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## ARD News October 2003

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## Agricultural Research Division News

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October 2003

Volume 36, Number 5

### Comments from the Dean

Dear Colleagues:

During the past year, UNL has announced and celebrated a number of large external research grants from federal agencies, including one during the week in which this is being written. ARD faculty are highly involved in most of these grant-funded projects. We thank the principle investigators and collaborators for their hard work in preparing the proposals and congratulate them for their creativity and scientific expertise that resulted in the proposals being selected for funding in a very competitive environment. In recognizing the outstanding scientists who are successful in obtaining large grants, administrators run the risk of not properly acknowledging the efforts of other faculty and staff who carry out productive research each day with little fanfare.

It is important that ARD faculty and staff understand that IANR administrators value them and their research programs regardless of their involvement in very large federal grants. We encourage all faculty to aggressively seek external funding because resources in addition to those provided by the state of Nebraska are normally required if a research project is to have significant outcomes and impacts. Some faculty conduct research in areas that have opportunities for large federal grants, whereas very few competitive grant opportunities exist for other faculty conducting research in areas that are not federal priorities. There are, however, external grant opportunities for almost every faculty member if he/she is diligent in searching for opportunities and clever in aligning the project with the funding organization's goals. Faculty members need to become familiar with funding opportunities from private companies, state agencies, commodity organizations, non-profit foundations and federal agencies that do not have formal competitive grant

competitions. As I have stated before, "All money is green," and our focus should be on obtaining needed resources regardless of source.

I continue to be very pleased with the development of ARD research programs. Our research grant and contract income continues to increase each year and outputs from the projects also are increasing. In a real sense, our greatest limitation at present is a lack of laboratory space in several departments. This lack of space is constraining the growth of some research groups and discouraging faculty members from preparing additional grant proposals. In addition, some of our research facilities are outmoded and must be renovated or replaced within the next five years. Finding funds to construct new facilities and renovate existing buildings will be a terrific challenge given the state's budget situation. Vice Chancellor Paul, Vice Chancellor Owens and I are working to address some of the facility issues through federal appropriations and private gifts. We have yet to be successful in obtaining funds for building an addition to house the Nebraska Center for Virology, but private gifts will build an education and research building at the Gudmundsen Sandhills Laboratory.

*Darrell W. Nelson  
Dean and Director*

### IANR Programs of Excellence Pre-proposals

ARD faculty members are involved in the following pre-proposals that were submitted this month to the Programs of Excellence (POE) effort coordinated by the Office of the Senior Vice Chancellor for Academic Affairs:

Water Resources Research Initiative  
Kyle D. Hoagland and Sherilyn C. Fritz



Sedimentary Geology and Meteorology/Climatology  
Chris Fielding, Clint Rowe and Steve Hu

Veterinary Diagnostic Center  
David Steffen

Previously approved and funded POE projects that have ARD faculty involvement include: Bioengineering; Food Safety; Bioinformatics and Biological Modeling; and Proteomics, Functional Genomics and Structural Biology. We are pleased that the Bioengineering project received funding that will allow the creation of two new laboratories for biomedical engineering faculty in the basement of L.W. Chase Hall. In addition, funds have been allocated to create a special pilot plant in the Food Industry Complex. It will house research on the effects of processing on foodborne pathogens and other hazards. The plant will be created when space becomes available in the building.

## Mussehl Endowment

Four proposals were submitted for the Mussehl Endowment. This substantial endowment was established in the University of Nebraska Foundation by the Mussehl Estate to support UNL poultry research programs. Projects eligible for endowment support include poultry management, health, nutrition, physiology, waste management and utilization, and poultry product research. The following proposals were funded:

**Randy Wehling and Glenn Froning**, Food Science and Technology

"Development of a Rapid Method for Measuring Bone Fragments in Mechanically Deboned Poultry Meat Using Near Infrared Spectroscopy"

Funded: \$14,700 September 1, 2003 — August 31, 2004

**Sheila Scheideler**, Animal Science Department

"Development, Assessment and Feasibility of a Value Added Hatchery Waste Phosphorus Product (HWPP)"

Funded: \$15,400 September 1, 2003 — August 31, 2004

**Sheila Scheideler and Mary Beck**, Animal Science Department

"Effects of Step-Down Lighting Programs and Optimizing the Molt Diet for Non-Fasting Molting Regimes"

Funded: \$16,430 September 1, 2003 — August 31, 2004

**Harshavardhan Thippareddi, Susan Cuppett and Glenn Froning**, Food Science and Technology

"Effects of Dietary Linoleic Acid on the Sensory and Microbiological Quality of Fresh and Irradiated Broiler Meat: Extending the Shelf Life Through Antioxidant Supplementation"

Funded: \$15,000 September 1, 2003 — August 31, 2004

## Multistate Research Activities Summarized

At the September 2003 meeting of the North Central Regional Association (NCRA), a proposal was approved to redesignate the acronyms for two multistate research activities. The new designations went into effect on Oct. 1, 2004. The following gives a short summary about the various types of multistate activities. Check at <http://www.wisc.edu/ncra/> for more information and required formats or contact Nancy Betts.

### I. Multistate Research Projects (NC):

**Activity:** Traditional research projects that are cooperative, jointly planned and employ multidisciplinary approaches to solve problems that concern more than one state and usually more than one region

**Membership (technical committee):** State Agricultural Experiment Station (SAES) scientists, an Administrative Advisor (AA), CSREES representative, other public and private sector scientists and, as applicable, extension specialists and/or extension agents

**Funding:** Seed dollars to support Nebraska's contribution and travel dollars usually yearly for five years

### II. Multistate Research Coordinating Committees (CC) and Information Exchange Groups (IEG):

**Designation:** currently NCR; adopted NCRIEG

**Activity:** An authorized group of research scientists, and in many cases extension specialists and extension agents, working on a topic area of shared interests, with coordinated activities and the exchange of outputs. (Note: This is not intended as a mechanism for preparing a multistate research project outline, although these can evolve into a research project.)

**Membership:** AA, CSREES representative, scientists and, as applicable, extension specialists and/or agents

**Funding:** Travel to meetings usually yearly for five years

### III. Committee responsible for developing proposal for new/revised MRP

**Designation:** currently NCT; adopted NCDC (developmental committee)

**Membership:** SAES scientists and others who form a writing committee

**Funding:** Travel to meet with writing group yearly up to two years

#### IV. Other Multistate projects types

- *National Research Support Projects (NRSP):*

**Activity:** Activities that support research needs but are not research per se are authorized as NRSPs. These include development of enabling technologies, development of support activities (such as collecting, assembling, storing and distributing materials, resources and information), sharing of facilities needed to accomplish high priority research, but which is not of itself primarily research.

**Membership:** four AAs (one appointed from each SAES regional association), a CSREES representative and scientists from SAES and elsewhere, as appropriate

**Funding:** Determined by SAES Directors

- *Emergency or Rapid Response Research Activity (Region-500 series):*

**Activity:** Range of activities from formally organized research on targeted objectives to very informal research coordination or information exchange activity, depending on the circumstances. This activity is intended to provide a mechanism to assure responsiveness to acute crises, emergencies and opportunities using the multistate research approach.

**Membership:** AA, CSREES representative, research scientists, and, as applicable, extension specialists and/or extension agents

**Creation and funding:** Proposed by Regional Executive Director and approved by CSREES

- *Research Advisory Committees (NCA):*

**Activity:**

- Provide stakeholder linkages, technical advice and review to regional associations
- Identify potential participants in NC, NCR(IEG) and NCT(DC)
- Assist in developing multistate research partnerships
- Assist in identifying significant findings and impacts from multistate research

**Membership:** university department heads/chairs or other institutional managers, along with an AA and sometimes a CSREES representative

## New or Revised Projects

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

**NEB-12-268 (Agronomy/Horticulture) Sustainable Farms, Landscapes and Rural Communities in Nebraska: An Agricultural Systems Team Approach**  
*Investigator:* Charles A. Francis  
*Status:* Revised Hatch project effective July 1, 2003

**NEB-12-299 (Agronomy/Horticulture) Development of Stress Resistant/High Yield Sorghum Germplasm for Release and Use in Investigation of Contributing Physiological Mechanisms**  
*Investigator:* Jerry D. Eastin  
*Status:* New Hatch project effective June 1, 2003

**NEB-17-084 (Entomology) Host-Plant Resistance, Insect-Plant Interactions, and Insect Genetics**  
*Investigator:* John E. Foster  
*Status:* New Hatch project effective July 1, 2003

**NEB-27-003 (School of Natural Resources) Exchange of Carbon Dioxide and Other Atmospheric Trace Gases in Vegetated Ecosystems**  
*Investigator:* Shashi B. Verma  
*Status:* Revised Hatch project effective April 1, 2003

**NEB-32-011 (SARE OFFICE) North Central Region (NCR) Sustainable Agriculture Research and Education (SARE) Program**  
*Investigator:* W.F. Wilcke  
*Status:* New Cooperative Agreement effective July 1, 2003

**NEB-40-026 (School of Natural Resources) Landscape-Level Mechanisms Influencing Population Dynamics of Birds**  
*Investigator:* Larkin Powell  
*Status:* New Hatch project effective April 1, 2003

**NEB-40-027 (School of Natural Resources) Radiative Transfer in Vegetative Canopies with Emphasis on Canopy Structure**  
*Investigator:* Betty Walter-Shea  
*Status:* New Hatch project effective August 1, 2003

**NEB-92-038 (Family and Consumer Sciences) Great Marriages: A Qualitative Study**  
*Investigator:* John DeFrain  
*Status:* New Hatch project effective July 1, 2003

# FY 2004 Appropriation for USDA/CSREES

The House of Representatives and the Senate have passed slightly different versions of the CSREES appropriation for FY 2004. The Senate version of the appropriation provides \$180 million for the National Research Initiative (NRI), which is about \$14 million more than the FY 2003 level. Unfortunately, the House version provides only about \$149 million for the NRI. The House version provides a slight increase for formula-based programs, whereas the Senate version level funds formula programs. The House version provides \$16 million for Homeland Security issues (primarily enhancement of the plant and animal diagnostic laboratory network), whereas the Senate version does not provide funding for this purpose. Most of the other research and integrated programs are maintained at FY 2003 levels in both the House and Senate bills. We anticipate that a Conference Committee will meet soon to resolve the differences between the two versions and that the final appropriations bill will be passed by Congress and signed by President Bush within the next month.

| Program                       | FY2003 Enacted* | FY2004 House   | FY 2004 Senate |
|-------------------------------|-----------------|----------------|----------------|
| ----- \$, thousands -----     |                 |                |                |
| <b>Research:</b>              |                 |                |                |
| Hatch Act                     | 178,977         | 180,148        | 178,977        |
| McIntire-Stennis Forestry     | 21,742          | 21,884         | 21,742         |
| Evans-Allen Program           | 35,411          | 36,000         | 35,411         |
| Animal Health and Disease     | 5,065           | 5,065          | 5,065          |
| National Research Initiative  | 166,045         | 149,248        | 180,000        |
| Special Research Grants       | 111,534         | 101,241        | 101,637        |
| Improved Pest Control         | 15,165          | 15,194         | 14,976         |
| Canola — Alternative Crop     | 840             | 840            | 840            |
| Critical Ag Materials Act     | 1,093           | 0              | 1,242          |
| Hesperaloe — Alter. Crop      | 348             | 0              | 840            |
| 1994 Institutions             | 0               | 998            | 1,093          |
| Joe Skeen Rangeland           | 994             | 1,000          | 0              |
| Sustainable Agriculture       | 13,661          | 13,661         | 13,661         |
| Aquaculture Centers           | 4,471           | 3,996          | 4,471          |
| Federal Administration        | 29,466          | 36,815         | 26,698         |
| <b>Total</b>                  | <b>584,861</b>  | <b>567,430</b> | <b>586,813</b> |
| <b>Higher Education:</b>      |                 |                |                |
| Institution Challenge Grants  | 4,888           | 4,888          | 4,888          |
| Graduate Fellowships          | 3,222           | 3,222          | 3,222          |
| Multiculture Scholars         | 992             | 992            | 992            |
| 1890 Capacity Building        | 11,404          | 9,479          | 11,404         |
| Hispanic Educ. Partnership    | 4,073           | 4,073          | 4,073          |
| 1994 Institutions             | 1,689           | 1,689          | 1,689          |
| Alaska/Hawaii Institutions    | 3,477           | 2,997          | 3,500          |
| Secondary Ag Education        | 944             | 994            | 994            |
| <b>Total</b>                  | <b>30,689</b>   | <b>27,342</b>  | <b>30,762</b>  |
| <b>Cooperative Extension:</b> |                 |                |                |
| Smith-Lever (3)b&(3)c         | 279,390         | 275,940        | 279,390        |
| 1890 Institutions             | 31,908          | 31,908         | 31,908         |
| Farm Safety                   | 5,489           | 5,489          | 5,489          |
| Food and Nutrition Educ.      | 58,185          | 58,185         | 58,185         |
| Indian Reservation Agents     | 1,983           | 1,983          | 1,983          |
| Pest Management               | 10,689          | 10,689         | 10,689         |
| Sustainable Agriculture       | 4,843           | 4,843          | 4,843          |
| Youth at Risk                 | 8,426           | 8,426          | 8,426          |
| Youth Farm Safety             | 496             | 496            | 496            |
| Renewable Resources Act       | 4,516           | 4,093          | 4,516          |
| 1890 Facilities               | 14,903          | 13,500         | 14,903         |
| Rural Health and Safety       | 2,605           | 0              | 2,605          |
| 1994 Extension                | 3,365           | 3,373          | 3,273          |
| Grants to Youth Orgs.         | 2,981           | 0              | 2,981          |
| Federal Administration        | 20,741          | 19,417         | 20,397         |
| <b>Total</b>                  | <b>450,520</b>  | <b>438,242</b> | <b>450,084</b> |
| <b>Integrated Activities:</b> |                 |                |                |
| Critical Issues — Disease     | 497             | 497            | 497            |
| Rural Develop. Centers        | 1,503           | 1,503          | 1,503          |
| Water Quality                 | 12,887          | 12,887         | 12,887         |
| Food Safety                   | 14,870          | 14,870         | 14,870         |
| Pest Impact Assess.           | 4,502           | 4,501          | 4,502          |
| Int. Science Education        | 497             | 1,000          | 497            |
| Crops at Risk — FQPA          | 1,487           | 1,487          | 1,487          |
| FQPA Risk Mitigation          | 4,857           | 4,857          | 4,857          |
| Methyl Bromide Trans.         | 3,229           | 3,229          | 3,500          |
| Organic Transition            | 2,111           | 2,111          | 2,111          |
| Homeland Security             | 0               | 16,000         | 0              |
| <b>Total</b>                  | <b>46,439</b>   | <b>62,942</b>  | <b>46,711</b>  |

## 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 faculty members' outstanding efforts in submitting proposals to the various agencies.

**Terry Mader, Q. Steven Hu and Rick Rasby** — USDOE/NIGEC — Evaluation of Ecosystem Models for Beef Cattle Production — \$324,512

**Brad Zumwalt and Mark Hutchison** — USDA/AMS — Seizing the Opportunity: Helping North Central Producers to Enter the Growing Goat Meat Market — \$96,800

**Al Peters and Lei Ji** — NASA — Forecasting Vegetation Greenness with Satellite and Climate Data — \$485,841

**Curtis L. Weller** — U.S. Department of Agriculture and U.S. Department of Energy — Compositional Analysis of Grain Sorghum Lipid Materials — \$323,981

**Albert Weiss and P. Stephen Baenziger** — USDOE/NIGEC — Improved Predictions of Winter Wheat Growth, Development and Yield in the Great Plains of the United States — \$306,464

**Robert M. Caldwell and David R. Swanson** — USDOE/NIGEC — The Value of Detail in Ecosystem Models for Predicting County-Level Wheat Yields Throughout the Great Plains — \$363,361

**Gary Y. Yuen** — USDA/ARS — Biocontrol of Scab with *Stenotrophomonas maltophilia* C<sub>3</sub> — \$19,229

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

**James E. Specht** — USDA/ARS/SSA — Drought Stress Tolerance in Nebraska — \$68,185

**Robert Wright** — USEPA — Demonstration and Evaluation of Reduced Risk Pesticides to Protect Against Seed and Seedling Insects in Corn — \$39,875

**Larkin Powell** — U.S. Fish and Wildlife — Comparing Sustainability of Grazing in the Nebraska Sandhills: Which Regime is Best for Cattle and Wildlife — \$63,000

**Milford Hanna and Sandun Fernando** — USDA/NRCS — Development of a New Biofuel Comprised of Ethanol, Biodiesel and Diesel Fuel Blends (EB-Diesel) — \$308,879

**Scott Josiah** — USDA/FS — Market Driven Conservation: Producing Commercially Valuable Woody Crops in Riparian Buffers — \$43,780

**Don Wilhite** — USDA/CSREES/SPECIAL — Developing Drought Mitigation and Preparedness Technologies for the U.S. — \$46,296

**Ed Peters** — USDA/FS — Riparian Management for Aquatic Health in the Central Great Plains — \$23,886

**Walter H. Schacht, Geoffrey M. Henebry, Patrick Reece, Jerry Volesky and Bruce E. Anderson** — USDA/RMA — Assessing Interannual Variation in Forage Production: Integrating Climatic Analysis, Advanced Remote Sensing and Ecological Forecasting for Risk Assessment and Management — \$608,880

**Ruben Donis** — USDA/CSREES/NRI through University of Maryland — Control and Prevention of Avian Influenza in the U.S. — \$384,532

**Joseph J. Barycki** — NSF — CAREER: Regulation of Glutathione Homeostasis — \$736,868

**James Brandle** — USDA/FS — Seedscape — Practically Speaking — \$10,000

**Qi "Steve" Hu** — NOAA — Diagnostic and Modeling Study of Land Memory Processes Affecting Summer Monsoon Rainfall in the SW United States — \$315,086

**Vadim Gladyshev** — Department of Health and Human Services — Mechanism of Prostate Cancer Prevention by Selenium — \$1,631,250

**Julie M. Stone** — NSF — Role of a Transcriptional Regulator in Programmed Cell Death and Plant Development — \$370,596

**Thomas P. Powers** — NSF — Nematode Communities in the Nebraska Sand Hills — \$195,483

**Martin B. Dickman** — NSF — Role of Proline in Blocking Fungal Apoptosis and ROS Induced Stress — \$623,025

**Han Asard** — NSF — Biochemical Properties and Physiological Functions of Plant Cytochromes b561 — \$396,178

**David R. Smith** — USDA/APHIS — An Accurate Determination of the Proportion of Beef Cattle Herds with John's Disease and Risk Factors for Herd Status — \$100,000

**Xun-Hong Chen and Kenneth Hubbard** — NOAA — The Interactions of Soil Moisture with Ground Water, Vegetation and Atmosphere — \$382,809

**Dean Eisenhauer** — USDA/FS — Improved Methods for Assessing Infiltration in Riparian Buffers — \$20,462

**Galen Erickson** — USDA/CSREES through North Carolina State University — Managing Phosphorus in Beef Feedlot Operations — \$29,396

**Anne K. Vidaver** — USDA/NRI — Detection, Molecular Analysis and Plant/Microbe Interactions of the Toxigenic Bacterium *Rathayibacter toxicus* and *R. rathayi* in Grasses — \$997,426

**Dennis Schulte, Rick Koelsch, David Billesbach and Lakshmi Koppolu** — USDA/NRI through Iowa State University — Verification of Odor Dispersion Modeling for Siting of Livestock and Poultry Production Systems — \$122,135

**Galen Erickson** — USDA/NRI — Evaluation of Dietary and Management Intervention Strategies to Reduce Emissions from Cattle Feedlots Using Standard Field Protocols — \$499,051

**Raymond Supalla** — USDA/ARS — Addressing Water Supply and Environmental Needs in the North Platte River Basin with Markets — \$17,200

**Qi "Steve" Hu** — NOAA — Diagnostic and Modeling Study of Land Memory Processes Affecting Summer Monsoon Rainfall in the SW United States — \$315,086

**Clinton Jones** — NIH — The HSV-1 LAT Gene Regulates Interferon Expression — \$401,500

**Jeffrey D. Cirillo and Andrew K. Benson** — NIH/NIAID — Evolutionary Mechanisms in Infectious Diseases — \$1,735,300



## Grants and Contracts Received August and September, 2003

### Agricultural Economics

|                                          |           |
|------------------------------------------|-----------|
| Giannakas, Konstantinos — USDA/ARS       | \$ 25,000 |
| Suppala, Ray — USDA/ARS                  | 17,200    |
| Miscellaneous Grants under \$10,000 each | 20,432    |

### Agronomy/Horticulture

|                                                                           |         |
|---------------------------------------------------------------------------|---------|
| Baenziger, Stephen — Nebraska Wheat Board                                 | 60,000  |
| Beecher, Brian — Nebraska Wheat Board                                     | 40,000  |
| Cassman, Kenneth — USDA/ARS                                               | 20,000  |
| Diestler, Dennis — NSF                                                    | 22,779  |
| Dobermann, Achim — Foundation for Agronomic Research/United Soybean Board | 20,000  |
| Graef, George — USDA/ARS                                                  | 144,578 |
| Wortmann, Charles — Alan and Irene William Endowment via UN Foundation    | 14,000  |
| Miscellaneous grants under \$10,000 each                                  | 15,250  |

### Animal Science

|                                                        |        |
|--------------------------------------------------------|--------|
| Calkins, Charles — Nebraska Beef Council               | 33,569 |
| Klopfenstein, Terry — Nutrition Physiology Corporation | 43,080 |
| Miscellaneous grants under \$10,000 each               | 5,000  |

### Biochemistry

|                                                   |         |
|---------------------------------------------------|---------|
| Banerjee, Ruma — NIH                              | 341,429 |
| Becker, Don — NIH                                 | 187,867 |
| Gladyshev, Vadim — NIH                            | 165,000 |
| Simpson, Melanie — Layman Funds via UN Foundation | 10,000  |
| Weeks, Donald — United Agri Products              | 10,000  |

### Biological Systems Engineering

|                                                  |        |
|--------------------------------------------------|--------|
| Koelsch, Rick — Tire Recycling Centers, USA, INC | 25,055 |
| Schulte, Dennis — National Pork Board            | 52,375 |

### Biometry

|                        |        |
|------------------------|--------|
| Marx, David — USDA/ARS | 26,667 |
|------------------------|--------|

### Center for Applied Rural Development

|                                                 |        |
|-------------------------------------------------|--------|
| Allen, John — University of Missouri — Columbia | 86,762 |
|-------------------------------------------------|--------|

### Center for Biotechnology

|                                          |       |
|------------------------------------------|-------|
| Miscellaneous grants under \$10,000 each | 9,132 |
|------------------------------------------|-------|

### Entomology

|                                                          |        |
|----------------------------------------------------------|--------|
| Kamble, Shripat — USDA through Michigan State University | 86,355 |
| Meinke, Lance — Monsanto                                 | 25,000 |
| Miscellaneous grants under \$10,000 each                 | 16,000 |

### Food Science and Technology

|                                          |         |
|------------------------------------------|---------|
| Hefle, Susan — USDA/CSREES               | 139,309 |
| Jackson, David — Ohio State University   | 33,750  |
| Taylor, Stephen — USDA/CSREES            | 39,007  |
| Taylor, Stephen — USDA/CSREES            | 445,785 |
| Miscellaneous grants under \$10,000 each | 7,588   |

### Northeast Research and Extension Center

|                                      |        |
|--------------------------------------|--------|
| Hunt, Thomas — Iowa State University | 10,995 |
|--------------------------------------|--------|

### Nutritional Science and Dietetics

|                       |         |
|-----------------------|---------|
| Zempleni, Janos — NIH | 145,000 |
|-----------------------|---------|

### Panhandle Research and Extension Center

|                                                     |        |
|-----------------------------------------------------|--------|
| Gary Hein — USDA/ARS                                | 36,700 |
| Pavlista, Alex — Nebraska Department of Agriculture | 24,750 |
| Miscellaneous grants under \$10,000 each            | 6,000  |

### Plant Pathology

|                                          |         |
|------------------------------------------|---------|
| Giesler, Loren — Ohio State University   | 12,312  |
| Giesler, Loren — Iowa State University   | 18,180  |
| Mitra, Amit — USDA/CSREES                | 200,000 |
| Steadman, James — USDA/ARS               | 49,475  |
| Miscellaneous grants under \$10,000 each | 14,600  |

### Plant Science Initiative/Horticulture and Agronomy

|                                              |        |
|----------------------------------------------|--------|
| Mackenzie, Sally — U.S. Department of Energy | 99,999 |
|----------------------------------------------|--------|

### School of Natural Resources

|                                                                        |           |
|------------------------------------------------------------------------|-----------|
| Gosselin, Dave, Ed Harvey, Matt Joeckel and Mark Kuzila — USEPA        | 25,000    |
| Hoagland, Kyle — Nebraska Game and Parks Commission                    | 33,963    |
| Holz, John — Nebraska Department of Environmental Quality              | 45,000    |
| Hu, Steve — U.S. Department of Commerce                                | 40,000    |
| Jess, Michael — Nebraska Department of Health and Human Services       | 24,497    |
| Jess, Michael — USGS                                                   | 40,390    |
| Josiah, Scott — USDA/FS                                                | 43,780    |
| Peters, Ed — Nebraska Game and Parks Commission                        | 219,361   |
| Powell, Larkin — NPS                                                   | 25,000    |
| Wedin, Dave, Geoffrey Henebry, Tim Arkebauer and Dave Billesbach — NSF | 1,696,675 |
| Wilhite, Donald — USDA/CSREES                                          | 208,962   |
| Wilhite, Donald — Columbia University                                  | 17,000    |
| Miscellaneous grants under \$10,000 each                               | 14,732    |

### Veterinary and Biomedical Sciences

|                                                                  |        |
|------------------------------------------------------------------|--------|
| Schmitz, John — Nebraska Department of Health and Human Services | 20,000 |
| Zhon, You — Layman funds via UN Foundation                       | 10,000 |
| Miscellaneous grants under \$10,000 each                         | 2,500  |

### West Central Research and Extension Center

|                                          |        |
|------------------------------------------|--------|
| Payero, Jose — USGS                      | 13,844 |
| Miscellaneous grants under \$10,000 each | 1,500  |

**GRAND TOTAL** **\$ 5,288,184**

**Correction:** In the August 2003 ARD Newsletter, the amount of the USDOE-EPSCOR grant to Shashi Verma, Timonthy J. Arkebauer, Ken Hubbard, J. Knops and Gary Lynne was incorrect. The grant is for \$941,161.

## Diane says

A great purpose leads to great achievement.