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ARD News April 2003

ARD
Agricultural Research Division News
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Comments from the Dean

Dear Colleagues:

In the midst of some depressing news about Nebraska's monthly tax receipts and proposed UNL budget cuts, it is important not to lose sight of the great things that are being accomplished by ARD faculty members. As the Deans completed their reviews of Annual Reports of Faculty Accomplishments and requests for promotion in rank and award of tenure, we were again reminded of the high quality of our faculty and the contributions that they are making to educate learners, solve clientele problems and add to the storehouse of knowledge in many academic fields. Below I have attempted to outline a small portion of the "good news" that has crossed my desk during the past few months:

- Five of our distinguished faculty have been selected to receive Cather-Bessey Professorships for 2003. ARD recipients are Patricia Crews, Martin Dickman, Carolyn Edwards, Stephen Ragsdale and Robert Spreitzer.
- Steve Ragsdale has received the University of Nebraska Outstanding Research and Creative Activity Award.
- Recent faculty hires in Biochemistry, Biological Systems Engineering, and Veterinary and Biomedical Sciences are highly talented individuals who will contribute tremendously to our research efforts.
- ARD grant and contract income for FY 2002 exceeded $37.1 million. Since the start of FY 2003, grant and contract income has outpaced that for FY 2002, including three federal grants that exceed $1 million.
- The mergers of academic units that are currently under way (Teachers College and CHRFS; SNRS and CSD; and Biometry and the statistics section of the Mathematics and Statistics Department) have the potential to significantly enhance ARD research because of increased collaborations.
- The approval of the Integrative Biomedical Sciences Ph.D. degree provides faculty in the Veterinary and Biomedical Sciences Department (and allied departments) with the first UNL degree in this broad area of science.
- The renovation of the Hardin Center to house the proposed School of Natural Resources and the Department of Statistics is a great step forward to allow all faculty within these academic program areas to be in one location.
- A number of our faculty and administrators continue to play major leadership roles in national professional/scientific societies, attesting to the esteem in which they are held by professional colleagues.
- ARD faculty are major contributors to new campus-wide initiatives in biomedical engineering and water resources research.

Space does not allow a more complete listing of significant accomplishments but please be assured that ARD staff are aware of many other important programs that have been completed or are under way. We salute all of the faculty accomplishments during 2002 and look forward to assisting you in 2003.

Darrell W. Nelson
Dean and Director

CSREES Budget for FY 2003 and the President's FY 2004 Request

After many months of effort, the USDA budget for FY 2003 was appropriated by Congress and signed by the President in February. Congress imposed a 0.65% rescission on all budget categories as a part of the appropriation process. The accompanying table includes data on the FY 2002 appropriation, FY 2003 appropriation and the President's request for the FY 2004 appropriation.

Base Programs (Hatch, McIntire-Stennis and Animal Health) were initially level funded for FY 2003 but because of the rescission, we will receive slightly lower allocations than for FY 2002. Under the Special Grants category, increases for FY 2003 were approved for Global Change-UV-B Monitoring, Minor Crop Pest Management and State Specific Special Grants. The National Research Initiative Competitive Grants Program was increased by about $45.5 million. Increases also were approved for Aquaculture Centers, Sustainable Agriculture Research and Education Program, Supplemental and Alternative Crops and 1994 Research Grants. A new program, Joe Skeen Institute for Rangeland Restoration, also was approved for FY 2003.

Within the Integrated Activities Account, only the Methyl Bromide Transition Program and the Organic Transition Program obtained increases in FY 2003. In addition, a new program entitled International Science and Education Grants Program was established and two programs (Regional Rural Development Centers and Critical Issues) were moved into Integrated Activities Account from the Special Research Grants Account for FY 2003.

The President's budget for FY 2004 level funds many of the programs from his recommendation for FY 2003. The President's budget eliminates all State Specific Special Grants (as is the case every year) but recommends a $200 million appropriation for the National Research Initiative. A new program area, Homeland Security, is recommended at a level of $16 million.

IANR was very successful in obtaining State Specific Special Grants in the FY 2003 appropriation to support our research efforts. With the assistance of faculty, we have developed a number of very strong proposals for funding in the FY 2004 appropriation and we look forward to having even more success this year. Many of our proposals for special grants are collaborations with faculty in other states, which strengthens the case for Congressional earmarks.

Cooperative State Research, Education, and Extension Service
($000)

Programs	*FY 2002 Appropriation Act*	*FY 2003 President's Budget*	*FY 2003 Appropriation with Rescission*	*FY 2004 President's Budget*
Research and Education Activities				
Base Programs:				
Hatch Act	$180,148	$180,148	$178,977	$180,148
McIntire-Stennis Cooperative Forestry	21,884	21,884	21,742	21,884
Evans-Allen Program	34,604	34,604	35,411	36,000
Animal Health and Disease, Section 1433	5,098	5,098	5,065	5,098
Subtotal	**241,734**	**241,734**	**241,195**	**243,130**
Special Research Grants:				
Critical Issues	200	0[a/]	0[a/]	0[a/]
Expert IPM Decision Support System	177	177	176	177
Global Change, UV-B Monitoring	1,402	2,500	2,235	2,500
Integrated Pest Management and Biological Control	2,725	2,725	2,707	2,725
Minor Crop Pest Management, IR-4	10,485	10,485	10,673	10,485
Minor Use Animal Drugs	588	588	584	588
National Biological Impact Assessment Program	248	253	251	253
Pest Management Alternatives	1,619	1,619	1,608	1,619
Rural Development Centers	560	0[b/]	0[b/]	0[b/]
Other	94,210	0	108,465	0
Subtotal	**112,214**	**18,347**	**126,699**	**18,347**
National Research Initiative Competitive Grants	**120,452**	**240,000**	**166,045**	**200,000**

Programs	FY 2002 Appropriation Act	FY 2003 President's Budget	FY 2003 Appropriation with Rescission	FY 2004 President's Budget
Other Research:				
Critical Agricultural Materials	720	0	1,242	0
Aquaculture Centers	3,996	3,996	4,471	3,996
Sustainable Agriculture Research and Education Program	12,500	9,230	13,661	9,230
Supplemental and Alternative Crops	924	0	1,188	0
1994 Research Grants	998	998	1,093	998
Joe Skeen Institute for Rangeland Restoration	0	0	994	0
Federal Administration (Direct Appropriation)	21,676	7,892	29,466	8,311
Subtotal	**40,814**	**22,116**	**52,115**	**22,535**
Higher Education:				
Graduate Fellowships Grants	2,993	3,500	3,222	4,500
Institution Challenge Grants	4,430	5,500	4,888	5,500
1890 Institution Capacity Building Grants	9,479	9,479	11,404	9,479
Multicultural Scholars	998	998	992	998
Hispanic Serving Institutions Education Grants Program	3,492	3,492	4,073	3,492
Tribal Colleges Education Equity Grants Program	1,549	1,549	1,689	2,250
Tribal Colleges Endowment Fund	7,100	7,100	7,054	9,000
Interest Earned on the Tribal Colleges Endowment Fund	1,487	2,232[c/]	1,771	2,508[c/]
Secondary/2-Year Post Secondary	1,000	1,000	994	1,000
Alaska Native-serving and Native Hawaiian-serving Institutions	2,997	2,997	3,477	2,997
Subtotal	**35,435**	**37,847**	**39,564**	**41,724**
Total, Research and Education Activities	**550,649**	**560,044**	**625,618**	**525,736**
Integrated Activities				
Section 406 Legislative Authority:				
Water Quality	$12,971	$12,971	$12,887	$12,971
Food Safety	14,967	14,967	14,870	14,967
Regional Pest Management Centers	4,531	4,531	4,501	4,531
Crops at Risk from FQPA Implementation	1,497	1,497	1,487	1,497
FQPA Risk Mitigation Program for Major Food Crop Systems	4,889	4,889	4,857	4,889
Methyl Bromide Transition Program	2,498	2,498	3,229	2,498
Organic Transition Program	1,500	499	2,111	499
Subtotal	**42,853**	**41,852**	**43,942**	**41,852**
Other Legislative Authorities:				
International Science and Education Grants Program	0	1,000	497	1,000
Critical Issues	0	500	497	2,500
Regional Rural Development Centers	0	1,513	1,503	1,513
Homeland Security	0	0	0	16,000
Subtotal	**0**	**3,013**	**2,497**	**21,013**
Total, Integrated Activities	**42,853**	**44,865**	**46,439**	**62,865**

[a/]Funds for critical issues are in the Integrated Activities Account.
[b/]Funds for Regional Development Centers are in the Integrated Activities Account.
[c/]Estimated interest earned on the Tribal Colleges Endowment Fund.

Selected Resources on Grant Writing

With the current strong emphasis on obtaining external grant funds, many faculty are taking advantage of opportunities to enhance their grant proposal writing skills. Writing workshops on and off campus have been one avenue to do this. Another is self-study, using books on how to write successful grant proposals. A few years ago, while serving as an ESCOP Administrative Intern in the ARD, Dr. David Stanley prepared a grant writing resource "Playing to Win — A Guide to Preparing and Processing Competitive Grant Proposals in the Institute of Agriculture and Natural Resources." One section of that was a list of books on grant proposal writing and on writing in general that can be found in Love Library. That list appears below.

Books on Writing Grant Proposals

Borland, A. and Margolin, J.E. (1990) *Foundation Center's User Friendly Guide: Grant seeker's guide to research resources*. The Center, New York, N.Y.

Bauer, D.G. (1988) *The "How to" Grants Manual*. Second Edition. Macmillan Publishing Co., New York, N.Y.

Escherich, P.L. and McManus, R.E. (1983) *Sources of Federal Funds for Biological Research*. Museum of Natural History, University of Kansas, Lawrence, KS.

High, G.R. (1991) *Getting Funded: The art of writing successful proposals*. School of Urban and Public Affairs, University of Texas, Arlington, TX.

Hill, J.N. and Whalen, T. (1993) *How to Create and Present Successful Government Proposals: Techniques for today's tough economy*. IEEE Press, Princeton, N.J.

Lefforts, R. (1990) *Getting a Grant in the 1990s: How to write successful grant proposals*. Prentice Hall Press, New York, N.Y.

Rice, J.B. (1995) *Applying for Research Funding: Getting started and getting funded*. Sage Publications, Thousand Oaks, CA.

Feif-Lehrer, L. (1989) *Going for Gold: Some dos and don'ts for grant seekers*. NIH — National Institute of Alcohol Abuse, Washington, D.C.

Horace Mann Learning Center. (1991) *Reviewing Applications for Discretionary Grants and Cooperative Agreements: A Workbook for Application Reviewers*. Horace Mann Learning Center, Washington, D.C.

NIH — National Institutes of Diabetes and Digestive and Kidney Diseases. (1988) *Administrative and Review Guidelines for Program Project Grant Applicants*. NIH, Washington, D.C.

NIH — Division of Research Grants (annually): *DRG Peer Review Trends*. NIH, Washington, D.C.

USDA — National Research Initiative Competitive Grants Program: *Abstracts of Funded Grants*. USDA Publications, Washington, D.C.

General Writing Resources

Elbow, Peter. (1981) *Writing with Power: Techniques for Mastering the Writing Process*, Oxford University Press, New York, N.Y.

Strunk, Williams, Jr. and E.B. White. (1979) *The Elements of Style*, Third Edition, Macmillan Publishing Co., Inc., New York, N.Y.

Williams, Joseph M. (1990) *Style: Toward Clarity and Grace*; The University of Chicago Press, Chicago, Ill.

Zinsser, William. (1985) *On Writing Well*, Harper and Row, New York, N.Y.

Grants and Contracts Received February and March, 2003

Agronomy/Horticulture	
Arkebauer, Timothy — USDOE/NIGEC	$ 77,250
Caldwell, Robert — USDA/ARS	120,000
Clemente, Thomas — USDA/CSREES	136,546
Graef, George, James R. Steadman and **Thomas Clemente** — USDA/ARS	42,000
Spalding, Roy — Nebraska Department of Agriculture	25,000
Specht, James — USDA/ARS	32,725
Miscellaneous grants under $10,000 each	282,902
Animal Science	
Beermann, Donald — UN Foundation	11,995
Miscellaneous grants under $10,000 each	38,270
Biochemistry	
Banerjee, Ruma — American Heart Association	19,000
Banerjee, Ruma — NIH	337,440
Biological Systems Engineering	
Franti, Thomas G. — Charles B. and Katherine W. Baker via UN Foundation	12,000
Biometry	
Eskridge, Kent — Nebr. Dept. of Health and Human Services	24,840
Stroup, Walt — Pfizer, Inc.	19,680
Entomology	
Kamble, Shripat — USDA/CSREES via Michigan State University	88,124
Siegfried, Blair and Lance Meinke — USDA/CSREES via University of Maryland	71,107
Food Science and Technology	
Thippareddi, Harshavardhan and Dennis Burson — USDA/CSREES	495,640
Miscellaneous grants under $10,000 each	95,214

Panhandle Research and Extension Center	
Harveson, Bob — Western Sugar Company	33,000
Miscellaneous grants under $10,000 each	97,794
Plant Pathology	
Miscellaneous grants under $10,000 each	7,350
School of Natural Resource Sciences	
Hoagland, Kyle — NPS	16,790
Holz, John — NDEQ	21,670
Shea, Pat and Steve Comfort — USEPA	194,201
Verma, Shashi, K.G. Cassman, T.J. Arkebauer, A. Dobermann, A.A. Gitelson, K.G. Hubbard, D.C. Rundquist, D.T. Walters, and E.A. Walter-Shea	280,000
Miscellaneous grants under $10,000 each	16,785
Veterinary and Biomedical Sciences	
Miscellaneous grants under $10,000 each	6,480
West Central Research and Extension Center	
Miscellaneous grants under $10,000 each	8,500
Grand Total	**$2,612,303**

Proposals Submitted for Federal Grants

The following is a listing of proposals that were submitted the past few months by faculty for federal grant programs. While not all grants will be funded, we are appreciative of the faculty members' outstanding efforts in submitting proposals to the various agencies.

Brett R. White — USDA/NRI — Transcriptional Regulation of the Porcine GnRH Receptor Gene — $287,193

James R. Alfano — USDA/NRI — Chaperones of the type III protein secretion system of *Pseudomonas syringae* tomato DC3000 — $353,100

Clinton Jones ane **Alan Doster** — USDA/NRI — Regulation of the latency-reactivation cycle by the bovine herpesvirus 1 (BHV-1) latency related (LR) gene — $319,600

Gary Y. Yuen, Donald Y. Kobayashi and **Gautam Sarath** — USDA/NRI — Induced resistance by Lysobacter enzymogenes C3 — $299,740

Timothy M. Nowatzki, Blair D. Siegfried, Lance J. Meinke and **Michael A. Caprio** — USDA/NRI — Quantifying Western Corn Rootworm Movement and Mating with a Mark-Recapture Technique: Impact on Resistance Management for Transgenic Corn — $248,083

Jeffrey D. Cirillo — NIH/NIAID — Entry Mechanisms of *Mycobacterium marinum* — $16,175

Kenneth W. Nickerson, Gerald Duhamel, Bessie Kebaara and **Dammika Navarathna** — NIH — Farnesol and Biofilms in a Mouse Model *Candida* Infection — $141,166

Kent Eskridge and **Roy Spalding** — USDA/FAS/ICD/RSED/SCRP — Functional Analysis of Nitrogen in Constructed Wetlands for Wastewater Treatment Using Stable Isotopes — $45,000

Andrea S. Cupp, Lane K. Christenson and **Debra T. Clopton** — NIH/NICHD — Molecular Mechanisms of Testis Development — $142,107

Jeffrey D. Cirillo, Gerald E. Duhamel, Steven H. Hinrichs and **Peter C. Iwen** — NIH — Virulence Mechanisms of *Francisella tularensis* — $1,631,250

Stephen L. Taylor — USDA/Special — Midwest Advanced Food Manufacturing — $422,444

F. Edwin Harvey — NSF through University of Kansas — An Investigation of Flow and Solute Transport in a Floodplain Aquitard — $78,212

David A. Wedin, Geoffrey M. Henebry, David B. Loope, Tim Arkebauer and **David Billesbach** — NSF — Sand Hills Biocomplexity: Integrating Biogeophysical Processes Across Space and Time — $1,996,117

Larkin A. Powell — USDA/North Central Region SARE — Comparing Sustainability of Grazing in the Nebraska Sandhills: Which Regime is Best for Cattle and Wildlife — $34,544

Tom Clemente — NSF through Cornell University — From Proplastid to Chloroplast: Understanding Plastid Differentiation in Maize Through Microarray and Proteome Analysis — $389,225

Don Wilhite — USDA/Special — Developing Drought Mitigation and Preparedness Technologies for the U.S. — $183,184

Shashi B. Verma — USDOE/NIGEC — 2003-04 Administrative and Research Budget of the Great Plains Regional Center of the National Institute for Global Environmental Change — $1,246,907

Steven Harris — NSF — The Role of a Fungal PARP homologue in hyphal cell death — $427,421

Bill Zanner — NSF — Multi-Proxy Reconstruction of Climate Variability in the Great Plains Over the Last 130 ka From Modern and Buried Soils — $136,689

P. Stephen Baenziger, John Watkins, David Baltensperger, Amit Mitra and **Martin Dickman** — USDA/ARS — Enhanced Scab Resistance in Wheat by Plant Transformation and Breeding — $115,752

Janos Zempleni — NIH — The Essential Role of Biotin in Cell Proliferation — $605,000

S.B. Verma, K.G. Cassman, T.J. Arkebauer, A. Dobermann, K.G. Hubbard, J.M.H. Knops, D.T. Walters and **H. Yang** — USDOE — Carbon Sequestration in Dryland and Irrigated Agroecosystems: Quantification at Different Scales for Improved Prediction — $900,000

James E. Specht — USDA/ARS — Field Drought Tolerance in Soybean Plant Introductions and Breeding Lines in Nebraska — $313,939

John Lindquist — USDA/NCIPM through University of Wisconsin — Manipulating *Pseudomonas syringae* PV Tagetis Populations to Enhance Biological Suppression of Canada Thistle — $29,581

Robert M. Caldwell- USDA/ARS — Manure and Nutrient Management Practices to Protect Human Health and the Environment — $96,000

Michael G. Dosskey, Dean E. Eisenhauer and **Thomas G. Franti** — USDA/FS — Improved Methods for Assessing Infiltration in Vegetative Buffer Systems — $10,911

Gary Hein, Paul Burgener and **Drew Lyon** — USDA/ARS — Biologically Intensive Areawide IPM of the Russian Wheat Aphid and Greenbug — $569,240

Sally Mackenzie — NIH — Mitochondrial Genome Dynamics in Arabidopsis — $1,249,880

Larkin Powell — NSF — Complex Metapopulation Dynamics: The Influence of Landscape Factors, Alternate Prey Density and Carnivores on the Breeding Success and Movements of Songbirds — $679,921

David R. Smith, Galen Erickson, Rod Moxley, Terry Klopfenstein and **Susanne Hinkley** — USDA/CSREES — Intervention Strategies to Reduce *Escherichia coli* 0157:H7 in Beef Feedyards — $591,551

John Weber and **Brett White** — NIH — Novel System for Identifying Functional Genes in Mice — 290,000

Roch E. Gaussoin and **Ryan Michael Goss** — USDA/CSREES — Management of biotechnology-derived forage and turf grasses and mechanisms of herbicide tolerance and resistance — $187,185

Janos Zempleni, Marjorie Lou, Rocio Rodriguez-Melendez and **Gautam Sarath** — NIH — Vitamin-dependent modifications of histones — $1,127,306

Milford A. Hanna — USDA/CSREES — Industrial Agricultural Products Center — $49,815

Susan L. Hefle — USDA/CSREES — Alliance for Food Protection — $136,920

Terry Klopfenstein, Charles A. Francis, James Brandle and **Daniel T. Walters** — USDA/CSREES — Integrated Crop/Livestock/Agroforestry Research for Sustainable Systems in Nebraska — $55,142

Stephen L. Taylor — USDA/CSREES — Development and Quality/Safety Enhancement of Speciality Food Products — $39,254

Robert W. Hukins, John H. Rupnow, Georgianna Whipple, Harshavardhan Thippiraddi and **Lisa Durso** — USDA/CSREES — Food Safety: Lifelong Learning Through Teacher Training — $528,264

Xun-Hong Chen — USGS — Modeling of Streamflow Dynamics in Alluvial Valleys with Irrigated Agriculture — $64,466

David S. Jackson and **Gang Guo** — NSF/EPA — Environmentally Benign Processes for Corn Nixtamalization\(TSE03-K\) — $388,970

Robert G. Wilson, Gary L. Hein and **Robert M. Harveson** — USDA/CSREES — Use of Patterns of Fructan Metabolism in Roots of Canada Thistle to Develop Integrated Control Strategies in Cropland and Range Ecosystems — $200,646

Mark Burbach and **Michael J. Hayes** — USGS — An Integrated Real Time Ground Water Level Monitoring Program for Improving Drought Assessment — $133,300

Marjorie F. Lou — NIH — Redox Signaling in the Lens — $1,450,000

James E. Specht — United Soybean Board/USDA — Genetically Map the Yield QTLs in Exotic Line PI 71.506 — $99,800

Harshavardhan Thippareddi — USDA/CSREES through KSU — Voluntary HAACP Program — $158,918

David Baltensperger — USDA/SARE — Producer Driven Education to Improve Bio-diversity in Semi-arid High-Plains Cropping Systems — $141,000

Amit Mitra — NSF — Efficient Gene Silencing by Intrinsic Direct Repeats: Mechanism and Utilization — $390,000

Thomas E. Hunt — USDA through KSU — Updating Dispersal Parameters to Evaluate the Risk of Resistance to Bt-Corn in Two Corn Borers when Insecticides are Used in Refuge Plantings — $55,419

New or Revised Projects

The following station projects were approved recently by the USDA Current Research Information System (CRIS):

NEB-12-294 (Agronomy and Horticulture) Detection and Assessment of Genetic Variation in Economically Important Weed Species
Investigator: Donald Lee
Status: New Hatch project effective January 2, 2003

NEB-13-154 (Animal Science) Role of Paracrine Growth Factors in Bovine Ovarian Follicular Development
Investigator: Andrea S. Cupp
Status: New Animal Health project effective May 1, 2002

NEB-13-156 (Animal Science) Reproductive Performance in Domestic Ruminants
Investigator: Andrea S. Cupp
Status: New Hatch project that contributes to regional project W-112 effective October 1, 2001

NEB-13-161 (Animal Science) Genetic Variation in Feed Energy Utilization
Investigator: Merlyn K. Nielsen
Status: New Hatch project effective March 1, 2003

NEB-14-125 (Veterinary and Biomedical Sciences) Enteric Diseases of Swine and Cattle: Prevention, Control and Food Safety
Investigator(s): Rodney A. Moxley, Gerald E. Duhamel and David R. Smith
Status: New Hatch project that contributes to regional project NC-1007 effective October 1, 2002

NEB-15-099 (Biochemistry) Engineering Plants for Increased Photosynthetic Efficiency: Introduction of the CO_2 Concentration Mechanism from C_4 Plants into C_3 Plants
Investigator(s): Donald P. Weeks and Thomas Clemente
Status: New State project effective July 1, 2002

NEB-16-097 (Food Science and Technology) Physical, Chemical and Biological Control of Molds and Mycotoxins in Foods and the Environment
Investigator: Lloyd B. Bullerman
Status: New Hatch project effective September 1, 2002

NEB-21-082 (Plant Pathology) Detection and Properties of Nebraska Plant Viruses with Emphasis on Soybean Viruses
Investigator: Leslie C. Lane
Status: New Hatch project effective December 1, 2002

NEB-21-083 (Plant Pathology) Biological Control of Grass and Cereal Diseases in Nebraska
Investigator: Gary Yuen
Status: New Hatch project effective January 1, 2003

NEB-24-035 (AgLec) Surveying and Characterizing Distance Education Interventions in Nebraska Rural Communities
Investigator: James W. King
Status: New State project effective March 1, 2003

NEB-33-001 (Center for Grassland Studies) Grassland Studies
Investigator: Martin A. Massengale
Status: New State project effective May 1, 2003

NEB-43-071 (West Central Research and Extension Center) Improving Irrigation Management to Conserve Water Resources in West Central Nebraska
Investigator: J.O. Payero
Status: New Hatch project effective June 1, 2002

NEB-44-016 (Panhandle Research and Extension Center) Weed Control Systems for Western Nebraska Irrigated Crops and Rangeland
Investigator: Robert G. Wilson
Status: Revised Hatch project effective October 1, 2002

NEB-44-062 (Panhandle Research and Extension Center) Improvement of Proso Millet and Other Crops for Adaptation to Western Nebraska
Investigator: David Baltensperger
Status: New Hatch project effective October 1, 2002

NEB-91-058 (Nutritional Science and Dietetics) N-3 Polyunsaturated Fatty Acids and Human Health and Disease
Investigator: Nancy M. Lewis
Status: New Hatch project that contributes to regional project NC-1167 effective October 1, 2002

NEB-94-030 (Textiles, Clothing and Design) New Technologies for the Utilization of Textile Materials
Investigator: Yiqi Yang
Status: New Hatch project that contributes to regional project S-1002 effective March 1, 2003

Income, Wealth and the Economic Well-Being of Farm Households[a/]

The Economic Research Service has completed an extensive study of the economic well-being of U.S. farm households. This article is a summary of the findings from the study. Since their inception in the 1930s, price and income support programs have been devised to both raise the level of farm income and close the gap between farm and non-farm incomes. Concurrent with farm program changes over the years was a dramatic shift in the structure and organization of farms. Current farm operations are complex business entities requiring astute management of contracts, alliances and ventures. Farm households are faced with wide-ranging decisions about how to allocate their limited resources among farm and non-farm activities. Just as farms are diverse in their structure, so are households in their employment, investment and consumption.

The main findings from the report are:

- *Farm households are no different than other households in pursuing two careers and diversifying earnings.* More than half of all U.S. farm operators work off-farm, with 80% of these working full-time jobs. Nearly half of all spouses also are employed off the farm.

- *The farm business as a source of income has played an increasingly smaller role in determining the well-being of farm households.* Nearly 90% of total farm household income in 1999 originated from off-farm sources. The contribution of earned income (off-farm) amounted to 53% of total farm household income.

- *While farm business income exhibits considerable variability, farm household income is relatively stable.*

- *The age and status of the farm operator most determines the level and sources of household income and wealth, but farm type and size, operator education, farm tenure and family size are also factors.*

- *Income available to farm households can support a standard of living equal to or above that of non-farm households.*

- *Consumption expenditures of farm households are lower than that for all U.S. households.*

- *For most non-farm households owning businesses, the business is the main source of income; for most farm proprietorship households, the farm detracts from total household income.*

- *Despite conventional thinking, farm households are not financially disadvantaged, compared with other U.S. households.*

- *Average wealth of farm households has increased and farm households have broadened their portfolio to include more non-farm investments.*

- *Even for farms located in rural areas, off-farm income is still the dominant source of household earnings.*

[a/]Taken from the USDA ERS Agricultural Economic Report Number 812. A copy can be ordered by telephoning 800-999-6779.

Diane says

If you say nothing, no one will repeat it.