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ARD
Agricultural Research Division News
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Comments from the Dean

Dear Colleagues:

As this article is being written, the Nebraska Legislature is attempting to resolve the state's budget crisis. We hope the University of Nebraska System will not be singled out for excessive budget cuts. We have been pleased with the outpouring of support for IANR programs by our clientele and members of the Unicameral. I believe this clearly shows that our research and education programs make a difference in the lives of Nebraska citizens. Over time, this respect and appreciation will generate tangible resources to support our efforts, although we may be forced in the short run to reduce budgets again to help solve the fiscal crisis.

In this time of concern about our budget, it is appropriate to take stock of recent faculty accomplishments. We are delighted to have four of our distinguished faculty named to the first class of Bessey-Cather Professors — Ruma Banerjee, Clinton Jones, Marjorie Lou and Shashi Verma. Please join me in congratulating these colleagues. ARD faculty were highly successful in the recent Nebraska Department of Agriculture Alternative Crops research and demonstration competitive program, obtaining more than two-thirds of the available funds. We also expect that our faculty will be very successful with Nebraska Research Initiative, Layman Fund, Priority Program Enhancement and University of Nebraska Foundation Grant proposals since a number of our submissions have been highly ranked in UNL competition. These developments occur after the great success of our faculty with Tobacco Settlement Fund proposals.

In addition, ARD faculty have been increasingly successful in obtaining external grant funds, particularly from federal agencies. During the fiscal year ending June 30, 2001, ARD faculty obtained grant and contract funds totaling $25.2 million, including $16.6 million in federal agency grants. Given the budget reductions we face in state appropriations, it is even more important that all ARD faculty be competitive for external grant funds as well as competitive in internal granting programs. I am confident that all faculty will rise to the financial challenge that we face during FY 2003.

Darrell W. Nelson
Dean and Director

Writing Good Research Objectives

Faculty members have numerous opportunities to identify and write objectives for their research activity. These can include: objectives for the Annual Report of Faculty Accomplishments, objectives for grant proposals and objectives for Agricultural Research Division Hatch, State or Multistate research projects. Writing good objectives is not easy. Having well-written objectives may be critical to the success of an effort, however, especially in grant proposals in which the objectives need to clearly communicate to the potential sponsor what is to be done and how the accomplishment of those objectives is consistent with what the sponsor wants to see accomplished.

One acronym that describes well-written objectives is the word "SAM." When applied to writing objectives, SAM suggests that the objectives should be Specific, Achievable and Measurable. Grantsmanship workshops often will include segments on how to write good objectives. Some of the following points are made in grantsmanship materials presented at a David Bauer workshop several years ago (*The Winning Grants Workshop*, David G. Bauer Associates, Inc., Rochester, New York, 14618). Bauer points out that many grant writers have difficulty writing objectives because they find it hard to separate the ends and the means. This is a very common fault found in ARD project objectives. The terms "study," "evaluate" and "assess," when used in objectives, are really the means to achieve the objectives or the methods, rather than statements of

the end results. Bauer outlines a seven-step process to help improve researchers' ability to focus on end results in their writing of objectives.

Step 1: Determine Result Areas

Identify the desired end results in measurable statements and measurable terms.

Step 2: Determine Measurement Indicators

Measurement indicators are quantifiable parts of the result area. By measuring your performance with these indicators, you are able to see how they indicate your progress toward completing an objective. Example objectives that include measurement indicators are: "identification of best management practices to reduce nutrient transport to groundwater" and "isolation of marker genes for disease resistance traits in grain sorghum." Measurement indicators may take many forms and researchers need to evaluate which best quantify an endpoint for the research planned.

Step 3: Determine Performance Standards

Performance standards answer the question, "How much (or little) of the measurement indicator do we need to consider ourselves successful or the objective completed?" Examples could include: "reduction by 50% of nitrate nitrogen moving to groundwater" and "release of two new sorghum lines with improved disease resistance."

Step 4: Determine the Time Frame

The time frame is the amount of time that you need to reach your performance standards. For the normal ARD Hatch, State or Multistate project, the time frame is five years. For many grant-funded projects, the time frame may be one or two years. The key is to determine achievable objectives with the resources available within the time frame proposed.

Step 5: Determine Cost Frames

The available resources may significantly influence the time frame as well as the level of performance standards to reach. The expected resources should be evaluated and used to establish a realistic time frame and level of accomplishments.

Step 6: Write the Objectives

This step combines the data you generated in the previous five steps. A good format for an objective is: "to (action verb and statement reflecting your measurement indicator) by (performance standard) by (deadline) at a cost of no more than (cost frame)." In research proposals, the deadline and the cost frame are normally specified in the other segments of the proposal and are not included in the objective. Based on the previous examples, the full objective here could become "to develop best management practices that will reduce the transport of nitrate nitrogen to groundwater under irrigated maize production by 50% with no negative effects on yield."

Step 7: Evaluate the Objective

Review each objective and answer the question: "Does this objective reflect the amount of change we want in the result area?" If the answer is yes, you probably have a workable objective. If not, chances are your measurement indicator, or performance standards, are not appropriate. Go back to those steps and repeat the process. Do this for each objective.

Remember to emphasize end results, not tasks or methods. **Don't say what you are going to do;** instead, try to emphasize the ultimate benefit or outcome of your program's work.

CSREES Research Budget (FY 2001 – 2003)

CSREES Mainline Research Appropriation

Appropriations for CSREES research programs for FY 2001 and 2002 are listed in the following table. Also included is President Bush's budget recommendations for FY 2003. Compared with FY 2001, the FY 2002 appropriation provided additional funding for the National Research Initiative, pesticide clearance for minor uses, state-specific grants and the Sustainable Agriculture Research and Education program. The President's budget for FY 2003 maintains level funding for most research programs but provides a $120 million increase for the National Research Initiative. Unfortunately, the President's budget does not fund the Initiative for Future Agricultural and Food Systems (IFAFS) program, which has received $120 million per year in mandatory spending.

Program	*FY 2001*	*FY 2002*	*President's Budget FY 2003*
	thousands of dollars		
Base Funds			
Hatch Act	180,148	180,148	180,148
McIntire-Stennis	21,884	21,884	21,884
Animal Health	5,098	5,098	5,098
Evans-Allen (1890)	32,604	34,604	34,604
Subtotal:	239,734	241,734	241,734
National Research Initiative	**105,767**	**120,452**	**240,000**
Special Grants			
Critical Issues in Pest Management	200	200	0 [a]
Pest Management Alternatives	1,619	1,619	1,619
IPM/Biocontrol	2,725	2,725	2,725
Pesticide Clearance for Minor Uses	8,970	10,485	10,485
Expert IPM/Decision Support System	177	177	177
Minor Use Animal Drugs	549	549	588
Biological Impact Assessment	253	248	253
Rural Development Centers	522	560	0 [a]
Global Change	1,431	1,402	2,500
Subtotal	**16,446**	**18,004**	**18,347**
State-specific Grants (total)	**82,725**	**94,210**	**0**
Nebraska-specific Grants			
Alliance for Food Protection [b]	(300)	(300)	(0)
Drought Mitigation	(200)	(200)	(0)
Food Processing Center	(42)	(42)	(0)
Midwest Food Manufacturing Alliance [c]	(423)	(423)	(0)
Non-food Agricultural Products	(64)	(64)	(0)
Rural Policy Research Institute [d]	(840)	(1,044)	(0)
Sustainable Agricultural Systems	(59)	(59)	(0)

Other Research			
Aquaculture Centers	3,991	3,996	3,996
Sustainable Agriculture Research and Education	9,230	12,500	9,230
Alternative Crops	798	924	0
Critical Material	639	720	0
Federal Administration	18,109	21,676	10,813
1994 Research Grants	978	998	998
Subtotal:	**33,765**	**40,814**	**25,037**
Grand Total:	**478,437**	**515,214**	**525,118**

[a]Moved to Section 406 Integrated Activities Program.
[b]Joint with University of Georgia; [c] Joint with 12 midwestern universities; [d]Joint with Iowa State University and University of Missouri.

Section 406 Integrated Activities Program

FY 2001 and FY 2002 appropriations for the AREERA Section 406 Integrated Activities Program within CSREES are listed in the following table. In the FY 2000 appropriation, Congress moved some research-specific and extension-specific programs into an Integrated Activities account that mandates joint research and education programs to address issues. The FY 2001 and 2002 appropriations provided about $42 million for integrated activities. The President's budget for FY 2003 is recommending three new areas for funding: International Science and Education, Critical Issues in Pest Management and Regional Rural Development Centers.

Program	*FY 2001*	*FY 2002*	*President's Budget FY 2003*
	—— thousands of dollars ——		
Integrated Activities:			
Water Quality	12,971	12,971	12,971
Food Safety	14,967	14,967	14,967
Pesticide Impact Assessment	4,531	4,531	4,531
Crops at Risk from FQPA	1,497	1,497	1,497
FQPA Risk Mitigation	4,889	4,889	4,889
Methyl Bromide Transition	2,495	2,498	2,498
Organic Transition Program	499	1,500	499
International Science and Education	—	—	1,000
Critical Issues in Pest Management	—	—	500
Regional Rural Development Centers	—	—	1,513
Total for Integrated Activities	**41,849**	**42,853**	**44,865**

Section 401 Initiative for Future Agriculture and Food Systems (IFAFS)

IFAFS funding for FY 2000 and 2001 was $120 million per year. IFAFS funding was eliminated in the FY 2002 appropriation. We anticipate that IFAFS will be reauthorized in the 2002 Farm Bill for implementation in FY 2003. The House version of the Farm Bill authorizes IFAFS at a level of $145 million per year, whereas the Senate Farm Bill authorizes $225 million per year. IFAFS is particularly important for agricultural scientists since this is one of the few federal competitive grant programs supporting problem-solving research and education.

IANR Successes: Impact 2002

The staff of Communications and Information Technology (CIT) have prepared an impressive listing of 59 accomplishment reports for 2001 covering teaching, research and extension. The accomplishment reports are organized around the six major USDA Research, Education and Economics mission area goals: (i) Competitive Agricultural Systems in a Global Economy, (ii) Safe and Secure Food and Fiber Systems, (iii) Heathy, Well Nourished Population, (iv) Greater Harmony Between Agriculture and the Environment, (v) Economic Development and Quality of Life for People and Communities and (vi) Society-Ready Graduates.

The accomplishment reports have been entered into the Land Grant University/USDA Image Enhancement Project National Data Base and have been combined with accomplishments from other land grant universities to create 21 national level Impact Statements. These Impact Statements are used to provide feedback to Congress and other decision makers about the ways in which appropriations have made a difference in the lives of U.S. citizens.

Each IANR unit administrator has a copy of the accomplishment reports, entitled "IANR Successes: Impact 2002." You also may obtain additional copies from CIT.

NABC Report 13

The National Agricultural Biotechnology Council (NABC) Report 13 entitled "Genetically Modified Food and the Consumer" has been printed and distributed. This report is a compilation of papers and discussion occurring at the NABC Annual Meeting held in May 2001 in Chicago. A number of excellent papers on state-of-the-art topics are included in the publication. Of special interest is a paper entitled "What the European Union Wants the United States to Understand About European Biotech Imports" by Antoine Van der Haegen.

Copies of NABC Report 13 have been provided to department heads and chairs by the Biotechnology Center. Additional copies are available from the Biotechnology Center or from the National Agricultural Biotechnology Council, Boyce Thompson Institute Room 419, Tower Road, Ithaca, New York, 14853.

Proposals Submitted for Federal Grants

The following is a listing of proposals that were submitted during February and March 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.

Fred Roeth — USDA/IREE — Evaluation of Alternative Weed Management Strategies for Transition to Organic Production — $92,431

David Billesbach — NSF — Controls, Feedback, and Couplings between the Carbon and Water Cycles in the Nebraska Sand Hills — $1,620,306

Blair Siegfried — USDA/IPM — A Site-Specific Field Corn IPM Program that Incorporates Transgenic Technology — $343,346

Clinton Jones — NIH — HSV-1 LAT Promotes Reactivation and Cell Survival — $1,631,250

Scott Josiah — USDA/SARE — Evaluating Agroforestry Enterprise Opportunities for Specialty Forest Products: Decision Tools for Producers — $99,308

Gautam Sarath — USDA/NRICGP — Regulation and Interactions of Plant Non-Symbiotic Hemoglobins — $239,133

Roger Elmore — USDA/CSREES — Glyphosate Effects on Glyphosate-Resistant Soybean Growth, Nodulation, and Yield — $80,325

Susan Hefle — USDA/CSREES — Alliance for Food Protection — $137,035

Han H. Asard — USDA/NRICGP — Biochemical Properties and Physiological Function of Plant Cytochromes b561 — $289,702

S. Madhavan — USDA/NRICGP — Nonstructural Carbohydrate Accumulation and Mobilization in Field-Grown Maize — $226,023

Paul Staswick — NSF — Jasmonate Signaling in Plants: Activation of Jasmoric Acid by the JAR1 Response Locus in *Arabidopsis thaliana* — $357,582

Brett White — USDA/NRICGP — Transcriptional Regulation of the Porcine GnRH Receptor Gene — $296,762

Stephen Ragsdale — USDA/NRICGP — Inhibition of Methane Synthesis in Ruminant Animals — $1,380,788

Julie M. Stone — NSF — Research Starter Grant — $35,000

Patrick Reece — USDA/SARE — Optimizing Use of Cool-season Forage Species for Livestock Production on Semi-arid Rangeland — $9,972

Patrick Reece — USDA/SARE — Motivations for Adoption of Sustainable Agriculture Practices, Education and Research: A Mixed-Method Study — $9,972

Robert Hutkins — USDA/IREECGP — Second Governor's Conference on Ensuring Meat Safety: *E. coli 0157:H7* — Progress and Challenges — $38,150

Marjorie F. Lou — NIH — Protein-thiol Mixed Disulfide in Cataractogensis — $2,274,174

David Billesbach — NASA — LBA-ECO Roving Eddy Covariance Flux System Intercomparison — $597,849

Andrea S. Cupp — NIH/NICHD — Role of VEGF in Testis Development and Function — $142,433

Donald A. Wilhite — USDA/CSREES — Developing Drought Mitigation and Preparedness Technologies for the U.S. — $183,331

Stephen L. Taylor — USDA/CSREES — Development and Quality/Safety Enhancement of Specialty Food Products — $39,285

Vadim Gladyshev — NIH — Methionine Sulfoxide Reduction, Selenium and Aging — $1,631,250

Dickey Dee Griffin — USDA/NIRCGP — Develop Pre-Harvest Version of the USDA-FSIS Fast Antibiotic Screening Test and Antibiotic Residue Avoidance Education — $185,746

Ruma Banerjee — NIH — Ascorbate Homeostasis: Functional Characterization of Cytochromes b561 — $11,253,500

James Specht — USDA/ARS — Positioning of Classical Soybean Genes on the Genome Map of Soybean — $203,000

Harshavardhan Thippareddi — USDA/NSFI — HACCP Training and Research to Assist Meat Processors with Process Deviations for Lethality and Stabilization — $561,487

Shelly McKee — USDA/NRICGP — Evaluation and Verification of SSOPs to Determine *L. monocytogenes* Control in Ready-to-Eat Poultry Processing Plants — $157,938

Milford Hanna — USDA/CSREES — Industrial Agricultural Products — $59,863

David W. Stanley — NRI — Prostaglandin Receptor Sites in Insect Hemocytes — $202,928

Laurie Hodges — USDA/IFAFS — High Tunnels for the Central Great Plains: Profitable, Season-extending Horticultural Production Systems — $192,859

David D. Baltensperger — USDA/SARE — North Central Region Sustainable Agriculture Research and Education Program — $2,733,349

Raul Barletta — USDA/NRICGP — Functional Genomic Analysis of *Mycobacterium paratuberculosisis* — $70,992

Raul Barletta — NRI — *Mycobacterium avium* subsp. *Paratuberculosisis* Intestinal Invasion — $114,159

David P. Shelton — USDA/NIWQP — A Systems Approach to Conservation Buffer Establishment — $499,355

Shelly McKee — USDA/Food Safety — Using an Assessment of Pastured Poultry Farm Management Practices to Improve Pre-Harvest Food Safety During Production — $300,247

Shelly McKee — USDA/CSREES — Developing Biosecurity Control Training Programs to Prevent the Introduction of Agents of Mass Destruction in the Food Supply — $605,417

Michael J. Hayes — USGS — Improved Drought Monitoring Through the Integration of Climate and Satellite-Based Data — $241,095

Robert W. Hutkins — USDA/NRICGP — Biochemical and Physiological Differences Between Pathogenic and Non-Pathogenic Strains of *E. coli* — $256,628

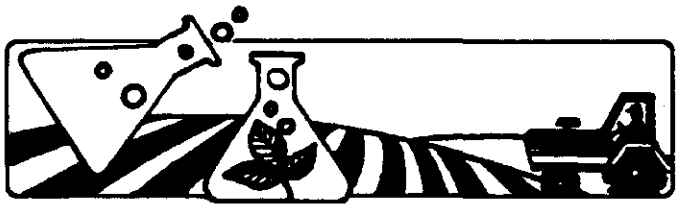
Martin B. Dickman — USDA/ARS — Evaluation of the Impact of Negative Regulators of Cell Death in the Soybean — *Sclerotinia* Interaction — $50,000

George L. Graef — USDA/NRICGP — Enhancing *Sclerotinia* Resistance Using Modern and Traditional Methods — $49,150

Marjorie Lou — NIH — BioRad Radiance-2100AGR-3Q/BLD Confocal/TE2000 Microscope — $256,279

Shashi B. Verma — DOE — 2002-03 Administrative and Research Budget of the Great Plains Regional Center of the National Institute for Global Environmental Change — $1,246,907

Andrew K. Benson — USDA/NRICGP — Population Genomics of *Listeria monocytogenes* — $447,264



Grants and Contracts Received February 2002

Agronomy/Horticulture	
Kenneth Cassman — Nebraska Corn Board	$51,937
Ken Russell — Huerman Fund/UN Foundation	5,000
Miscellaneous grants under $10,000 each	6,550
Animal Science	
Miscellaneous grants under $10,000 each	16,650
Biochemistry	
Xin Bi — NIH	182,212
Entomology	
Blair Siegfried — Monsanto Company	10,000
Miscellaneous grants under $10,000 each	15,000
Food Science and Technology	
Vicki Schlegel — Center for Blood Research	91,473
Miscellaneous grants under $10,000 each	26,318
Northeast Research and Extension Center	
Miscellaneous grants under $10,000 each	5,000
Panhandle Research and Extension Center	
Miscellaneous grants under $10,000 each	50,000
Plant Pathology	
Gary Yuen — Rutgers University	17,000
School of Natural Resource Sciences	
David Wedin — University of Minnesota	11,686
Rod Johnson — Sampson Range Endowment/ UN Foundation	10,000
South Central Research and Extension Center	
Roger Elmore — Huerman Fund/UN Foundation	15,000
Veterinary and Biomedical Sciences	
Marjorie Lou — NIH National Eye Institute	326,526
West Central Research and Extension Center	
Robert Klein — Nebraska Wheat Board	15,000
Miscellaneous grants under $10,000 each	1,500
Grand Total:	**$852,052**

New, Revised or Extended Research Projects

The following is a listing of research projects that were approved recently by the USDA Current Research Information System (CRIS):

NEB-10-132 (Biological Systems Engineering) Agricultural Water Management Technologies, Institutions and Policies Affecting Economic Viability and Environmental Quality
Investigator: R.J. Supalla
Status: Revised Multistate project effective October 1, 1999

NEB-11-123 (Biological Systems Engineering) Improved Acquisition of Thematic Soil Maps
Investigator: V.I. Adamchuk
Status: New Hatch project effective March 1, 2002

NEB-12-209 (Agronomy/Horticulture Department) Procedures for Assessing Impacts of Nonpoint Agrichemicals on Groundwater
Investigator: R.F. Spalding
Status: Revised Hatch project effective October 1, 2001

NEB-16-044 (Food Science and Technology Department) Molecular Mechanisms Regulating Skeletal Muscle Growth and Differentiation
Investigator: M.G. Zeece
Status: Revised Multistate project effective October 15, 2000

NEB-16-090 (Food Science and Technology Department) Enhancing Food Safety Through Control of Foodborne Disease Agents
Investigator: C.L. Weller
Status: New Multistate project effective October 15, 2000

NEB-40-014 (School of Natural Resource Sciences) Predicting Contaminant Dehalogenation Rates from Electron Scattering Studies
Investigators: S.D. Comfort, P.D. Burrow, P.J. Shea
Status: New Hatch project effective November 1, 2001

NEB-43-058 (West Central Research and Extension Center) Biology, Ecology, Economics and Control of Major Insects Affecting Cattle in Nebraska
Investigator: J.B. Campbell
Status: Hatch project extended one year — effective November 1, 2001

NEB-91-053 (Nutritional Science and Dietetics) The Essential Role of Biotin in Cell Proliferation
Investigator: J. Zempleni
Status: New Hatch project effective July 1, 2001

Nebraska Farm Income Statistics, 1990-2000

The information below was assembled by the USDA Nebraska Agricultural Statistics Service. Included in this data are some sobering facts about the status of Nebraska agriculture. I encourage faculty to carefully consider the situation that many producers are in and think about ways in which the Institute of Agriculture and Natural Resources could assist in reversing the adverse trends.

Parameter	*1990*	*1993*	*1996*	*1999*	*2000*
Number of farms, x1000	57	56	56	55	54
Net income/farm, x1000	44	36	61	32	26
Gov't paymts/farm, x1000	11	14	7	26	26
Return on assets, %	7.5	5.8	9.1	4.2	—
Debt to asset ratio, %	19.1	21.1	21.2	22.2	—
Farmland value, $/acre	524	514	610	670	695

President's Budget Recommendations for Research and Development in FY 2003

Presented below is a summary of President Bush's recommendations for federal research and development programs in the FY 2003 appropriation bills. Funding recommendations vary considerably from agency to agency and in programs within agencies.

Agency and Program	*Recommended change from FY 2002, %*
Department of Agriculture	
CSREES Research	1.9
Higher Education Programs	6.8
Extension Programs	- 4.2
Integrated Activities	4.7
CSREES Total	- 0.4
Department of Defense	
Basis Research Overall	- 0.1
Applied Research Overall	- 7.5
U.S. Geological Survey (Total)	- 5.1 *
Department of Energy (Total)	0 **
U.S. Environmental Protection Agency	- 3.8
National Institutes for Health (Total)	15.7
Research Project Grants	10.1
Centers	15.9
Total Research	11.2
National Oceanographic and Atmospheric Administration	- 1.4 #
National Science Foundation (Total)	5.0
Research Projects	5.1
Major Research Equipment and Facilities	- 9.0

*Recommendations eliminate support for Water Resources Research Institutes.
**Recommendations reduce support for "Biological and Environmental Research" by 11.6%.
#Recommendations eliminate support for Regional Climate Centers.

2001 Graduate Student Survey — January 2002

Graduate student data represents students enrolled on the sixth-day census (fall 2001) 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 Human Resources and Family Sciences) increased 2.1% from the fall semester 2000 to the fall semester 2001. Fifty-eight percent of the graduate students in CASNR majors are supported by assistantships (state-appropriated GRA and GTA grants; fellowships; and international agency or foreign country support). Thirty-seven percent of the students in the College of Human Resources and Family Sciences are supported. Twenty percent of our graduate students were not enrolled in IANR graduate majors on the sixth day of the semester.

	M.S.				*Ph.D.*				*Total*			
Major/Unit	*GRA*	*GTA*	*Other**	*Self*	*GRA*	*GTA*	*Other**	*Self*	*98*	*99*	*00*	*01*
College of Agricultural Sciences and Natural Resources												
Agricultural Economics	12	0	0	13	7	0	0	5	33	26	36	37
Ag Leadership, Education and Comm. (1)	8	1	0	41	1	2	0	10	34	35	46	63
Agronomy	23	1	1	20	17.5	0	12	8	134	119	98	82.5
Animal Science	29	2	10	6	12.5	0	13	13	86	88	87	85.5
Biochemistry	5	0	0		31	0	0	0	26	31	28	36
Biological Systems Engineering (2)	7.5	0	1	6.5	7	0	3	5	27	26	30.5	30
Biometry	4	4	2	1	4	0	0	0	12	15	17	15
Entomology	12	0	0	65	12	1	3	2	39	64	75	95
Food Science and Technology	7	0	0	10.5	14	0	4	8	46	44	48	43.5
Horticulture (3)	3	1	0	0	6	0	1	1	20	15	19	12
Mechanized Systems Management	5	0	0	0	—	—	—	—	8	7	7	5
Plant Pathology (4)	0	0	0	3	5	0	0	1	14	8	16	9
School of Natural Resource Sciences (5)	17	0	0	25.5	8	2	0	5	23	44	64.5	57.5
Veterinary and Biomedical Sciences (6)	14	0	0	7	14	0	4	1	36	36	33	40
Total	**146.5**	**9**	**14**	**198.5**	**139**	**5**	**40**	**59**	**538**	**558**	**605**	**611**
College of Human Resources and Family Sciences												
Family and Consumer Sciences	6	10	1	19	—	—	—	—	36	35	40	36
Nutritional Science and Dietetics	7	7	0	22	—	—	—	—	24	41	32	36
Textiles, Clothing and Design - MS	2	0	0	7	—	—	—	—	8	5	7	9
Textiles, Clothing and Design - MA	1	4	0	9	—	—	—	—	0	5	5	14
Interdepartmental Nutrition	1	0	0	0.5	4	1	3	2.5	20	9	13	12
Interdepartmental HRFS	0	0	0	28	5	4	1	14	29	36	52	52
Total	**17**	**21**	**1**	**85.5**	**9**	**5**	**4**	**14**	**117**	**131**	**149**	**159**
Grand Total	**163.5**	**30**	**15**	**284**	**148**	**10**	**44**	**73**	**655**	**689**	**754**	**770**

*Other includes grant support, international agency or foreign country support and fellowships.
(1) = Ph.D. students obtain degrees in Teachers College.
(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) = Ph.D. degrees are offered through UNMC.