at national meetings.
• Several program advisory groups assist educators with planning. The Diverse Agriculture work group also has an advisory group of producers and agency representatives. The Farmer and Rancher College program has an advisory group of agricultural business professionals. Commodity groups such as the corn and soybean growers boards advise educators and help to fund programs.
• Several educators work with specialists from the Department of Agricultural Economics to annually develop and deliver the Winning the Game and Marketing Stored Grain workshops throughout the state. They are working to develop a comprehensive marketing and risk management educational program.
• Several educators work with the beef specialists on the 4-State Beef workshop and the Eastern Nebraska Cattleman’s Expo.
• An educator and specialist are working to develop and deliver a watershed management workshop for NRCS, NRD and extension faculty for eastern Nebraska.
• Educators routinely work with specialists on locating on-farm research cooperators and monitoring of research plots. Soybean rust Sentinel plots are one example of this partnership, but many others exist.
• Two educators serve on the advisory committee for the agronomy department.
• One educator serves on the Executive Committee for the Nebraska Pork Producers Association and provides input on funding of research projects.
• The educators affiliated with the Department of Animal Sciences attend a research update each spring.
• Focused family educators have participated in a child care providers research project with another land grant university.
• The Building Nebraska Families program is currently participating in a research impact study with Mathematica and will begin a study with a graduate student in the College of Education and Human Sciences.
• Through the urban community neighborhood program strong linkages have been established with University of Nebraska–Omaha Center for Urban Affairs and an extension educator has been located at their center in Omaha.
• Campus based faculty have been invited to spring and fall District meetings. Educators extend personal invitations to individuals based on educational programs being discussed and work group projects. Frequently we hold District meetings on campus so specialists may easily attend sessions without travel time. Several have attended for parts of our meetings. A great deal of success in this arrangement depends on the educator-specialist relationship.
• Several on-farm research projects are created each year between private industry and Extension via SREC’s on-farm research programs. Our on-farm research programs are well known and respected among private industry and Extension Specialists. Extension Specialists often see SREC’s on-farm research program as a tool to conduct solid on-farm research and have the results disseminated in a timely fashion. Tom Hoegemeyer recently said, “The NSFGPP was one of the most exciting Extension programs that he has seen.” Earle Raun stated, “I honestly think the NSFGPP is the best all-around program Extension sponsors, and you two make it work! You operate it, get the participants to talk and provide information and everyone attending the annual meeting learns from the discussions.”
• 10% of SREC educators hold Ph.D’s in their focused assignments. Several are currently enrolled in Ph.D programs. Because of our location and the value we place on research and education this trend is likely to continue.
• SREC educators are becoming very active in grants and have increased their grant activity during the past 5 years from almost nothing to over $600,000 annually. This trend is likely to continue and will assist us in hiring support for programs.

Implications and Recommendations
SREC will become a center of excellence for the development and delivery of scientifically based educational programs. SREC will be a national leader in innovative teaching, experiential learning and on-farm research. We will engage faculty on all campuses in issues related to our clientele. We will develop a very flexible, relevant and invigorating approach to research by working with advisory groups to identify and prioritize research needs.
• Strong communication among educators, specialists, department heads and commodity boards, private industry and growers regarding agricultural research efforts is a top priority.
• Our on-farm research programs are second to non nationwide and we will continue to build on that strength.
SREC will move forward to engage our clientele in a variety of grass-roots producer initiated, private industry and Extension Specialists generated on-farm research projects.

On-farm research projects will establish relationships with industry partners which may lead to more in-depth long-term research efforts by departments.

We will continue to look for opportunities to partner in family, community development, community/residential environment and nutrition research projects with the University, other land grant institutions and industry.

We will market our involvement in research as part of our educational programs and stakeholder communications.

We will provide professional development opportunities for educators interested in enhancing their research methodology skill and their teaching skills.

We will continue to secure grants and funding for innovative educational programming.

We will continue to grow our partnerships on grant and research projects with extension specialists.

We will continue to develop the urban initiative to include multi-disciplinary research and extension efforts and look for unique opportunities for urban research projects.

References
Shelton, David P. (1990). The University of Nebraska Research and Extension Centers – An Overview [PowerPoint]. Lincoln, NE: University of Nebraska-Lincoln


