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ARD News October 2004

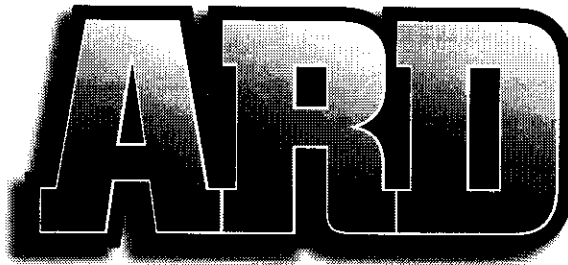
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Agricultural Research Division News

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October 2004

Volume 37, Number 5

Comments from the Dean

Colleagues:

Recently, I informed Vice Chancellor Owens of my intention to retire effective June 30, 2005. At that time, my tenure at the University of Nebraska-Lincoln will exceed 21 years, and I will have served as ARD Dean and Director for nearly 17 years. It is time for another person to provide leadership for the Agricultural Research Division. By announcing my retirement at this time, Vice Chancellor Owens will have time to initiate a search for my successor.

I wish to express my appreciation to all present and former ARD faculty and staff for their quest for excellence, strong work ethic, dedication to the people of Nebraska and support of ARD goals. Your accomplishments during the past 20 years have been truly outstanding. I have no doubt that your tradition of excellence will continue far into the future. In particular, I want to thank those faculty who have served on the ARD Advisory Council for their wise counsel and support during both great and less-than-good times. Your service was above that expected of a faculty member and resulted in many positive changes that benefit all ARD faculty and staff.

A special note of appreciation is extended to my colleagues who served as department heads and chairs, school directors, district directors, and directors/leaders of interdisciplinary centers and programs. The individuals serving in these roles have been tremendous and have provided extraordinary leadership in difficult times. Your support, assistance and encouragement have been very important to me and the ARD staff. There is no way that I can adequately thank you for the positive relationships between ARD and IANR units.

My thanks would not be complete without a thank you to the three Vice Chancellors (Roy Arnold, Irv Omtvedt and John Owens) to whom I have reported. These terrific leaders have worked very hard to strengthen IANR's research programs while ensuring that our collective efforts address the needs of Nebraska. They have provided strong support for me and the ARD office. I also wish to thank my colleague IANR Deans who have been great partners in strengthening IANR. During my tenure as Dean and Director, I have had the pleasure of working with three CASNR Deans (Ted Hartung, Don Edwards and Steve Waller), three CED Deans and Directors (Leo Lucas, Ken Bolen and Elbert Dickey) and two CHRFS/CEHS Deans (Karen Craig and Marjorie Kostelnik). All of these administrators have been highly collaborative in strengthening ARD programs. I particularly appreciate the counsel and fellowship exhibited by my colleague Deans. This has made my position enjoyable and, I hope, productive.

Everyone reaches a time in their life when a decision about retirement is required. I have reached that point in time and have decided that family and non-academic activities will have priority after June 30, 2005. I wish you all the very best in both your personal and academic endeavors. IANR has a very bright future and you should be proud to be a part of this great organization.

*Darrell W. Nelson
Dean and Director
Agricultural Research Division*

Nebraska Research Initiative Funding for 2004-2005

The ARD Office recently received notice of Nebraska Research Initiative (NRI) funding for 2004-2005 from the Office of the Executive Vice President and Provost. Listed below are the NRI awards for the current fiscal year:

| Principle Investigator | Title | Amount |
|------------------------|---|-----------|
| Kyle Hoagland | Water Center Laboratory | \$276,450 |
| Kyle Hoagland | Water Resources Research Initiative | \$ 50,000 |
| Pat Shea | Building Surface Analysis into Environmental Science | \$181,320 |
| Milford Hanna | Encapsulation of Chemicals and Biochemicals | \$150,000 |
| Tom Clemente | Production of Value Enhanced Soybean Oil Through Biotechnology | \$198,027 |
| Gary Yuen | Functional and Chemical Characterization of a Novel Broad Spectrum Antimycotic from <i>Lysobacter enzymogenes</i> | \$ 89,770 |

Congratulations to these faculty members who have successfully competed with many faculty in the University of Nebraska System for NRI funds.

FY2005 Appropriation for USDA/CSREES

The House of Representatives has passed the Appropriations Committee recommendations for the FY 2005 budget for CSREES. The Senate Appropriations Committee has submitted their recommendations but the budget has not yet been passed by the full Senate. Both the House and Senate provide small increases in formula programs. The House version restores most of the 10 percent cuts made in programs for the FY 2004 appropriation whereas the Senate version keeps many of the lines at the FY 2004 level. The Senate version provides a \$19 million increase in the National Research Initiative whereas the House version has a \$16 million increase. Within the Integrated Activities account, the House restores cuts made in FY 2004 and provides a \$10 million increase in the Homeland Security Program. The Senate version maintains FY 2004 levels in most lines but increases the Homeland Security Program by \$7 million. We anticipate that the USDA appropriation will become part of an omnibus appropriations bill to be considered by Congress in mid-November after the elections.

| Program | FY2004 Enacted | FY2005 House | FY 2005 Senate |
|----------------------------------|-------------------|-----------------|-------------------|
| -----\$, thousands----- | | | |
| Research: | | | |
| Hatch Act | 179,085 | 180,648 | 180,148 |
| McIntire-Stennis Forestry | 21,755 | 22,384 | 23,000 |
| Evans-Allen Program | 35,788 | 37,000 | 36,000 |
| Animal Health and Disease | 5,098 | 5,098 | 5,098 |
| National Research Initiative | 164,027 | 180,000 | 183,000 |
| Special Research Grants | 110,655 | 88,194 | 108,993 |
| Improved Pest Control | 13,594 | 15,756 | 14,595 |
| Canola — Alternative Crop | 752 | 846 | 840 |
| Critical Ag Materials Act | 1,111 | 1,111 | 1,111 |
| Hesperaloe — Alternative Crop | 311 | 350 | 0 |
| 1994 Institutions | 1,087 | 1,087 | 1,087 |
| Joe Skeen Rangeland | 895 | 1,000 | 1,000 |
| Sustainable Agriculture | 12,222 | 12,722 | 12,222 |
| Aquaculture Centers | 4,000 | 4,000 | 4,000 |
| Federal Administration | 37,482 | 42,610 | 26,769 |
| Total | 588,097 | 593,306 | 597,863 |
| Higher Education: | | | |
| Institution Challenge Grants | 4,859 | 5,500 | 4,859 |
| Graduate Fellowships | 2,883 | 4,500 | 2,883 |
| Multiculture Scholars | 986 | 998 | 998 |
| 1890 Capacity Building | 11,411 | 12,411 | 11,411 |
| Hispanic Educational Partnership | 4,645 | 5,645 | 4,645 |
| 1994 Institutions | 1,679 | 2,250 | 1,689 |
| Alaska/Hawaii Institutions | 3,131 | 2,997 | 3,500 |
| Secondary Ag Education | 880 | 1,000 | 890 |
| Total | 29,683 | 35,301 | 30,875 |
| Integrated Activities: | | | |
| Critical Issues — Disease | 444 | 2,500 | 444 |
| Rural Development Centers | 1,353 | 1,513 | 1,345 |
| Water Quality | 11,530 | 12,971 | 11,530 |
| Food Safety | 13,305 | 14,967 | 13,305 |
| Pest Impact Assessment | 4,028 | 4,531 | 4,028 |
| International Science Education | 895 | 1,000 | 895 |
| Crops at Risk — FQPA | 1,330 | 1,497 | 1,330 |
| FQPA Risk Mitigation | 4,345 | 4,889 | 4,345 |
| Methyl Bromide Trans. | 3,131 | 2,498 | 3,131 |
| Organic Transition | 1,889 | 1,889 | 1,889 |
| Homeland Security | 7,953 | 18,000 | 15,000 |
| Total | 50,195 | 66,255 | 57,242 |

Recognition of Junior Faculty for Excellence in Research

In 1991, the ARD Advisory Council established a program to recognize the research accomplishments made by junior faculty members. No more than two junior faculty are recognized each year. The recognition consists of a certificate, engraved plaque and \$3,000 for use in professional development or research-related activities.

Criteria used to evaluate nominees include scientific publication record, especially those publications resulting from research at UNL, external grant funding and recognition by peers. A sub-committee of the ARD Advisory Council evaluates the nominations and recommends recipients to the Dean for Agricultural Research.

The following faculty members were selected for recognition during the 2004-2005 academic year:

Dr. Andrea Cupp, Assistant Professor, Animal Science Department

Dr. Donald Becker, Assistant Professor, Biochemistry Department

Congratulations to Drs. Cupp and Becker! A call for nominations is issued each year on about June 1. We encourage faculty and administrators to nominate deserving junior faculty in their units.

ARD-Administered Grants and Awards Programs

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The Agricultural Research Division administers several grant and recognition programs using ARD funds, NU Foundation funds and funds from other sources. Some of these are awarded annually on a regular schedule and some on an ad hoc basis as funds permit. The following summary explains some of these programs and how they currently are being administered.

NU Foundation Endowments

Anna H. Elliott Fund Grants

Awarded every two years as endowment income permits. Income is about \$60,000 annually and the program is oriented to plant science research directed to western Nebraska. RFP issued about **Dec. 15**, awarded in **odd-numbered** years.

Sampson Range and Pasture Management Endowment

Awarded every two years as endowment income permits. Three research, extension or teaching projects are funded every two years. The program is directed at pasture and rangeland management and the study of native grasses. RFP issued about **Jan. 15**, awarded in **odd-numbered** years.

Mussehl Poultry Research Endowment

Awarded every two years as endowment income permits. Income is about \$25,000 per year. Research in poultry management, health, nutrition, physiology, waste management and utilization, and poultry product research is supported by the endowment. RFP is issued about **June 1**, awarded in **odd-numbered** years.

Widaman Trust Graduate Fellowship

Awarded annually. \$2,000 added to stipend of outstanding graduate students. Nominations are due about **May 10**.

Hardin Distinguished Graduate Fellowship in Plant Stress Physiology

Awarded annually. \$2,000 added to stipend of a selected student plus \$1,000 to the department to

assist the student's research. One fellowship awarded annually. Nominations are due about **May 10**.

John and Louise Skala Fellowship

Awarded annually. Fellowships may be awarded to graduate students who have been accepted into either M.S. or Ph.D. programs, and have been offered graduate assistantships. These funds are to be used to supplement existing assistantships (GRA/GTA) with offers of \$3,000 for M.S. and \$5,000 for Ph.D. students. Fellowships constitute an award based on academic and scholastic achievement or promise, cannot be associated with any service requirement, and will be awarded only to students doing research in the area of industrial uses of agricultural commodities. Cannot be candidate for Widaman, Milton Mohr or Farmer's National if a candidate for Skala Award. Industrial Ag Products Center assists in the selection of recipients. Nominations are due about **May 10**.

William G. Whitmore Graduate Student Travel Grants

Awarded annually. In accordance with the donor instructions, this program will support attendance to professional society meetings in the field of animal science, agricultural education and leadership, and veterinary and biomedical sciences. Grants under this program are limited to a maximum of \$500 per individual per fiscal year. This includes transportation (which is not to exceed coach class airfare), registration, lodging, meals, etc. Deadlines for submissions are **May 15** and **Nov. 15**.

Larrick Graduate Student Travel Grants

Awarded twice yearly. In accordance with the donor instructions, this program supports graduate student travel to professional meetings. In that the Whitmore Graduate Student Travel Grant supports students in animal science, agricultural education and leadership, and veterinary and biomedical sciences, the Larrick Graduate Student Travel Grant program supports graduate student travel in fields other than those listed for the Whitmore program. Grants under this program are limited to a maximum of \$500 per individual per fiscal year. This amount includes transportation (not to exceed coach class airfare), registration, lodging and meals. Deadlines for submissions are **May 15** and **Nov. 15**.

Williams Endowment

Awarded every two years. Project proposals should relate to the "management of surface water run-off and erosion from agricultural land to achieve total maximum daily loading (TMDL) compliance." The specific focus of the research may be changed in future solicitations as emerging priorities change. Deadline for submission is **May 15** in **even-numbered** years.

Mary and Charles C. Cooper/Emma I. Sharpless Fellowships

Jointly awarded on an annual basis by ARD and CASNR. \$1,000 or \$2,000 added to stipend of selected graduate students for assistance in recruitment. Applications are accepted throughout the year.

Junior Faculty Excellence in Research Recognition (Ruth E. Branham Endowment)

Awarded annually. Up to two junior faculty recognized per year. Recognition consists of certificate, plaque and \$3,000 for use in research or professional development. Call for nominations is issued **June 1**.

Burlington Northern Water-Science Endowment

Awarded on a biannual basis for water science research. Approximately \$60,000 is available every two years. RFP issued about **Jan. 15**, awarded in **even-numbered** years.

Helen Porter Van Spronsen Charitable Trust

The annual income from the Trust is to partially support (\$10,000) one GRA in the range and livestock research program. This will be a named assistantship assigned to an approved ARD project in range and livestock research at the Gudmundsen Sandhills Laboratory. Awarded every two years. RFP issued about **Feb. 1**, awarded in **odd-numbered** years.

Ralph H. Bainbridge Memorial Fund

The annual income of approximately \$5,000 will be used to partially support research in beef production and grassland management. Grants will be awarded on a competitive basis to interdisciplinary teams. Matching funds will be required. Awarded every two years. RFP issued about **Feb. 1**, awarded in **odd-numbered** years.

Agricultural and Water Research Fund

Interest income will be used in conjunction with the current Burlington-Northern Water Science Endowment to enhance water science and irrigation management research. This is awarded every two years in concurrence with the Burlington Northern Water-Science Endowment. RFP issued about **Jan. 15** in **even-numbered** years.

Jorgensen Fund

The interest income will be used to partially support a GRA for a graduate student conducting research at the Gudmundsen Sandhills Laboratory on beef-range systems. Awarded every two years. RFP issued about **Feb. 1**, awarded in **odd-numbered** years.

Channing B. and Katherine W. Baker Fund

Interest from the endowment is used to support one GRA in the areas of (i) soil conservation and management or (ii) breeding and genetics of food and feed grains. Preference in awarding the GRA will be given to Ph.D. students. Awarded every

two years. RFP issued about **Feb. 1**, awarded in **even-numbered** years.

ARD Discretionary Funds

Multistate Research Funds

Awarded once each year. Approximately 25 percent of the Hatch Act funds provided to the Nebraska Agricultural Experiment Station (NAES) is set aside to support multistate research activities. This account is used to provide travel expenses for attendance of official NEAS representatives at annual meetings of multistate research projects (NE, NC, S or W), coordinating committees/information exchange groups (NCR, SIEG, etc.), administrative committees (NCA, etc.) or proposal development committees (NCT, etc.). Funding for operations, graduate student and technical support is also provided to official participants in multistate research projects to allow them to accomplish the project objectives.

Special Hatch Funds

Awarded once every two years. An increase in the Hatch Act funds provided to the Nebraska Agricultural Experiment Station was set aside in a competitive grants program that addresses specific federal priorities. Requests for proposals are normally issued in **April of odd-numbered years** and awards are made effective July 1 of that year. The request for proposal specifies the federal priority areas for which applications are sought.

Interdisciplinary Research Grants

Awarded annually depending on availability of funds. Two or three grants awarded for up to two years duration and for up to \$20,000 annually. RFP issued about **Feb. 1**.

Graduate Student Recruitment Funds

Awarded as requested by departments. Up to two per department per **calendar year**. Award pays up to 50 percent of expenses or \$200 per student. Purpose is to reimburse recruitment visits to UNL for students offered assistantships.

ESCOPI/ACOP Leadership Development Course

One faculty member is selected for participation each year. Award consists of tuition and travel expenses associated with ESCOP/ACOP Leadership Development Course. Participants spend about 10 percent of their time serving as administrative interns in ARD. Request for applications is issued in late **November** and **application deadline is late January**.

ARD Research Equipment Awards

Awarded annually, as provided in state appropriations. Approximately \$225,000 awarded annually to all ARD units, according to prioritized requests. RFPs are issued about **Sept. 1**.

Undergraduate Honors Student Research Program

Awarded annually. Approximately \$52,000 awarded each spring to honor students conducting research with faculty members holding an ARD appointment. Students receive a maximum of \$2,500 for supplies and expenses and/or as a stipend. RFPs are issued about **April 1 and Sept. 1.**

UNL-Wide Competitions

Layman Trust Fund Awards

The Layman Awards are aimed at providing seed money for projects that will enhance the grantee's ability to obtain external funding or produce prominent scholarly work. Priority will be given to non-tenured tenure-track faculty and to other eligible faculty who propose projects of high promise and who make a compelling case that Layman funding is critical to their success. Awards may be made for pilot projects, prototype development, faculty development, and preliminary educational and public service programs. Award recipients are expected to actively pursue external funding sources and, where appropriate, submit a proposal for external funding within 18 months of receiving the award. RFPs are issued in **December with deadline in January; awards issued about May 1.**

University of Nebraska Foundation

The University of Nebraska Foundation grant is for equipment and information technology. The four campuses of the UNL system are eligible to compete for these grants. This program's goal is to strengthen UNL's priority areas through the purchase of needed information technology and equipment, with an emphasis on interdisciplinary collaboration among departments, colleges and other campuses. RFPs are issued and a letter of intent is to be submitted **March 1** to the Vice Chancellor for Research and the proposals by the **middle of March** to the cognizant Deans.

Willa Cather and Charles Bessey Professorships

These professorships were established to recognize distinguished scholarship and creative activity. Any UNL full professor, regardless of discipline, who does not currently hold another named professorship or chair, is eligible to be nominated or apply. A faculty member may not hold a Cather or Bessey Professorship and another named professorship or chair simultaneously. The professors will receive a \$2,500 annual stipend. Nominations and applications should be submitted to the Office of Academic Affairs by the **middle of October.**

Othmer Fellowships

Othmer Fellowships are intended to assist in recruiting **exceptional** scholars who are seeking a terminal degree (Ph.D., MFA). Othmer Fellows will receive, in addition to the departmental assistantship, a \$7,500 fellowship per year. Othmer Fellowships are renewable for up to three years, given continued

excellent progress toward the degree. At the end of the three-year fellowship period, Othmer Fellows are entitled to compete for other fellowship funding. **After this year, the call for applications will be sent in September and notification will be made early in the fall semester.**

Chancellor's Doctoral Fellowships

Chancellor's Doctoral Fellowships are designed to assist departments with the recruitment of superior graduate students by adding fellowship funds to an assistantship. These fellowships are for \$3,000 and are automatically renewable for a second year, given excellent progress toward the degree. All newly admitted doctoral students are eligible. **After this year, the call for applications will be sent in September and notification will be made early in the fall semester.**

Richard H. Larson Graduate Minority Fellowships

Richard H. Larson Minority Fellowships are designed to assist departments with the recruitment of superior graduate students from racial/ethnic groups under-represented in higher education (i.e., African-American, Hispanic or American Indian students) by adding fellowship funds to an assistantship. These fellowships are for \$2,500 and are automatically renewable for a second year, given excellent progress toward the degree. Larson fellowships may be offered in combination with other recruiting fellowships (e.g., Othmer or Chancellor's) where applicable. All newly admitted graduate students are eligible. **After this year, the call for applications will be sent in September and notification will be made early in the fall semester.**

Student Assistantships in Research and Scholarship (STARS)

The Student Assistantship in Research and Scholarship (STARS) program is designed to assist departments with the recruitment of racially/ethnically under-represented students or women interested in pursuing graduate studies in disciplines where they are under-represented. The STARS program aids departmental recruitment of superior graduate students by adding summer assistantships to regularly funded departmental assistantships. In order for the students to be exempt from summer tuition, the departmental assistantships must be large enough during the academic year to provide summer tuition benefits. These assistantships are for \$3,000 and are to be used to support a student during the first summer after matriculation into a full-time program of graduate study (i.e., the summer after the first year of graduate study). **After this year, the call for applications will be sent in September and notification will be made early in the fall semester.**

Anyone with questions about these programs is encouraged to contact the Agricultural Research Division office.

Proposals Submitted for Federal Grants — August-September 2004

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Steve Baenziger, Kent Eskridge and Ismail Dweikat — USDA/NRI — The genetic basis of agronomic traits controlled by chromosome 3A in wheat — \$399,198

Curt Weller, Tim Carr, Vicki Schlegel, Susan Cuppett, K. Hwang and L. Wang — USDA/CSREES — Purification process influences on structural and nutritional function of grain sorghum — \$495,343

J. Dixon Esseks — USDA/NRI — Farm viability, farmland preservation and smart growth: Seeking convergence — \$319,539

Susan Hefle — USDA/CSREES — Alliance for Food Protection — \$124,438

James Alfano — USDA/CSREES — Functional genomics of the pathogenetic and epiphytic lifestyles of the bacterial plant pathogen *Pseudomonas syringae* B728a — \$129,999

Asit Pattnaik — USDA/CSREES — Analyses of virulence and attenuation determinants of PRRSV using reverse genetic approach — \$496,403

Raul Barletta — USDA/NRI — John's Disease Integrated Program — \$86,728

Rodger Johnson, John Weber and J. Lunney — USDA/NRI — Identifying genes expressed differently in pigs with differential phenotypic responses to PRRSV — \$24,691

Janos Zempleni — USDA/NRI — Biotin affects cytokine metabolism — \$372,403

Donald Wilhite — USDA/CSREES — Drought monitoring, planning and mitigation — \$217,593

Steven Harris — NIH — Regulation of polarisome function in filamentous fungi — \$1,460,000

Robert Kuzelka — EPA — Working towards recovery: Building consensus on the Missouri River Ecosystem — \$27,992

Kenneth Hubbard and Steve Goddard — USDA — Risk Management tools for the agriculture landscape — \$844,404

Andrew Tyre — Health and Human Services — Habitat effects on mosquito-vertebrate host interactions — \$86,000

Anatoly Gitelson — USDA/ARS — Development and validation of remote sensing Algorithms to detect Cyanobacteria in catfish ponds — \$10,000

Clinton Jones — Health and Human Services — Functional analysis of the HSV-1 gene encoding LAT — \$1,825,000

Brian Beecher — USDA — Improving barley digestibility by modifying kernel texture — \$7,000

Richard Sutton — National Park Service — Develop management plan for historic osage orange hedgerow — \$8,918

Tim Arkebauer — Department of Energy — Controls on soil surface CO₂, N₂O and CH₄ fluxes, ecosystem respiration and global warming potentials — \$304,118

John Yohe — USAID — International Sorghum/Millet Collaborative Research Support Program — \$2,850,000

Donald Weeks and Tom Clemente — USDA/BARD — Enhancement of photosynthesis and crop productivity — \$160,000

Vadim Gladyshev — NIH — Functions of thioredoxin glutathione reductase — \$96,000

Viacheslav Adamchuk — USDA — Yield monitor (non-contact microwave solids flow meter) for mapping — \$3,103

Derrel Martin — Department of Interior — Cooperative agreement for modeling and field experimentation to determine the effects of land terracing and non-federal reservoirs on water supplies — \$379,664

Robert Wright — Environmental Protection — Biological control of Japanese beetles by metarhizium anisopliae applied with autodissemination traps — \$38,646

Stephen Taylor — USDA/CSREES — Midwest Advance Food Manufacturing Alliance — \$398,383

Milford Hanna, Loren Isom and Robert Weber — USDA Rural Business-Cooperative Service — Strategically locating soybean and biodiesel processing facilities in Nebraska — \$101,250

Milford Hanna — CSREES-NRCS — Post Award Management of Biomass R and D Initiative projects — \$50,000

Janos Zempleni — NIH — Roles for biotin in epigenetic events — \$401,500

Terry Mader, Steve Hu and Robert Rasby — NIGEC — Evaluation of ecosystem models for beef cattle production — \$216,341

Anne Vidaver — USDA/ARS — Molecular characterization of clavibacter species — \$318,742

Julie Stone — NSF — Understanding the regulation of plant colonization by bacterial endophytes — \$644,733

Etsuk Moriyama, Jitender Deogun, Steve Kachman, Guoqing Lu and Luwen Zhang — NIH and NSF — Bioinformatics of virus-host specificity/pathogenesis — \$1,362,179

Sally Mackenzie — Department of Energy — Nuclear-organellar interactions involving atmsh1 in *Arabidopsis* — \$360,000

Jeffrey Cirillo — NIH/NIAID — Molecular genetics of francisella virulence — \$572,500

Steve Baenziger, Amit Mitra, Marty Dickman and Tom Clemente — U.S. Wheat and Barley — Enhance scab resistance in winter wheat germplasm by plant transformation — \$98,900

Alex Martin — USDA/ARS — Effect of transgenes from sorghum on the fitness of shattercane X sorghum hybrids — \$15,000

Rhae Drijber — USDA/ARS — Manure and nutrient management practices to protect human health and the environment — \$662,200

Susan Fritz, Jim King and John Markwell — NSF — Improving agriculture, food and natural resources programs — high school to college and beyond — \$828,778

Darrell Nelson — USDA/ARS — Research to improve production efficiency/meat quality, reduce food safety pathogens — \$300,000

Dan Duncan — US EPA — Wetland program development grant — \$30,791

Susan Cuppett and Vicki Schlegel — NIH — A food based oxidative stress model in Caco-2 cells — \$157,284

David Baltensperger and Drew Lyon — DOE-SBIR — Improvement of cool season oil seeds to support economically competitive biodiesel production on the western High Plains — \$3,000

James Van Etten — Health and Human Services — Improvement of methodology for genetic analysis (cloning and engineering of nicking enzymes) — \$100,000

Martin Dickman and Donald Becker — NSF — The role of proline metabolism during apoptosis and adaptive stress responses in fungi — \$659,685

Dave Dunigan and Jim Van Etten — NSF — Virus — mediated transcriptional shut off — \$870,399

Julie Stone — Department of Energy — Role of transcriptional regulator in programmed cell death and plant development — \$468,873

Steve Hu, Roger Bruning, L. Pytik-Zilling, Ken Hubbard and Gary Lynne — NOAA — Transition of weather and climate forecasts into effective decision-making tools — \$293,732

Chen Xun-Hong — NSF — Multi-scale water balance connections in an irrigated ecosystem — \$782,838

Scott Hygnstrom — USDA/APHIS — Toward the development of spatially explicit models of wildlife disease — \$105,930

Kenneth Hubbard — NSF — Collaborative Research: Spatio-temporal variations in soil moisture and land memory processes in the Great Plains — \$103,799

Andrew Tyre — NIH — Habitat effects on mosquito-vertebrate host interactions — \$86,019

New or Revised Projects August/September 2004

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

NEB-10-154, (NC-1016) Economic assessment of changes in trade arrangements, bio-terrorism threats and renewable fuels requirements on U.S. grain and oilseed sector

Investigator: Dennis Conley (Agricultural Economics)
Status: Multistate project effective Oct. 1, 2004

NEB-10-155, Vertical integration, contract coordination, and market power in agricultural raw product markets

Investigator: Jeff Royer (Agricultural Economics)
Status: Revised Hatch project effective Sept. 1, 2004

NEB-11-115, Improved anaerobic lagoon design and management for odor control

Investigator: Dennis Schulte (Biological Systems Engineering)
Status: Revised Hatch project effective June 1, 2004

NEB-12-181, Development of profitable reduced herbicide weed management systems through integration of management practices

Investigator: Alex Martin
Status: Revised Hatch project effective July 1, 2004

NEB-14-134, Influence of enterotoxins on virulence and colonization of the porcine intestine by *escherichia coli*

Investigator: Rodney Moxley (Veterinary and Biomedical Sciences)
Status: NRI Grant effective Sept. 1, 2004

NEB-19-016, Midwest Advanced Food Manufacturing Alliance

Investigator: Steve Taylor (Food Science and Technology)
Status: Special Grant effective Sept. 1, 2004

NEB-19-017, Alliance for Food Protection

Investigator: Susan Hefle (Food Science and Technology)
Status: Special Grant effective Sept. 15, 2004

NEB-21-101, Genomics of the necrotrophic fungal pathogen *sclerotinia sclerotorum*

Investigator: Martin Dickman (Plant Pathology)
Status: NRI Grant effective Sept. 1, 2004

NEB-40-033, Drought monitoring, planning and mitigation

Investigator: Don Wilhite (School of Natural Resources)

Status: Special Grant effective Sept. 15, 2004

NEB-42-007, Assessment and management of cattle exposed to environmental stressors

Investigator: Terry Mader (Northeast Research and Extension Center)

Status: Revised Hatch project effective Oct. 1, 2004.

NEB-44-066, Interactions among life-forms in secondary succession on restored wetlands

Investigator: P.E. Reece (Panhandle Research and Extension Center)

Status: State Interdisciplinary project effective July 1, 2004



**Grants and Contracts Received
August-September 2004**

Agricultural Economics

Miscellaneous grants under \$10,000 each \$6,500

Agronomy and Horticulture

Alex Martin — USDA/ARS 75,000
 Ismail Dweikat — Nebraska Grain Sorghum Board 13,393
 James Specht — USDA/ARS 68,185
 Roy Spalding — Nebraska Department of Agriculture 10,000
 Brian Beecher, Steve Baenziger and Robert Gray — Nebraska Wheat Board 50,000
 Lenis Nelson — Nebraska Wheat Board 12,000
 Steve Baenziger, Brian Beecher and David Baltensperger — Nebraska Wheat Board 70,000
 Steve Baenziger, Kent Eskridge and Ismail Dweikat — USDA/NRI 390,000
 Roy Spalding — Central Platte Natural Resources 40,000
 Miscellaneous grants under \$10,000 each 72,918

Animal Science

Galen Erickson and Terry Klopfenstein — Nebraska Corn Board 27,773
 Donald Beermann — Brinegar Faculty Development 13,058
 Terry Klopfenstein — Wagner Fund (Grad stipends) 60,253
 Terry Klopfenstein, Don Adams and Rick Funston — Nebraska Corn Board 19,811
 Chris Calkins — Nebraska Beef Council 42,569
 Miscellaneous grants under \$10,000 each 15,000

Biochemistry

Ruma Banerjee — NIH 1,973,970
 Han Asard — NSF 386,084
 Vadim Gladyshev — NIH 40,320
 Vadim Gladyshev — NIH 55,775
 Ruma Banerjee — NIH 288,000
 Donald Becker — NIH 216,875

Biological Systems Engineering

Curt Weller — USDA/ARS 40,000

Center for Grassland Studies

Martin Massengale — Sampson Fellowship 16,400

Entomology

Leon Higley — Nebraska Game and Parks 20,989
 Lance Meinke — Monsanto 15,725
 Lance Meinke — Pioneer HiBred International 17,607
 Miscellaneous grants under \$10,000 each 7,000

Food Science and Technology

Lloyd Bullerman — Kraft Foods Global, Inc. 25,000
 Susan Hefle — USDA/CSREES 24,887
 Steve Taylor — USDA/CSREES 398,383
 Miscellaneous grants under \$10,000 each 11,092

Industrial Ag Products Center

Milford Hanna — USDA/CSREES-NRCS 25,000

Northeast Research and Extension Center

Thomas Hunt and Leon Higley — North Central Soybean Research 19,030
 Miscellaneous grants under \$10,000 each 16,000

Panhandle Research and Extension Center

Robert Wilson — Monsanto 10,800
 Charles Hibberd — Nebraska Dry Bean Commission 24,000
 David Baltensperger — Anna Elliott 15,000
 Gary Hein — USDA/ARS 85,436
 Drew Lyon — Anna Elliott 15,000
 Miscellaneous grants under \$10,000 each 120,095

Plant Pathology

James Steadman — Nebraska Dry Bean Commission 13,900
 Anne Vidaver — USDA/ARS 77,254
 James Van Etten — NIH 288,000
 Loren Giesler with Ohio State — North Central Soybean Research 20,000
 Loren Giesler and Tom Hunt — North Central Soybean Research 29,175
 John Watkins — Nebraska Wheat Board 11,000
 Loren Giesler — Nebraska Department of Agriculture 58,300
 Martin Dickman — BARD 145,000
 James Steadman — USDA/ARS 41,800
 Miscellaneous grants under \$10,000 each 5,300

Sustainable Agricultural Research and Education

William Wilcke — USDA/CSREES 2,721,126

School of Natural Resources

Bill Zanner — Nebraska Department of Natural Resources 143,051
 John Holz and Kyle Hoagland — Nebraska Department of Environment Quality 111,000
 James Merchant — American View, Inc. 89,500
 Scott Hygnstrom — Nebraska Game and Parks 50,000
 Anatoly Gitelson — USDA/ARS 10,000
 Craig Allen — Nebraska Game and Parks 50,000
 Michael Hayes, Don Wilhite and Ken Hubbard — U.S. Geological Survey 83,804
 Steve Comfort — Pacific Northwest National Labor 59,000
 Michael Hayes, Robert Hitchcock and William Waltman — National Oceanic and Atmospheric 107,909
 Sunil Narumalani — Nebraska Military Dept. 37,581
 Miscellaneous grants under \$10,000 each 14,875

Veterinary and Biomedical Sciences

Clinton Jones — Pfizer 60,268
 Miscellaneous grants under \$10,000 each 200

West Central Research and Extension Center

David Tarkalson — Anna Elliott 10,600

Water Center

Kyle Hoagland — National Park Service 12,000

Total

9,105,571