

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Agricultural Research Division News & Annual Reports

Agricultural Research Division of IANR

2-2004

ARD News February 2004

Follow this and additional works at: <https://digitalcommons.unl.edu/ardnews>



Part of the [Agriculture Commons](#)

"ARD News February 2004" (2004). *Agricultural Research Division News & Annual Reports*. 94.
<https://digitalcommons.unl.edu/ardnews/94>

This Article is brought to you for free and open access by the Agricultural Research Division of IANR at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Agricultural Research Division News & Annual Reports by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.



ARD



Agricultural Research Division News

Office of the Dean, 207 Ag Hall, P.O. Box 830704, Lincoln, NE 68583-0704, Phone (402) 472-2045, FAX (402) 472-9071

February 2004

Volume 37, Number 1

Comments from the Dean



Dear Colleagues:

Included in this issue of ARD News is a discussion of the FY 2004 appropriation for CSREES that was included in the Omnibus Appropriation Bill passed by Congress in late January and subsequently signed by President Bush. The FY 2004 CSREES appropriation included 10 percent reductions in numerous budget lines that support our research, teaching and extension programs. This represents the first time during my tenure as Dean and Director that numerous budget lines received significant budget reductions and likely foretells additional challenges in the future.

Also included in the budget discussion is a listing of the FY2005 President's Budget recommendation for CSREES. Included in the President's Budget are projected reductions from FY 2004 levels in several budget categories that are important to IANR. There are, however, some budget lines that receive favorable treatment in the President's Budget. Most of the focus for increased funding is in competitive grant programs.

The overall USDA budget is being reduced as is the case with several other federal departments. These reductions are being imposed because of the large federal deficit (projected at \$500 billion in FY 2004) brought on by increased spending for homeland security, social welfare programs and national defense, coupled with reductions in the federal income tax rate. Discretionary spending is now a relatively small part of the federal budget and any "belt tightening" must occur in the discretionary part of the budget since mandatory programs must be funded. It is likely that we will see additional constraints on the CSREES budget in the future, particularly in regards to formula funding.

Given that both the federal government and the Nebraska Legislature have significant budget challenges, it is prudent for IANR to spend our pre-

vious financial resources strategically. In addition, our faculty and staff must be very active in obtaining funding to support their programs from sources other than state appropriations and federal formula programs. The sources available include federal competitive grant programs in USDA, NIH, NSF, DOE, USEPA, DOD and NASA; private gifts from individuals; awards from foundations; and industry grants and contracts. It seems to me that many IANR faculty and staff need to recognize that during the past five years our world has changed dramatically in regard to funding sources and that we cannot depend heavily on state appropriations and federal formula funds to support our programs. It is incumbent upon each of us to adapt to this change and put forth the necessary energy to become even more self-reliant in terms of funding.

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

Hatch and State Projects



****Guidelines for Hatch, State and Multistate projects and reviews are currently being updated. Drafts of new formatting for outlines and submission processes are ready for ARD Advisory Council review. Your comments on updating the guidelines are always welcome. Contact Advisory Council members or Nancy Betts.**

Background

The U.S. Congress approved the original Hatch Act in 1887. This legislation established funding for agricultural experiment stations (i.e., Agricultural Research Division) at all state and territorial land-grant colleges and universities. The stated aims of this legislation are:

- to promote the efficient production, marketing, distribution and utilization of products of the farm as essential to the health and welfare of our peoples.
- to promote a sound and prosperous agriculture and rural life as indispensable to the maintenance of maximum employment and national prosperity and security.
- to assure agriculture a position in research equal to that of industry.

Section 2 of the Act states: *"It shall be the object and duty of the state agricultural experiment stations through the expenditure of the appropriations hereinafter authorized to conduct original and other researches, investigations and experiments bearing directly on and contributing to the establishment and maintenance of a permanent and effective agricultural industry of the United States, including researches basic to the problems of agriculture in its broadest aspects, and such investigations as have for their purpose the development and improvement of the rural home and rural life and the maximum contribution by agriculture to the welfare of the consumer, as may be deemed advisable, having due regard to the varying conditions and needs of the respective States."*

In short, ARD receives appropriations that it must spend on original research. The research must contribute to maintaining *"a permanent and effective agricultural industry."* Research is defined broadly to include basic, developmental and applied. The appropriations (called formula funds or base funds) are provided to ARD with an equal match of state funds required.

The Hatch Act was amended by Congress in 1998 (The Agricultural Research, Extension, and Education Reform Act of 1998 or AREERA). The amendment mandates (among other things) that *all formula-funded research (including multistate research) undergo scientific peer review*. Meeting this review requirement is the responsibility of the individual experiment stations.

The project proposal and peer-review process is being updated to meet AREERA mandates. The following shows a brief summary of draft changes:

- **New project outlines** (Hatch, McIntire-Stennis and Animal Health) must document planning for a five-year research activity "that focuses on a clearly definable problem, a manageable phase of a larger problem, or a few closely related elements of a broad-based research program. Each new project outline must include information on: a) WHAT is being done, b) WHO is doing it, c) WHERE it is being conducted, d) WHEN it is performed, e) IMPACT expected (including publications produced) and, f) BUDGETARY needs (including potential for external funding)." New Hatch and State projects require full peer review of scientific merit. (source: <http://cris.csrees.usda.gov/star/system.html#brief>)
- **Revised project outlines** must document a five-year continuation of the previously approved

project. The revision must be completed before the end date of the previous project. Revised projects undergo a modified review with the Unit Administrator(s) and ARD Dean/Dean's representative.

- **Projects may be extended** when additional time is needed to fully complete a five-year project. The Department Head makes the request for a one-year extension. A new project, with new objectives, is required by the end of the one-year period.
- **Multistate projects:** Please see the comprehensive guide to multistate projects at <http://www.wisc.edu/nkra/>

Reporting outlines for Nebraska contributions to approved multistate research activities must follow a specific format and must undergo a modified review with the Department Head and ARD Dean/Dean's representative.

FY 2004 CSREES Appropriation and the President's FY 2005 Budget

.....

In the December issue of ARD News, we indicated that the Conference Committee had agreed upon the FY 2004 appropriation for USDA including CSREES and the House had passed the bill. After the holiday break, the Senate passed the Conference Committee recommendations as part of the Omnibus Appropriations Bill. The bill was subsequently signed by the President and became law. As was the case for all of the appropriations bills, a 0.59 percent rescission was imposed upon all of the budget lines. The "final" FY 2004 appropriation for CSREES is in the table on the next page.

On Feb. 2, 2004, President Bush released his FY 2005 Budget recommendation. The FY 2005 budget for CSREES includes discretionary spending totaling about \$1.02 billion, which represents a decrease of about \$104 million (9.24 percent) from the FY 2004 Appropriations Act. The FY 2005 Budget continues current activities for most CSREES programs and reflects a restoration of individual programs affected by government-wide rescissions to the FY 2003 appropriated and/or the FY 2004 President's Budget level. The FY 2005 President's Budget for CSREES is in the table on the next page.

Increases are proposed for the Food and Agriculture Defense Initiative (formerly Homeland Security Program) to continue support for the diagnostic laboratory network and to establish a new Higher Education Agrosecurity Program. The Budget also proposed funding the National Research Initiative at \$180 million, which is an increase of about \$16 million over the FY 2004 level. The increase will support activities that address genomics and nutrition/obesity issues.

Earmarked Special Research Grants, Extension and Federal Administrative projects and grants, Critical Agricultural Materials, Supplemental and Alternative

Crops, and the Joe Skeen Institution for Rangeland Restoration are proposed for elimination in the FY 2005 Budget. The budget document also proposed to prohibit USDA from administering IFAFS and does not include funding for this program. The FY 2005 Budget also proposed that the cap on indirect costs for competitive grants be raised to 25 percent from the current 20 percent cap.

Research Program	FY2003 Appropriation	FY2004 Appropriation	FY 2005 President's Budget
----- \$, in millions -----			
Formula Programs:			
Hatch Act	178.977	179.085	180.148
McIntire-Stennis Forestry	21.742	21.755	21.884
Evans-Allen-1890 Universities	35.411	35.788	36.000
Animal Health and Disease	5.065	4.532	5.098
National Research Initiative:	166.045	164.027	180.000
Special Research Grants:			
State Specific (Earmarked)	111.534	107.904	0
Expert IPM	0.176	0.158	0.177
Integrated Pest Management	2.707	2.439	2.725
Minor Crop Pest Management	10.673	9.549	10.485
Pest Management Alternatives	1.608	1.448	1.619
Canola	0.841	0.757	0
Hesperaloe and Desert Plants	0.348	0.313	0
Critical Ag Materials Act	1.242	1.111	0
1994 Institutions	1.093	1.087	0.998
Jo Skeen Rangeland	0.994	.895	0
Sustainable Agriculture-SARE	13.661	12.222	9.230
Aquaculture Centers	4.471	4.000	3.996
Integrated Activities:			
Critical Issues—Plant and Animal Disease	0.497	0.444	2.500
Rural Development Centers	1.503	1.345	1.513
Water Quality	12.887	11.530	12.971
Food Safety	14.870	13.305	14.967
Pest Management Centers	4.531	4.028	4.531
International Science and Education	0.497	0.895	1.000
Crops at Risk from FQPA	1.487	1.330	1.497
FQPA Risk Mitigation	4.857	4.345	3.889
Methyl Bromide Transition	3.229	3.131	2.498
Organic Transition	2.111	1.889	0.499
Homeland Security (Food and Ag Defense Initiative)	0	7.953	30.000

Federal Earmark Grants – FY 2004

The University of Nebraska System has been much more aggressive during the past two years in requesting that the Nebraska Congressional Delegation facilitate requests for special funding to address very high priority projects that are unlikely to be funded from federal competitive grant programs at this time. These grants normally provide seed funding for a particular project and/or support for developing infrastructure that makes the research project much more poised for success with competitive grants in the future.

Listed below are the ARD-affiliated projects that were funded by Congress for FY 2004:

Department of the Interior Appropriation

- Fish and Wildlife Cooperative Research Unit (\$400,000)

Energy and Water Appropriation

- Soybean Oil for Biodiesel Fuel (\$500,000)

Department of Agriculture Appropriation

- National Drought Mitigation Center (\$202,000)
- Rural Policy Research Institute (\$1,136,000); partnership with the University of Missouri and Iowa State University
- Midwest Advanced Food Manufacturing Alliance (\$429,000); competitive program managed on behalf of 12 midwestern states
- Alliance for Food Protection (\$268,000); partnership with the University of Georgia

Veterans Affairs and Housing and Urban Development Appropriation

- Innovative Clean-up Technologies for Soil and Water (\$1,000,000) USEPA
- Water Resources Modeling (\$175,000) USEPA

117th ARD Annual Report

The 117th Annual Report for the Agricultural Research Division was recently published. Although this report is required by legislation establishing the Nebraska Agricultural Experiment Station on March 31, 1887, it is published primarily as a means to communicate faculty research accomplishments to key decision makers. The publication also serves as a historical record of faculty accomplishments, active projects, faculty and graduate student recognition and outputs from the research program.

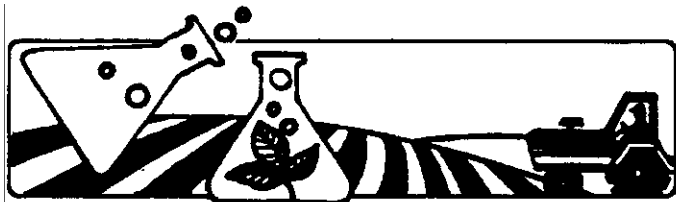
The annual report is sent to wide range of people including the Governor, members of the Nebraska Legislature, the Nebraska Congressional Delegation, University of Nebraska Board of Regents, NU and UNL administrators, state agency directors, USDA officials, ARS collaborators, experiment station directors in other states and selected IANR clientele. This report may be accessed on the World Wide Web at: <http://www.ard.unl.edu/report.html>.

Endeavors

For a number of years, Vicki Miller has written and coordinated printing of *Endeavors*, the primary accomplishment reporting publication of the Agricultural Research Division. *Endeavors* provides short reports of significant findings from ARD faculty research projects. Each year, this eight-page document highlights the accomplishments of 25 to 30 research projects. The 2003-2004 publication features a broad range of research topics from alternative crops to the impacts of consolidation in the food processing industry.

Endeavors is the principal publication provided to members of the Nebraska Legislature to report on the

impacts of Nebraska's investment in agricultural research. Likewise, we use the publication in our meetings with members of the Nebraska Congressional Delegation and their staffs. It also has been used as the basis for discussions with IANR clientele and support groups. Copies are available for use by unit administrators and faculty in their meetings with unit external advisory committees or other clientele groups. Please contact the ARD office if you would like copies.



Grants and Contracts Received December 2003 and January 2004

Agricultural Economics	
Miscellaneous Grants under \$10,000 each	\$ 16,000
Agronomy/Horticulture	
Schepers, James — John Deere Company	15,000
Specht, James — USDA/ARS	38,198
Miscellaneous Grants Under \$10,000 each	23,700
Animal Science	
Cupp, Andrea — NIH	71,217
Miller, Phillip — Elanco Animal Health	87,750
Miscellaneous Grants Under \$10,000 each	9,000
Center for Grassland Studies	
Schacht, Walter and Geoffrey Heneby — USDA Risk Management Agency	608,880
Miscellaneous Grants Under \$10,000	17,400
Entomology	
Meinke, Lance — Monsanto	10,000
Siegfried, Blair — USDA/CSREES	71,284
Miscellaneous Grants Under \$10,000 each	51,900
Food Science and Technology	
Hutkins, Robert — USDA/CSREES	140,000
Miscellaneous Grants Under \$10,000 each	4,420
Northeast Research and Extension Center	
Miscellaneous Grants Under \$10,000 each	6,000
Nutritional Science and Dietetics	
Zempleni, Janos — NIH	272,161
Panhandle Research and Extension Center	
Miscellaneous Grants Under \$10,000 each	39,800
Plant Pathology	
Giesler, Loren — USDA/CSREES through University of Illinois	12,500
Steadman, James — University of Wisconsin — Madison	30,000
Vidaver, Anne K. — USDA/ARS	30,763
Miscellaneous Grants Under \$10,000 each	5,600
School of Natural Resources	
Hoagland, Kyle — National Park Service — CESU	10,000
Parham, James — The Research Corporation of the University of Hawaii	29,188
Miscellaneous Grants Under \$10,000 each	5,000
Veterinary and Biomedical Sciences	
Barletta, Raul — USDA/BARD	44,000
Brodersen, Bruce — USDA/ARS	25,000
Jones, Clinton — USDA/CSREES	319,600

Schmitz, John — Nebraska Dept. of Health and Human Services	24,000
Smith, David — USDA/APHIS	100,000
Steffen, David — Nebraska Dept. of Agriculture	25,000
Miscellaneous Grants under \$10,000 each	240
West Central Research and Extension Center	
Miscellaneous Grants Under \$10,000 each	4,300
Grand Total	\$2,147,901

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.

Asit K. Pattnaik and Fernando A. Osorio — USDA/NRICGP — Analyses of Virulence and Attenuation Determinants of Porcine Reproductive and Respiratory Syndrome Virus Using Reverse Genetics Approach — \$496,403

Sally Mackenzie and Ismail Dweikat — USDA/NRICGP — Genetic Components of Gynodioecy in Natural Plant Populations — \$359,820

Roy F. Spaulding, Dean Eisenhauer, Richard Ferguson, Rhae Drijber and Mary Exner — USDA/NRICGP — Measurement of the Impact of Converting from Conventional to Pivot Irrigation on Nitrate Loading to Ground Water Beneath Thick Vadose Zones — \$499,927

Melissa Inman — USDA/NRICGP — Characterization of a Novel BHV-1 Open Reading Frame (ORF-E) that is Expressed in Trigeminal Ganglia of Latently Infected Calves — \$398,245

Janos Zempleni — USDA/NRICGP — Biotin Affects Cytokine Metabolism — \$307,984

Milford A. Hanna, Girish Ganjyal and Pawan P. Singh — USDA/NRICGP — Multiscale Modeling and Experimental Verification of Expansion of Biopolymers During Extrusion — \$396,324

P. Stephen Baenziger, Kent Eskridge, Ismail Dweikat and Kulvinder Gill — USDA/NRICGP — The Genetic Basis of Agronomic Traits Controlled by Chromosome 3A in Wheat — \$399,198

Rodney A. Moxley and David H. Francis — USDA/NRICGP — Influence of Enterotoxins on Virulence and Colonization of the Porcine Intestine by *Escherichia coli* — \$475,132

Curtis L. Weller, Timothy P. Carr, Susan L. Cuppett, Vicki L. Schlegel, Keum Taek Hwang and Lijun Wang — USDA/NRICGP — Purification Process Influences on Structural and Nutritional Function of Grain Sorghum — \$495,343

Paul E. Read, Anne Fennell, Jeffrey S. Peake and William J. Waltman — USDA/NRICGP — Matching Winegrape Cultivars to Landscapes and Growing Environments on the Northern Great Plains — \$494,559

John C. Allen, Gary D. Lynne and Richard C. Bishop — USDA/NRICGP — Social Capital, Contingent Valuation, and Rural Development Outcomes — \$470,025

John L. Lindquist, Alex R. Martin, Roch E. Gaussoin and Robert G. Wilson — NRICGP — Physiological and Molecular Basis for Weed Response to Management — \$486,352

David S. Jackson and Gang Guo — USDA/NRICGP — Environmentally Benign Processes for Corn Nixtamalization — \$329,865

Timothy P. Carr — USDA/NRICGP — Mechanisms of Cholesterol Absorption and Regulation by Dietary Phytosterols — \$241,078

Brian S. Beecher, P. Stephen Baenziger and Robert A. Graybosch — USDA/NRICGP — Improved Quality Bread Wheats by Reduction of Grain Polyphenol Oxidase — \$419,165

Robert G. Wilson, Gary L. Hein and Robert M. Harveson — USDA/NRICGP — Use of Patterns of Fructan Metabolism in Roots of Canada Thistle to Develop Integrated Control Strategies in Cropland and Range Ecosystems — \$309,112

George E. Meyer, John L. Lindquist and David D. Jones — USDA/NRICGP — Machine Vision Based Plant Species Discrimination and Modeling for Improved Weed Management — \$286,652

Subramaniam Srikumaran — USDA/NRICGP — MHC Class 1 Down-Regulation by Bovine Herpesvirus 1: Viral Proteins Involved — \$321,765

Steven Harris — NIH — The Polarisome: A Key Regulator of Cell Polarity — \$1,084,749

Mark Kuzila — Department of Interior, USGS — Rural and Urban Geologic Mapping of Nebraska — STATEMAP FY 2004-05 — \$173,700

Yiqi Yang, Wenlong Zhou, David D. McCallister III and Narendra Reddy — USDA/NRICGP — A Novel Natural Cellulosic Fiber from Cornhusk for Textiles with a Potential \$5.5 Billion Value Addition to the U.S. Agriculture — \$362,982

Karl J. Reinhard — NSF — Anasazi Maternal and Infant Health: Parasitological Analysis of Antelope House and Salmon Ruin — \$461,303

Brigitte Tenhumberg and Svata M. Louda — NSF — QEIB: Are Insect Herbivores Crucial for Ecosystem Resistance to Invasion by Bull Thistle? — \$386,476

Jeffrey D. Cirillo — NIH — Entry Mechanisms of *Mycobacterium marinum* — \$1,314,000

Anne K. Vidaver — USDA/ARS — Molecular Characterization of *Clavibacter iranicus* and Related Species — \$30,763

David D. Jones and Milford A. Hanna — NSF — A Biofuel Comprising of Ethanol, Biodiesel and Diesel Fuel Nanoemulsions (EB-Diesel) — \$586,938

Andrew Benson — NIH — Genome Biology of *Francisella tularensis* Populations — \$392,000

Clinton Jones and Melissa Inman — NIH — Discovery of Proteins that Regulate Herpesvirus Latency — \$401,500

Janos Zemleni — NIH — Biological Functions of Biotin — \$876,000

New or Revised Projects

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

NEB-11-124 (Biological Systems Engineering) Storm Runoff Simulator to Evaluate Conservation Buffers
Investigator: Thomas G. Franti
Status: New Hatch Project Effective June 1, 2003

NEB-11-125 (Biological Systems Engineering) The Science and Engineering for a Biobased Industry and Economy
Investigator(s): David D. Jones, Yiqi Yang, Milford A. Hanna and Curtis Weller
Status: New Hatch project that contributes to regional project S-1007 effective October 1, 2002

NEB-12-275 (Agronomy/Horticulture) Management of Grain Quality and Security for World Markets
Investigator: Brian Beecher
Status: Revised Hatch Project that contributes to regional project NC-213 effective October 1, 2003

NEB-13-166 (Animal Science) Transcriptional Regulation of the Porcine GNRH Receptor Gene
Investigator: Brett R. White
Status: New USDA/NRI grant effective January 1, 2004

NEB-14-128 (Veterinary and Biomedical Sciences) Regulation of the Latency-Reactivation Cycle by the Bovine Herpesvirus (BHV-1) Latency Related Gene
Investigator(s): Clinton Jones and Alan Doster
Status: New USDA/NRI grant effective December 15, 2003

NEB-21-088 (Plant Pathology) The Type III Protein Secretion System of *Pseudomonas syringae* Tomato DC3000
Investigator: James R. Alfano
Status: New State project effective December 1, 2003

NEB-42-029 (Northeast Research and Extension Center) Conservation Buffer Design, Establishment, Growth, and Performance
Investigator: David P. Shelton
Status: New Hatch project effective July 1, 2003

NEB-43-072 (West Central Research and Extension Center) Soil Nutrient and Manure Management for Crop Production in West Central Nebraska
Investigator: David D. Tarkalson
Status: New Hatch project effective October 1, 2003

Fall 2003 Graduate Census

Graduate student data represents students enrolled on the sixth-day census (Fall 2003) and non-enrolled students actively pursuing graduate degrees. The graduate program in the Agricultural Research Division (College of Agricultural Sciences and Natural Resources and the College of Education and Human Sciences) decreased 1.5% from the fall semester 2002 to the fall semester 2003. Fifty-two percent of the graduate students in CASNR majors are supported by assistantships (state-appropriated GRA and GTA fellowships; and international agency or foreign country support). Forty-two percent of the students in the College of Education and Human Sciences are supported. Thirty percent of our graduate students were not enrolled in IANR graduate majors on the sixth day of the semester.

Institute of Agriculture and Natural Resources

Major/Unit	M.S.				Ph.D.				Total					02-03 % chg
	GRA	GTA	Other*	Self	GRA	GTA	Other*	Self	1999	2000	2001	2002	2003	
College of Agricultural Sciences and Natural Resources														
Agricultural Economics	12	0	1	15	6	0	1	1	26	36	37	35.5	36	1.4%
Ag. Leadership, Education and Comm.	0	1	5	55	1	2	4	18.5	35	46	63	84	86.5	3.0%
Agronomy	3	1	17.5	23	9	0	20	7	119	98	82.5	75	80.5	7.3%
Animal Science	9	1	17	8.5	10	0	16	11	88	87	85.5	79	72.5	-8.2%
Biochemistry	0	0	2	0	0	0	28	1	31	28	36	33	31	-6.1%
Biological Systems Engineering	4	0	8.5	5	0	0	8.5	0	26	30.5	30	21	26	23.8%
Entomology	0	1	12.5	79.5	5	0	6	4	64	75	95	94	108	14.9%
Food Science and Technology	7	0	3	7.5	6	0	3.5	6	44	48	43.5	41	33	-19.5%
Horticulture *	2	0	3	5	2	0	1	1	15	19	12	15.5	14	-9.7%
Master of Agriculture	0	0	0	8	NA	NA	NA	NA	NA	NA	NA	10	8	-20.0%
Mechanized Systems Management	3	1	0	0	NA	NA	NA	NA	7	7	5	6	4	-33.3%
Plant Pathology	1	0	2	3	5	0	3	2	8	16	9	12	16	33.3%
School of Natural Resources (MA/MS)	6	0	17	22	5	0	15	8	44	64.5	57.5	88	73	-17.0%
Statistics	2	10.5	7	13	0	2	1.5	1.5	15	17	15	30.5	37.5	23.0%
Veterinary and Biomedical Sciences	1	0	7	7	0	0	13	2	36	33	40	31.5	30	-4.8%
Total	50	15.5	102.5	251.5	49	4	120.5	63	558	605	611	656	656	0.0%
Grand Total		419.5					236.5		558	605	611	656	656	0.0%

College of Education and Human Sciences

Family and Consumer Sciences	6	10	3	23	NA	NA	NA	NA	35	40	36	43	42	-2.3%
Nutritional Science and Dietetics	3	11	7	7	NA	NA	NA	NA	41	32	36	39	28	-28.2%
Textiles, Clothing and Design (MA/MS)	1	0	6	18	NA	NA	NA	NA	10	12	23	26	25	-3.8%
Interdepartmental Nutrition	NA	NA	NA	NA	2	1	3	10	9	13	12	15	16	25.0%
Interdepartmental HRFS	0	0	0	9	2	1	3	15	36	52	52	30	30	0.0%
Total	10	21	16	57	4	2	6	25	131	149	159	153	141	-7.8%
Grand Total		104					37		131	149	159	153	141	-7.8%
Grand Total CASNR and CEHS	60	36.5	118.5	308.5	53	6	126.5	88	689	754	770	809	797	-1.5%

(1) = Ph.D. students obtain degrees in the College of Education and Human Sciences.

(2) = Engineering degrees are offered through the College of Engineering and Technology.

(3) = The Ph.D. program is in the Horticulture and Forestry major.

(4) = Degrees obtained through the School of Biological Sciences.

(5) = The Ph.D. program is in the Horticulture and Forestry major, or other departments.

(6) = Some Ph.D. degrees are offered through UNMC.

* Other includes grant-supported GRA or international agency or foreign country fellowships.

Diane says

The optimist is wrong as often the pessimist is, but he has a lot more fun.