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ARD News February 2003

ARD

Agricultural Research Division News

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Comments from the Dean

Dear Colleagues:

The period from January 1 to March 15 is the most hectic time of the year for members of the IANR Deans Council. In addition to the normal amount of meetings, e-mail and correspondence, we are reviewing all of the Annual Reports of Faculty Accomplishments (ARFA), conducting Planning Sessions for all units, and writing performance evaluations of unit administrators. This is written as an explanation of why the Deans are not as available to you as they are normally and why a response from us may not be as timely as usual. It is refreshing to read ARFAs and Unit Planning Sessions reports that contain descriptions of the wonderful accomplishments of our faculty members. We all need a lift in spirits, given the budget situation, and I receive that from the enthusiasm evident in the ARFAs of many faculty members.

The federal funding situation continues to be murky. Prior to adjournment in December, Congress had passed only two of 13 FY2003 appropriations bills, although the fiscal year started October 1 . A series of continuing resolutions has provided funding to USDA agencies at levels no more than the FY 2002 appropriation. Congress has decided to package the remaining appropriations bills into an "Omnibus Appropriation" and has appointed a large Conference Committee to resolve differences in funding between the House and Senate versions of the appropriations bills. The Senate version of the USDA-CSREES appropriation is much more favorable than the House version. Included in the Senate version is a $44 million increase in the NRI, a $5.5 million increase in Hatch Act funding, and $60 million for an IFAFS-like program. We are hoping that the Senate version prevails but the proposed tax cut, ballooning budget deficit and possibility of war may result in appropriations that are at the FY 2002 levels.

The President's budget for FY 2004 is very much status quo for agricultural research. The only encouraging sign was a recommendations that the NRI be funded at $200 million — an $80 million increase from FY 2002. Unfortunately, the President's budget did not fund IFAFS for FY 2004.

The University of Nebraska System is making strong efforts to obtain additional state-specific grants for our programs. I am proud that 10 ARD projects were among the requests presented to the Nebraska Congressional Delegation in January. Of these projects, five are collaborative efforts with other states in the region. We are hopeful that several of these large projects will receive funding. Although these state-specific projects do not eliminate the need for competitive grant awards, the proposed grants will allow ARD faculty to conduct research in highly important areas not currently listed in RFAs distributed by federal agencies.

Darrell W. Nelson
Dean and Director

Endeavors

For a number of years, Vicki Miller of CIT has written and coordinated printing of **Endeavors**, an important accomplishment reporting publication of the Agricultural Research Division. **Endeavors** provides short reports of significant research findings from ARD faculty. Each year, this eight-page document highlights the accomplishments of 25 to 30 research projects. The 2002-2003 publication features a broad range of research 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 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.

116th ARD Annual Report

The 116th Annual Report for the Agricultural Research Division was recently published. Although this report is required by legislation that established 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 a 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. Copies of the annual report have been provided to each unit administrator for circulation to faculty. Anyone interested in having a personal copy of the report should contact the ARD office at 2-2045.

William G. Whitmore Student Travel Endowment

The William G. Whitmore memorial fund was established at the University of Nebraska Foundation in 1980 as a memorial to William G. Whitmore, a member of the University of Nebraska Board of Regents from 1902-1916. The fund designates several potential uses. Additional donations and endowment income has accumulated to a level that grants now can be made available. After discussions with the Agricultural Research Division Advisory Council, it has been decided to use part of these funds to establish a travel grant program for graduate students within IANR whose advisor or co-advisor has an ARD research appointment. In accordance with the donor instructions, this program will support attendance to professional society meetings in the fields of animal science, agricultural education and leadership, and veterinary and biomedical sciences. Priority for grants will be given to graduate students who are personally presenting the results of their research and/or scholarly investigations.

The Whitmore Research Travel Committee makes grants for expenses, including transportation (which is not to exceed coach class airfare), registration, lodging meals, etc. Grants under this program are limited to a maximum of $500 per individual per fiscal year. Twenty-two students applied for the travel award. These five IANR students received the William G. Whitmore Memorial Award for travel during July 1 - December 31, 2002:

Brent J. Gortzen	$300.00	Institute of Behavior and Applied Management, Denver, CO — AgLEC Department
Kyle J. Vander Pol	$500.00	American Society of Animal Science National Meeting, Quebec City, Canada — Animal Science
Derek Petry	$500.00	Congress on Genetics Applied to Livestock Production, Montpellier, France — Animal Science
Janice Rumph	$500.00	Congress on Genetics Applied to Livestock Production, Montpellier, France — Animal Science
Melissa A. Inman	$500.00	Annual Meeting of the American Society for Virology, Lexington, KY — Veterinary and Biomedical Sciences

The following IANR students received the William G. Whitmore Memorial Award for travel during February 1 — June 30, 2003 as follows:

Travis B. Farran	$430.00	Annual Meeting of the Midwestern Sections of the American Society of Animal Science and Dairy Science Assn., Des Moines, IA., — Animal Science
Kimberly M. Hargrave	$500.00	Experimental Biology/ American Society for Nutritional Sciences in San Diego, CA — Animal Science
Bruce DeGroot	$500.00	Joint Annual Meeting of the American Dairy Science and American Society of Animal Science, Phoenix, AZ — Animal Science

Chao-Wei Chen	$500.00	Association for Research in Vision and Ophthalmology, Ft. Lauderdale, FL — Veterinary and Biomedical Sciences

The next call for these travel funds will be sent to the unit administrators around the second week in April.

How to State the Value of Your Research

The December 2002 issue of ARD news contained an excerpt from a white paper sponsored by the National Association of State Universities and Land Grant Colleges (NASULGC), Experiment Station Committee on Organization and Policy (ESCOP). The paper is: McKenzie, David R.; How to State the Value of Your Research, Topic 1, Advocating for Science, a Series on Science Communication, March 2002.

The following article is an additional excerpt from the same paper giving additional points on how to state the value of your research. These points can relate to communicating with potential funding organizations as well as reporting value and impacts of completed research to sponsors and supervisors.

How to State the Value of Your Research

by David R. McKenzie

A Check List (of What to Include)

Here is a check list of what should be found in a statement on the value of a research project. I leave it to you to figure out the logical flow of the information. But, every good statement on the value of one's research should:

Name your donors: State your donors' names and repeat them as appropriate, especially when you are in a public setting. It never hurts to give your donors public recognition or to note their thoughtful wisdom by investing in your work.

Thank your donors: It always pays to be grateful for the resources your donors have invested in you. This is usually given as money, but it also could be as in-kind donations (e.g., laboratory space, computer access) or human resources (e.g., technical advisors, student workers). And, if the money was given without restrictions, you have an even greater obligation to point out how wisely the money has been invested.

State your goals: In addition to taking into account your donor's goals, it is important to state up-front your project's goals. What are the intentions of the work in terms of outcomes and impacts? Exactly what are you trying to do?

Attach your work to their goals: You must show how working on your goals is contributing to completing your donor's goals. That is what they will want to see; the linkages of these two sets of goals, through your work. You should already know why they chose to invest in your project. Was it to alleviate poverty? To make food safer? To reduce farmers' dependency on pesticides? Be sure to state the link between their goals and your goals.

Describe your project's organization: A short statement on how you have organized your activities is necessary to assure the donor(s) that you are not wasting their money through some organizational inefficiency.

Share your research strategies: Most research activities have implicit, if not explicit, research strategies. You should not assume that your donors would easily guess your research strategies. You need to tell them and explain why those strategies are important to the project.

State your accomplishments: Scientists tend to focus on what needs to be done next, and too often they forget to state what has been accomplished so far. When accomplishments are left unstated, the impression donors get is nothing has been done. That's a bad move. Spell out in a logical statement just what has been accomplished and what it means in terms of the donor's goals. Be sure to share credit with your partners.

State again the importance of your research: The justification for investing in your project was no doubt based on some "Statement of Importance," or "Statement of Justification" found in your original proposal. You will need to clearly re-establish your topic's importance to the donor(s). Failing to do that convincingly may cost you the continuation of your funding.

Verify the importance of your work: Quantitative information obtained in the course of conducting your research may be very useful for documenting the importance of the work. Measurement of effects and estimates of changes are most useful indicators of importance. But, testimonials by the individuals impacted by your work are also worthwhile. Example are crop farmers who are grateful for no longer being dependent on daily pesticide sprays, or photos of children no longer exposed to pesticide drift.

Describe your efficiencies: Everyone wants to hea that his or her money is being well-spent. This axiom i especially true for donors. For example you might tell of how the costs of sample analysis were reduced through some innovation. Or you might have saved money by partnering with another institution. But be sure you can document your claims.

Tell of the actions taken: What implementation

steps, corrective actions, mitigations, remedies or policy changes have been enacted to improve the operation of your research project? You will need to tell of changes under way, or anticipated improvements, even when research is not yet completed. The intent here is to provide assurances that proper attention to management principles is being observed.

State your discoveries: Scientifically disclosed facts that give new understanding, new knowledge revealed and what it means, or new technologies developed and how they can be used are but a few categories of research outputs that need to be clearly stated to your donors as your research discoveries. This should form the centerpiece of your presentation, and should clearly establish the research progress that has been made.

Describe the (anticipated) outcomes: Estimates of the return on investments (ROI), counterfactual analyses, and cost-benefit and risk-benefit assessments, even when preliminary, are helpful for establishing the value of your research as outcomes. A $250,000 research project that is showing the potential for saving millions of dollars in reduced pesticide costs is a great story to tell as a donor's "return on investment". And, for this example, the associated social, health, and environmental benefits of the reduced pesticide dependency should be described as well. Be sure to be clear on stating the outcomes that are *ex ante* (predicted) versus those that are *ex post* (actual).

Reveal your plans and next steps: If you are planning changes (e.g., to take on new partners, address the next set of research objectives, change the project's direction), you should point out those changes to your donor(s). And you should be sure to spell out why the changes are being implemented, especially if it is intended to strengthen the project, or if it will use **their** money more effectively or more efficiently.

Give them a summary: The public speaking advice to "tell them what you are going to say; say it; and then tell them what you just said" has merit in most applications. Telling them what you have just said, in a summary statement, is a very good way to leave them with your bottom line message. Your summary statement should list your accomplishments, link those accomplishments to their goals, and state where you are going from there. You should note the broad applicability of your research (if appropriate), and state the general applications of your current and anticipated research findings. Finally, you should do yourself a favor by stating your need for continued (or more) resources, while hinting at how hard you are working.

Make a pledge: The final point to include in your statement on the value of your research should be your pledge to deliver the goods. Your donors view your project as an investment, not a gift. You need to clearly pledge your commitment to their investment decisions.

New or Revised Projects

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

NEB-12-293 (Agronomy and Horticulture) Assessing Nitrogen Mineralization and Other Diagnostic Criteria to Refine Nitrogen Rates for Crops and Minimize Losses
Investigator: Daniel T. Walters
Status: New Hatch project that contributes to regional project NC-218 effective October 1, 2001

NEB-13-157 (Animal Science) Management Systems to Improve the Economic and Environmental Sustainability of Dairy Enterprises
Investigator(s): Richard J. Grant and H. Douglas Jose
Status: New Hatch project that contributes to regional project NC-1119 effective October 1, 2002

NEB-14-123 (Veterinary and Biomedical Sciences) Develop Pre-Harvest Version of the USDA-FSIS Fast Antibiotic Screening Test and Antibiotic Residue Avoidance Education
Investigator: Dickey D. Griffin
Status: New USDA Grant effective September 15, 2002

NEB-14-126 (Veterinary and Biomedical Sciences) Pathogenesis of Bovine Viral Diarrhea Virus and Bovine Respiratory Syncytial Virus Infections
Investigator: Clayton L. Kelling
Status: New Animal Health Project effective October 1, 2002

NEB-16-095 (Food Science and Technology) HACCP Training and Research to Assist Meat Processors with Process Deviations for Lethality and Stabilization
Investigator(s): H. Thippareddi and Dennis E. Burson
Status: New USDA Competitive Grant effective September 19, 2002

NEB-17-079 (Entomology) Dynamic Soybean Pest Management for Evolving Agricultural Technologies and Cropping Systems
Investigator(s): Leon Higley and Tom Hunt
Status: New Hatch project that contributes to regional project S-1010 effective October 1, 2002

NEB-21-069 (Plant Pathology) Characterization of Wheat Leaf Rust Virulence in Nebraska and Its Implication for Breeding for Resistance

Investigator: John E. Watkins
Status: Revised Hatch project effective October 1, 2002

NEB-40-017 (School of Natural Resource Sciences) Impacts of *Pinus ponderosa* Establishment on Ecosystem Functions in the Sandhills of Nebraska
Investigator(s): Tala N. Awada and David A. Wedin
Status: New McIntire-Stennis project effective September 1, 2002

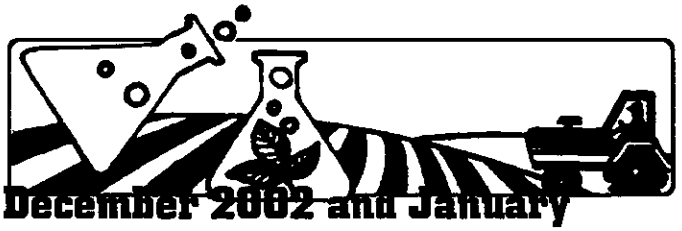
NEB-40-018 (School of Natural Resource Sciences) Agrochemicals in Nebraska Ground Water: Occurrence, Trends, and Health Associations
Investigator: Mary Exner-Spalding
Status: New Hatch Project effective July 1, 2002

NEB-40-019 (School of Natural Resource Sciences) Evaluation and Remediation of Chemically Compromised Soil Environments
Investigator: Pat Shea
Status: New Hatch project effective July 1, 2002

NEB-91-056 (Nutritional Science and Dietetics) Nutrient Bioavailability — Phytonutrients and Beyond
Investigator: Judy Driskell
Status: New Hatch project effective October 1, 2002, that contributes to regional project W-1002

NEB-92-037 (Family and Consumer Sciences) Couple Relationships in the Latter Half of Life
Investigator: Li-Wen Lin
Status: New Hatch project effective August 1, 2002

Grants and Contracts Received



December 2002 and January 2003

Agricultural Economics

Perrin, Richard and Jim Roberts — USDA/ARS	$ 90,000
Royer, Jeff — Farm Credit Services via UN Foundation	18,500
Supalla, Ray — USDA/ARS	20,000
Miscellaneous Grants under $10,000 each	5,050

Agronomy/Horticulture

Cassman, Ken — USDA/ARS	100,000
Dobermann, A. — Foundation for Agronomic Research via UN Foundation	25,000
Russell, W. Kenneth — Anna H. Elliott Fund via UN Foundation	15,000
Schacht, Walter, Lowell Moser and **Jerry Volesky** — Nebraska Department of Roads	61,912
Specht, James — USDA/ARS	59,748
Wortmann, Charles — Alan and Irene Williams Endowment via UN Foundation	14,000
Miscellaneous Grants under $10,000 each	74,352

Agricultural Research Development Center

Duncan, Dan — Barta Bros. Fund via UN Foundation	30,000

Animal Science

Beermann, Donald — USDA/ARS through Colorado State University	28,939
Erickson, Galen and **Terry Klopfenstein** — Cargill, Inc.	24,375
Johnson, Rodger, John Weber, Fernando Osorio and **Alan Doster** — Nebraska Pork Board	21,000
Jones, Steve and **Chris Calkins** — National Cattlemen's Beef Association	122,875
Miller, Phil — Nebraska Pork Board	12,000
Scheideler, Sheila — Mussehl Poultry Research Endowment via UN Foundation	31,260
Miscellaneous Grants under $10,000 each	29,338

Biological Systems Engineering

Adamchuk, V.I. — John Deere Product Engineering Center	14,500
Koelsch, Rick — Nebraska Pork Board	16,155
Martin, Derrel and **William Kranz** — USDA/NRCS	25,000
Miscellaneous Grants under $10,000 each	18,525

Biochemistry

Banerjee, Ruma — NIH	1,486,317
Stone, Julie — NSF	35,000
Weeks, Donald — Consortium For Plant Biotechnology Research	78,000

Biometry

Marx, David — USDA/ARS	40,000
Marx, David — Rivers Corporation, Inc.	60,000

Entomology

Kamble, Shripat — Dow Agro Sciences, Inc.	15,000
Siegfried, Blair — Consortium for Plant Biotechnology Research Inc.	47,000
Miscellaneous Grants under $10,000 each	60,595

Food Science and Technology

Benson, Andrew — USDA/NRI	260,236
Hutkins, Robert, Andrew Benson and **Rod Moxley** — USDA/NRI	38,150
Zeece, Michael — Mussehl Poultry Research Endowment via UN Foundation	14,500
Miscellaneous Grants under $10,000 each	87,127

Northeast Research and Extension Center

Shelton, David P. — Alan and Irene Williams Endowment via UN Foundation	14,991
Miscellaneous Grants under $10,000 each	36,900

Nutritional Science and Dietetics

Lewis, Nancy — USDA/ARS	40,000
Miscellaneous Grants under $10,000 each	3,000

Panhandle Research and Extension Center

Baltensperger, David — High Plains Grass Seed Association	39,000
Harveson, Robert M. — Anna H. Elliott via UN Foundation	10,000
Harveson, Robert M. — Western Sugar Company	28,000
Hibberd, Charles — Panhandle Chicory Growers Association	15,675
Wilson, Robert — BASF Corporation	20,000
Miscellaneous Grants under $10,000 each	111,600

Plant Pathology

Vidaver, Anne K. — USDA/ARS	92,490
Miscellaneous Grants under $10,000 each	15,800

School Natural Resource Sciences

Hoagland, Kyle — NPS/CESU	12,000
Kuzelka, Bob — The Groundwater Foundation	10,000
Miscellaneous Grants under $10,000 each	3,000

South Central Research and Development Center	
Miscellaneous Grants under $10,000 each	38,350
Veterinary and Biomedical Sciences	
Griffin, Dickey Dee, Susanne Hinkley, Henry Cerny and Roy Spalding — USDA/NRI	185,746
Kelling, Clayton — Schering-Plough Animal Health Corporation	98,460
Lou, Marjorie — NIH through UNMC	29,596
Osorio, Fernando A. — USDA/NRI	200,000
Miscellaneous Grants under $10,000 each	865
West Central Research and Extension Center	
Adams, Don C. — Helen Porter Van Spronssen via UN Foundation	10,000
Payero, Jose O. — UN Foundation	70,000
Miscellaneous Grants under $10,000 each	14,721
Grand Total	$ 4,179,648

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.

Lloyd Bullerman and **Dojin Ryu** — USDA/NRI — Naturally Occurring Antifungal Agents from Lactic Acid Bacteria — $227,017

Madhavan Soundararajan, Timothy J. Arkebauer, John P. Markwell and **Daniel T. Walters** — USDA/NRI — Nonstructural Carbohydrate Accumulation and Mobilization in Field-Grown Maize — $282,086

Lilyan E. Fulginiti — USDA/NRI — Resources and Functionings: Well-Being and Inequality in Rural Nebraska — $163,789

Konstantinos Giannakas — USDA/NRI — Truthful Adoption of Agricultural Conservation Practices in the Presence of Auditor and Producer Uncertainties — $97,983

Roger Elmore, James R. Brandle, Robert M. Caldwell, Qi Steven Hu, Lenis A. Nelson and **Fred W. Roeth** — USDA/NRI — Early-Season Wind Effect on Corn Leaf Placement, Plant Growth, and Development — $296,196

Azzeddine M. Azzam, John R. Schroeter and **J. David Aiken** — USDA/NRI — State Corporate Farming Restrictions and Industry Structure — $28,258

Donald J. Lee and **Alex R. Martin** — USDA/NRI — Gene Sequencing and Expression of Glyphosate's Target Enzyme (EPSPS) in Weed Species — $197,449

Terry Mader, Anne Parkhurst and **John Harrington** — USDA/NRI — Cattle Responses to Climatic Challenges — $299,826

John L. Lindquist — USDA/NRI — Ecophysiological Determinants of Corn - Velvetleaf Competition for Nitrogen and Light — $234,136

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

Emily J.H. Ross — USDA/NRI — Transcriptional Regulation of Programmed Cell Death (PCD) in Plant Development — $90,000

Julie M. Stone and **Martin B. Dickman** — USDA/NRI — Identification and Characterization of Genes Conferring Resistance to the Fungal Toxin Fumonisin B1 — $377,976

Raul G. Barletta and **Charles J. Czuprynski** — USDA/NRI — Molecular Analysis of a *Mycobacterium paratuberculosis* Colony-morphology Attenuated Mutant — $298,864

Han H. Asard — USDA/NRI — Biochemical Properties and Physiological Function of Plant Cytochromes b561 — $311,647

Osvaldo Jorge Lopez and **Fernando A. Osorio** — USDA/NRI — A Sub-Unit Vaccine and Diagnostic Tests for Porcine Reproductive and Respiratory Virus (PRRSV) — $211,052

Subramaniam Srikumaran — USDA/NRI — MHC Class 1 Down-Regulation by Bovine Herpesviru 1: Viral Proteins Involved, and Underlying Mechanisms — $288,895

Clayton L. Kelling, Amelia R. Woolums, Subramaniam Srikumaran, Ruben Donis and **Bruce Brodersen** — USDA/NRI — Apoptosis and Cellular Immunity in BVDV and BRSV Co-Infection — $346,944

Amit Mitra — USDA/NRI — Utilization of Direct Repeat-Induced Gene Silencing in Plant Functional Genomics — $233,252

Karl J. Reinhard — NSF — Evaluating the Role of Diet and Parasitism as Causal Factors for Anasazi Porotic Hyperostosis: Analysis of Coprolites from Antelope House, Arizona and Salmon Ruin, New Mexico — $539,194

Xiao Chen Zeng and **Dennis Diestler** — ONR — Multiscale Computational Studies of Tribological Systems — $225,000

Walter Schacht — University of Nebraska-Omaha through U.S. DOI and USDA — Quantifying the Effect of Fire on Grazed Nebraska Sandhills Prairie: Response of Plants and Effect on Soil Surface Stability — $104,345

Stephen D. Danielson, James R. Brandle and **Erin E. Blankenship** — USDA/NRI — Habitat Enhancement for Predatory Insects of Alfalfa Pests — $295,765

S.B. Verma, R. Ballinger, K.G. Cassman, T.J. Arkebauer, A. Dobermann, A.A. Gitelson, K.G. Hubbard, J.M.H. Knops, D.C. Rundquist, D.T. Walters, E.A. Walter-Shea and **Haishun Yang** — DOE/EPSCoR — Carbon Sequestration and Global Climate Change — $975,000

James Stubbendieck — National Park Service — Restoration of Threadleaf Sledge — $29,940

Terry L. Mader and **Q. Steven Hu** — NIGEC — Evaluating Models Predicting Livestock Output Due to Climate Change — $270,000

Raul Barletta — US-Israel BARD — Identification and Characterization of *Mycobacterium paratuberculosis* Virulence Genes Expressed *in vivo* by Negative Selection — $180,087

Susan Tunnell and **James Stubbendieck** — USEPA — Grazing as an Alternative Method for Wetland Restoration — $100,018

Mark Kuzila — USGS — Rural and Urban Geologic Mapping of Nebraska — STATE MAP — $220,008

Donald A. Wilhite — NATO — Drought as a Limiting Factor of Cereal Production — $25,000

Galen Erickson and **Rick Koelsch** — USDA/NRI — Managing Phosphorus in Beef Feedlot Operations — $29,396

P.S. Baenziger, H. Aziz, W. Schacht and **J. Peake** — ICARDA — Restoring Wheat Production and Grazing Land Productivity in Afghanistan — $199,985

Janos Zempleni — NSF — Oxidative Folding of Secretary Proteins Depends on Flavins — $221,168

Robert G. Wilson, Gary L. Hein and **Robert M. Harveson** — USDA-IPM — Use of Patterns of Fructan Metabolism in Roots of Canada Thistle to Develop Integrated Control Strategies in Cropland and Range Ecosystems — $98,880

John B. Campbell — USDA/IPM through Kansas State University — Management of Stable Fly Populations Developing in Feeding Sites of Round Bales — $17,280

C.A. Hibberd, H. Aziz, C. Burkhart-Kriesel, J. Peake and **A. Etling** — ICARDA — Training of Afghanistan Agricultural Research and Extension Scientists to Transfer Technology to Afghan Farmers and Livestock Producers — $200,000

Ruma Banerjee — NIH — H-Tunneling in Methylmalonyl — CoA Mutase — $37,200

Karl J. Reinhard — NSF — Evaluating the Floral Base of Chinchorro Diet: Collection of Plant and Diatom Samples — $366,225

Diane says

Too many sound arguments are all sound.

2002 Graduate Student Survey

Graduate student data represents enrolled and non-enrolled students for the Fall 2002 semester. Only non-enrolled students actively pursuing graduate degrees within the time limit for granting degrees established by the Office of Graduate Studies are considered. 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 7.7% from the Fall Semester, 2001 to the Fall Semester, 2002. Fifty-four and 5/10 percent of the graduate students in CASNR majors are supported by assistantships (state-appropriated GRA's and GTA's; grants; fellowships; and international agency or foreign country support). Thirty-four and 7/10 percent of the students in the College of Human Resources and Family Sciences are supported. Thirty-two percent of our graduate students are not enrolled in IANR graduate majors on the sixth day of the semester.

	M.S.				*Ph.D.*				*Total*				*2001 to 2002*
		GTA	*Other**	*Self*	*GRA*	*GTA*	*Other**	*Self*	*99*	*00*	*01*	*02*	*% chg*
Major/Unit													
College of Agricultural Sciences and Natural Resources													
Agricultural Economics	13		1	12.5	6		1	2	26	36	37	35.5	-4.1%
Agricultural Leadership, Education (1)	9	1		48	4	3		19	35	46	63	84	33.3%
Agronomy	23		2	15	18.5		6.5	10	119	98	82.5	75	-9.1%
Animal Science	25		2	13	20		10	9	88	87	85.5	79	-7.6%
Biochemistry	3			1	28	1			31	28	36	33	-8.3%
Biological Systems Engineering (2)	6		1	4.5	5.5		3	1	26	30.5	30	21	-30.0%
Biometry	11	7	1	10	1.5				15	17	15	30.5	103.3%
Entomology	9	1		66	10	0	2	6	64	75	95	94	-1.1%
Food Science and Technology	10			8	17		1	5	44	48	43.5	41	-5.7%
Horticulture (3)	3.5			5	7				15	19	12	15.5	29.2%
Master of Agriculture				10								10	
Mechanized Systems Management	4			2					7	7	5	6	20.0%
Plant Pathology (4)	2		1	2	5		2		8	16	9	12	33.3%
School of Natural Resource Sciences (5)	26.5			26.5	21			14	44	64.5	57.5	88	53.0%
Veterinary and Biomedical Sciences (6)	14			7	8.5			2	36	33	40	31.5	-21.3%
Total	159	9	8	230.5	152	4	25.5	68	558	605	611	656	7.4%
Grand Total		**406.5**				**249.5**			**558**	**605**	**611**	**656**	**7.4%**
College of Human Resources and Family Sciences													
Family and Consumer Sciences	17			26					35	40	36	43	19.4%
Nutritional Science and Dietetics	11	9	2	17					41	32	36	39	8.3%
Textiles, Clothing and Design - MA /MS	7	1		18					10	12	23	26	13.0%
Interdepartmental Nutrition	1				3		2	9	9	13	12	15	25.0%
Interdepartmental HRFS				24	4.5	2.5		19	36	52	52	50	-3.8%
Total	36	10	2	85	7.5	2.5	2	28	131	149	159	173	8.8%
Grand Total		**133**				**40**			**131**	**149**	**159**	**173**	**8.8%**
Grand Total CASNR & HRFS	**195**	**19**	**10**	**315.5**	**159.5**	**6.5**	**27.5**	**96**	**689**	**754**	**770**	**829**	**7.7%**

*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.