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ARD News October 1998

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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

October 1998

Volume 33, Number 1

Comments from the Dean

Dear Colleagues:

By the time this issue of ARD News reaches your desk, I will have completed 10 years of service as Dean and Director. It is almost unbelievable that a decade has passed in the seemingly short time since I moved from Plant Sciences to Agricultural Hall. It has been a period characterized by a personal steep learning curve, an incredible number of meetings with administrators and faculty, a few frustrations, but, most of all, by satisfaction in seeing ARD faculty achieve tremendous success in research and graduate education.

During the last 10 years, ARD faculty FTE in tenured or tenure-leading lines has decreased from 144.5 to 126.3. In this period, state appropriations have increased by 67 percent, grant income has increased by 92 percent, outputs of theses and dissertations has increased by 28 percent, total refereed journal articles increased by 10 percent and total books and book chapters published increased by 13 percent. At the same time, the number of crop varieties and germplasms released from our breeding programs has significantly increased and the number of patents awarded to our faculty has also increased. We now have significant royalty streams coming to IANR units from licensing intellectual property developed by faculty and staff.

These accomplishments are a tribute to the dedication, creativity and hard work of ARD faculty and staff. The outputs from your research projects are widely recognized throughout the U.S. for high quality and as a result our research program are growing in stature. Thanks to each of you for your support of what we are attempting to accomplish in the Agricultural Research Division. I really appreciate the assistance and encouragement provided to me by ARD faculty and staff. Keep up the good work!

Darrell W. Nelson
Dean and Director
Agricultural Research Division

The North Central Region (NCR) Sustainable Agriculture Research and Education (SARE) Program

The North Central Region (NCR) Sustainable Agriculture Research and Education (SARE) Program is a USDA competitive grants program first authorized by the 1990 Farm Bill. The purpose of the SARE program is to generate and disseminate information that is sound and practical about alternative farming systems believed to have the potential to increase the sustainability of agriculture.

Three types of grants are administered under the program and include:

- *Research and Education Grants* — awarded to researchers, producers, educators and other individuals working together to promote sustainable agriculture ideas and practices. Preproposal applications are available mid-July and due mid-September.
- *Producer Grants* — awarded to farmers and ranchers working on on-site projects within the region. Applications are available early-February and due late-April.
- *Professional Development Program Grants* — awarded to persons who develop educational programs related to sustainable agriculture specifically for Extension, NRCS, and other agricultural professionals. Applications are available early-December and due mid-February

The FY-98 funding cycle was completed this past June. The following Nebraska individuals have been recommended for FY-98 funding:

- *Research and Education Grants* — Wyatt Fraas from the Center for Rural Affairs in Hartington
Burt Weichenthal from the UNL Panhandle Research and Extension Center in Scottsbluff



It is the policy of the University of Nebraska-Lincoln not to discriminate on the basis of gender, age, disability, race, color, religion, marital status, veteran's status, national or ethnic origin or sexual orientation.



- *Producer Grants* — John Ellis of York; David Kreutz of Aurora

The FY-99 Call for Preproposals for research and education grants is available now and has a deadline of Sept. 11. Applications may be obtained by contacting:

North Central Region SARE Program
University of Nebraska-Lincoln
13A Activities Bldg
Lincoln NE 68583-0840

Phone: (402) 472-7081

FAX: (402) 472-0280

E-Mail: sare001@unlvm.unl.edu

Web Site: <http://www.ces.ncsu.edu/ncrsare>

Revised Guidelines for ARD Travel Reimbursement Program for Prospective Graduate Students

Listed below are revised guidelines for the ARD Travel Reimbursement Program for Prospective Graduate Students. The ARD Advisory Council revised the guidelines to clarify some ambiguous provisions in the previous version. The program concept remains as originally conceived in 1987.

- The following guidelines pertain only to the funds available through the ARD Travel Reimbursement Program. Departments are free to reimburse prospective graduate students from other sources or to use funds from other sources to supplement funds distributed through this program.
- The purpose of the ARD Prospective Graduate Student Travel Reimbursement Program is to assist in attracting high quality graduate students into the ARD research programs. The program is for recruitment purposes and is not intended to be used to support interviews of prospective graduate students. The objective is to assist departments in convincing students who have been offered an assistantship to actually enroll at UNL.
- A special account will be established in the ARD dean's office to provide administrative units with a source of funds to partially reimburse travel expenses for prospective graduate students who wish to visit the department/district center before making a decision. Each ARD administrative unit will be eligible to receive funding to reimburse up to two (2) students per calendar year from this account. Only individuals who have been offered graduate research assistantships will be eligible for reimbursement.
- Departments/district centers will be permitted to use their own resources to reimburse prospective graduate students beyond the two per year supported from this special Dean's account if they desire to do so.

- ARD administrative units may receive funds from this program to assist in reimbursing accounts from which funds have been taken to cover some or all of the expenses incurred by prospective graduate students (who have been offered an assistantship) while visiting the UNL campus. Amounts equal to 50 percent of the student's expenses, or \$200, whichever is less, can be awarded to help defray the costs of transportation, lodging and meals.
- Each department/district center will establish its own appropriate screening procedures. The departmental graduate committee or an equivalent committee at the district center, will work with their respective unit administrator in making decisions with regard to which potential candidates are eligible to receive travel support from either the dean's travel account or from departmental/district center resources.
- Requests for reimbursement from the Dean's Travel Account will be submitted by the department head/center director to the dean of the Agricultural Research Division.

Approved 7/06/98 - ARD Advisory Council

Mussehl Endowment

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

Sheila Scheideler	Animal Science Department
Davis Clements	Biological Systems Engineering Department "Dicalcium Phosphate from Eggshells" Funded: \$10,000
Sheila Scheideler	Animal Science Department "Ideal Amino Acid Ratios for Albumen Formation in the Laying Hen" Funded: \$ 9,768
Sheila Scheideler	Animal Science Department "Effects of Trace Mineral Protein Supplement and Calcium Level on Egg Shell Quality in Older Laying Hens" Funded: \$10,000
Mindy Brashears	Food Science and Technology Department "Competitive Inhibition of Food-borne Pathogens in Poultry Products" Funded: \$10,000
Nancy M. Lewis	Nutritional Science and Dietetics Department
Sheila Scheideler	Animal Science Department
Rosemary Wander	Nutritional and Food Management (Oregon State)
Tim Carr	Nutritional Science and Dietetics Department "Potential Health Benefits of the Inclusion of Eggs in Diets of Physically Active Adults" Funded: \$10,000

Shelly McKee Food Science and Technology Department
 Mindy Brashears Food Science and Technology Department
 "Efficacy of Feeding Egg IgY from Hens
 Immunized against *Salmonella enteritidis* (SE)
 to Treat and Prevent SE Infection in Hens"
 Funded: \$10,000

Nebraska Corn Development, Utilization and Marketing Board Funding July 1, 1998 - June 30, 1999

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The following projects were approved by the
 Nebraska Corn Development, Utilization and Market-
 ing Board for July 1, 1998-June 30, 1999 funding:

Milford Hanna	Glucaric Acid — A Potential Large Scale Commodity Chemical From Corn Starch	34,130
Viswas Ghorpade Milford Hanna	Pilot Scale Synthesis of Levulinic Acid Via Reactive Extrusion	46,300
Milford Hanna Qi Fang Gerald Biby	PLA Based Visa, Master Card and Memory/Smart Cards	36,948
Robert Hutkins	Isolation and Properties of Extreme Acideophiles Capable of Producing Lactic Acid	38,750
David S. Jackson	Alkaline Cooking (Corn and Tortilla Chip, Tortillas) of Nebraska Corn	24,494
Thomas Franti Dean Eisenhauer Kyle Hoagland Mike Dosskey	Development and Testing of Field Techniques for Estimating the Effectiveness of Grass Filter Strips	21,320
Drew Lyon Jurg Blumenthal	Short Season Dryland Corn for the Nebraska Panhandle	2,000
K. Arumuganathan Kulvinder S. Gill	Sorting and Micro-Cloning of Individual Maize Chromosomes	54,750
David S. Jackson Curtis L. Weller Randy L. Wehling	Measuring Corn's Intrinsic Value: Assessment of Value for Industrial Uses	22,515
	Total	281,207

Nebraska Dry Bean Development, Utilization and Marketing Board Funding July 1, 1998 - June 30, 1999

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The following projects were approved by the
 Nebraska Dry Bean Development, Utilization and
 Marketing Board for July 1, 1998-June 30, 1999:

Gary Hein Ron Seymour	Development of Infestation Techniques Further Studies into the Behavior an Impact of the Western Bean Cutworm in Dry Beans	5,750
Robert Wilson John Smith	Using a Crop Desiccant to Facilitate Harvest of Dry Beans	5,200
Jim Schild David Nuland Tony Merrigan Larry Peterson Howard Schwartz	Evaluation of Growth Compounds on Regrowth and Yield Following Hail	3,000

Gary Yuen Dermot Coyne Eric Kerr James Steadman Howard Schwartz	Fusarium Wilt of Bean in Western Nebraska	6,000
Durward Smith	Improved Product Quality and Non- Conventional Utilization of Dry Edible Beans	5,700
James Steadman Dale Lindgren Janelle Fenton	Pathogenic Variability of the Bean Rust Fungus in Nebraska and the Search for Stable Rust Resistance	5,500
David Nuland Jim Schild Tony Merrigan	Commercial Evaluation of Two Great Northern Breeding Lines	3,200
C. Dean Yonts	Polyacrylamide (PAM) — A Method to Control Irrigation Induced Soil Erosion in the Production of Dry Beans	3,500
David Nuland Dale Lindgren James Steadman Dermot Coyne	Evaluation of Dry Bean Cultivars for Disease Reaction and Performance in Western Nebraska	5,700
Dermot Coyne James Steadman Anne Vidaver David Nuland Dale Lindgren Durward Smith	Breeding Great Northern and Pinto Dry Beans with Multiple Disease Resistance Combined with Improved Seed Quality, Yield and Plant Type	14,409
Chuck Hibberd	Increasing the Production Efficiency and Market Value of Dry Edible Beans Through a Collaborative, Integrated Research and Extension Program at the Panhandle Research and Extension Center	24,000
	Total	81,959

Nebraska Grain Sorghum Development, Utilization and Marketing Board Funding July 1, 1998 - June 30, 1999

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The following projects were approved by the Nebraska
 Grain Sorghum Development, Utilization and Marketing
 Board for July 1, 1998-June 30, 1999 funding:

Robert N. Klein Paul Nordquist	Nebraska Hybrid Grain Sorghum Seed Strip Test	7,500
David J. Andrews	Using New Genetic Diversity to Develop Grain Sorghum Germplasm with Good Adaptation to Eastern Nebraska	20,836
Z B Mayo Lisa Silberman	Sorghum Insect Pest Management in Nebraska	8,100
Max D. Clegg Lenis A. Nelson David Baltensperger	Sorghum Grown and Grain Fill Under Cool Sub-optimal Nighttime Temperatures	4,500
Jerry Eastin	Improving Stress Resistance, Yield Potential and Market Value by Altering Seed Number, Seed Weight and Plant Color	25,995
Roger Stockton Stephen C. Mason	Ethylene Improvement in Grain Sorghum Cold Tolerance During Germination	2,800
	Total	69,731

Nebraska Soybean Development, Utilization and Marketing Board Funding Oct. 1, 1998 - Sept. 30, 1999

The following projects were approved by the Nebraska Soybean Development, Utilization and Marketing Board for Oct. 1, 1998 - Sept. 30, 1999 funding:

George Graef	Winter Nursery Support for Soybean	29,800
James E. Specht	Breeding and Genetic Research	
George Graef	Development of Improved Soybean	130,800
James E. Specht	Varieties for Nebraska	
James R. Steadman	Management of Sclerotinia Stem Rot	30,952
George Graef	by Development of Resistant Soybean	
	Cultivars and Induced Resistance	
Robert M. Caldwell	Nitrogen Fertilization of Soybean:	33,134
	A Precision Farming Approach to	
	One Million Research Plots	
Milford Hanna	Soybean Form Oil	3,952
Thomas E. Clemente	Modification of Soybean Lipid	37,520
Paul Staswick	Composition by Down Regulation of	
	Fatty Acid Desaturase Genes	
Hossein Nouredini	Development of a Continuous	22,172
	Process for Enzymatic Hydrolysis	
	and Glycerolysis of Soybean Oil	
Robert M. Caldwell	Phosphorus Requirements and	34,500
	Improved Fertilizer P	
	Recommendations for Nebraska	
	Soybeans Grown in Rainfed and	
	Irrigated Systems	
	Total	322,830

Nebraska Wheat Board Funding July 1, 1998 - June 30, 1999

The following projects were approved by the Nebraska Wheat Board for July 1, 1998-June 30, 1999 funding:

David R. Shelton	Selecting Nebraska Wheats for	35,420
P. Stephen Baenziger	Processing Needs of Domestic and	
C. James Peterson	Foreign Markets	
Robert A. Graybosch		
P. Stephen Baenziger	Improving Winter Wheat Varieties	46,600
David R. Shelton	for Nebraska	
David Baltensperger		
Lenis A. Nelson	Variety Testing of Public Winter	12,000
	Wheat Varieties Developed Outside	
	of Nebraska	
C. James Peterson	Hard White Wheat Development for	65,000
David R. Shelton	Nebraska	
David Baltensperger		
Robert Graybosch		
John E. Watkins	Lessening the Impact of Leaf and	20,000
P. Stephen Baenziger	Stem Rust and Wheat Streak Mosaic	
	Virus on Nebraska Wheat Varieties	
Gary L. Hein	Impact of High Plains Disease on	9,880
John E. Watkins	Wheats Being Developed for Wheat	
	Curl Mite and Wheat Streak Mosaic	
	Resistance	
Drew Lyon	Utilizing Spring Seeded Wheat in	7,000
	Dryland Cropping Systems	

Robert Graybosch Development of Waxy Wheats 10,000
C. James Peterson
David R. Shelton

Total 170,480

Proposals Submitted for Federal Grants

The following is a listing of proposals that were submitted after August 1998 by faculty for federal grant programs. While not all grants will be funded, we are appreciative of the faculty members' effort in submitting proposals to the various agencies.

Dermot Coyne and James R. Steadman — USAID — Biology, Epidemiology, Genetics, and Breeding for Resistance to Pathogens of Beans with Emphasis on Those Causing Bacterial and Rust Diseases — \$87,500

Gail A. Wicks — USDA/FAS/ICD/RSED/SCP — Use of Reflectance Technology to Identify Weed Competitive Wheat Cultivars — \$30,000

Gail A. Wicks — USDA/FAS/ICD/RSED/SCP — Use of Reflectance Technology to Measure Herbicide by Wheat Cultivar Interactions — \$30,000

Michael Zeece — USDA/FAS/ICD/RSED/SCP — Ubiquitin-Proteasome-Dependent Degradation of Myofibrillar Proteins — \$30,000

James W. King — A Descriptive Study of Selected Australian Distance Education Activities in Agriculture and Forestry — \$5,000

Lenis A. Nelson — USDA/FAS/ICD/RSED/SCP — Using Statistical Procedures and Molecular Markers to Partition Genotype by Environment Interaction in Maize — \$5,000

Albert Weiss — USDA/BARD — Title Prediction of Wheat Quality from Physiological and Physical Understanding of Growth and Development — \$185,000

Steve Waller — USDA/CSREES — Sustainable Agriculture Research and Education (SARE) Program for the North Central Region — \$25,875

Kenneth G. Hubbard and Steven J. Meyer — NSF — Climate Data Delivery System: Climate Information for Federal Agencies — \$123,505

Shripat Kamble — USDA/Special Research Grants — Nebraska Participation in the National Agricultural Pesticide Impact Assessment Program — \$22,527

Vadim Gladyshev — NIH — Polymorphisms in the Selenoprotein Gene and Cancer Risk — \$925,587

Julie Savidge — USDA Forest Service — Breeding Success and Habitat Parameters of Burrowing Owls on the Buffalo Gap National Grassland — \$20,000

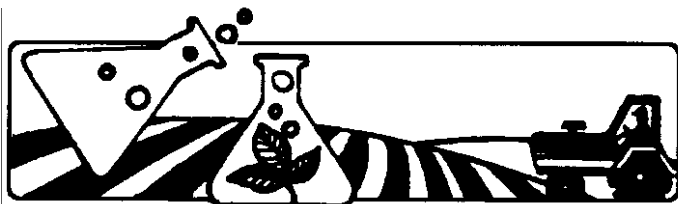
James E. Kinder — USDA/BARD — Regulation of LH Secretion in the Perioovulatory Period as a Strategy to Enhance Ovarian Function and Fertility in Dairy and Beef Cows — \$221,600

John B. Campbell — USDA/ARS — Biology and Control of Stable Flies Afflicting Cattle in Pastures — \$45,000

Z B Mayo — USDA/ARS — The Role of the Greenbug Holocycle in Generating Biotypic Diversity — \$1,000

Fernando A. Osorio — USDA/FAS/MSD — Characterization of an Emerging Vesicular Disease that can be Mistaken for Foot-and-Mouth Disease — \$10,000

John Foster — USDA/ARS — Techniques for Identification, Cryopreservation and Genetic Sexing of the Primary Screwworm — \$60,000



Grants and Contracts Received August and September, 1998

Agricultural Economics	
Azzam, Azzeddine — Iowa State University	19,418
Agricultural Research and Development Center	
Miscellaneous grants under \$10,000 each	10,000
Agronomy	
Andrews, David — USAID	42,000
Baenziger, P. S. — Pioneer Hi-Bred International	18,000
Eghball, Bahman — USAID	100,000
Gill, Kulvinder — USDA/CSREES	150,000
Maranville, Jerry — USAID	19,600
Mason, Stephen — USAID	23,450
Staswick, Paul — University of Illinois	36,334
Miscellaneous grants under \$10,000 each	42,310
Animal Science	
Milton, Todd — Fort Dodge Animal Health	32,400
Pomp, Daniel — UN Foundation	47,210
Miscellaneous grants under \$10,000 each	36,404
Biochemistry	
Banerjee, Ruma — NIH	277,454
Biological Systems Engineering	
Martin, Derrel — Burlington Northern — UN Foundation	16,350
Biometry	
Stroup, Walt — Pfizer Animal Health	14,400
Center for Rural Development	
Cordes, Sam — University of Missouri	55,000
Entomology	
Danielson, Stephen — U.S. Fish and Wildlife	40,000
Miscellaneous grants under \$10,000 each	46,181
Food Science and Technology	
Benson, Andrew — USDA/CSREES	150,000
Cuppert, Susan — Iowa State University	91,089
Jackson, David and Sahai, Deepak — NSF	211,748
Miscellaneous grants under \$10,000 each	5,000
Horticulture	
Miscellaneous grants under \$10,000 each	29,850
Industrial Ag Products Center	
Hanna, Milford — National Corn Growers Association	32,000
Northeast Research and Extension Center	
Mader, Terry — Optimum Quality Grain	35,000
Miscellaneous grants under \$10,000 each	38,000

Panhandle Research and Extension Center	
Hein, Gary — USDA/CSREES	68,136
Hibberd, Charles — Agronomics International	40,000
Rush, Ivan G. — Vitamins, Inc.	13,500
Smith, John — Western Sugar Company	50,000
Miscellaneous grants under \$10,000 each	75,300
Plant Pathology	
VanEtten, James — NIH	229,465
Miscellaneous grants under \$10,000 each	10,700
School of Natural Resources	
Harvey, F. Edwin — Nebraska Department of Water Resources	38,250
Harvey, F. Edwin — USEPA	36,310
Kuzelka, Robert — Nebraska Groundwater Foundation	60,000
Spalding, Roy — NDEQ	150,000
Volk, Bob — USDA/ARS	300,000
Walter-Shea, E. A. and Rundquist, Donald — UCAR	72,526
Miscellaneous grants under \$10,000 each	30,035
South Central Research and Extension Center	
Miscellaneous grants under \$10,000 each	72,150
Veterinary and Biomedical Sciences	
Barletta, Raul — Texas A&M	20,000
Donis, Ruben — Pfizer	45,000
Moxley, Rodney — National Beef Council	24,950
Moxley, Rodney — National Pork Producers	18,500
Schmitz, Jack — Pfizer	25,000
Wills, Robert — National Pork Producers	18,181
Miscellaneous grants under \$10,000 each	2,870
West Central Research and Extension Center	
Hergert, Gary W. — University Foundation	67,895
Miscellaneous grants under \$10,000 each	32,924
Grand Total	3,120,890

New or Revised Projects

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

NEB-11-111 (Biological Systems Engineering) Characterization and Modeling of Odor Emissions from Animal Production Facilities

Investigator(s): D. D. Schulte, S. B. Verma, D. P. Billesbach, and R. K. Koelsch
Status: New State project effective July 1, 1998

NEB-12-268 (Agronomy) Sustainable Farms, Landscapes and Rural Communities in Nebraska: An Agricultural Systems Team Approach

Investigator: Charles A. Francis
Status: New Hatch project effective July 1, 1998

NEB-12-269 (Agronomy) Cropping Systems for Uncertain Environments: Decision Aids for Managing Soil and Weather Variability

Investigator: Robert M. Caldwell
Status: New Hatch project effective July 1, 1998

NEB-13-142 (Animal Science) Value-Added Processed and Manufactured Meat Products

Investigator: Roger W. Mandigo
Status: New Hatch project effective June 11, 1998

NEB-13-143 (Animal Science) Enhancing the Global Competitiveness of U.S. Red Meat

Investigator(s): Chris R. Calkins and Dillon M. Feuz
Status: New Hatch project that contributes to regional project W-177 effective Oct. 1, 1997

**NEB-16-078 (Food Science and Technology)
Evaluation and Characterization of Antioxidants from
Plant Sources**

Investigator: Susan L. Cuppett

Status: New Hatch project effective June 10, 1998

**NEB-17-072 (Entomology) Ecology and Management
of Diabrotica Species**

Investigator: L. J. Meinke

Status: New Hatch project effective June 18, 1998

**NEB-17-073 (Entomology) Dynamic Soybean Insect
Management for Emerging Agricultural Technologies
and Variable Environments**

Investigator: Leon G. Higley

Status: New Hatch project that contributes to regional
project S-281 effective Oct. 1, 1997

**NEB-20-061 (Horticulture) Development of
Glyphosate Resistant Buffalograss**

Investigator(s): T. P. Riordan, T. E. Clemente, S. Fei, and
R. V. Klucas

Status: New State project effective July 1, 1998

**NEB-23-003 (Biometry) Innovative Design and
Analysis of Agricultural Experiments**

Investigator(s): W. W. Stroup and E. T. Paparozzi

Status: New State project effective July 1, 1998

**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, 1998

**NEB-29-008 (Industrial Ag Products Center)
Biodegradable Plastics from Corn Starch and
Soybean Oil**

Investigator(s): M. A. Hanna and V. Miladinov

Status: New State project effective July 1, 1998

**NEB-43-064 (West Central Research and Extension
Center) Cow-Calf-Yearling Beef Production Systems**

Investigator(s): D. C. Adams, T. Milton, T. J.

Klopfenstein, R. T. Clark and J. D. Volesky

Status: New State project July 1, 1998

**NEB-92-032 (Family and Consumer Science) New
Relational Perspective in Developmental Psychology
and Its Applications to Education and Child Care**

Investigator: C. P. Edwards

Status: New Hatch project effective June 10, 1998

**NEB-92-034 (Family and Consumer Science) Three
Cohorts of Teenage Mothers Regional Comparisons
and Sex Education**

Investigator: S. T. Russell

Status: New Hatch project effective July 9, 1998

University Funds May Not Be Used For Individual Memberships and Subscriptions

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In March, 1996, the Vice Chancellor's Council approved a policy that prohibits the use of university funds for purchase of individual memberships in scientific organizations or personal subscriptions to journals. The policy statement is provided below:

- No university funds (appropriated, grants, contracts, indirect cost recovery, or revolving) may be used to purchase individual memberships in professional societies or other periodicals.
- University funds may be used to purchase institutional memberships in civic or professional organizations or to purchase institutional subscriptions for journals or other periodicals.
- University of Nebraska Foundation funds may be used to purchase personal memberships or subscriptions if individual endowments are established for this purpose.

The policy was adopted because several cases of abuse were discovered and because council members believe that faculty members have personal responsibility to be members of their professional or scientific society.

Binational Agricultural R & D Fund (BARD)

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The BARD program was established in 1977 by the governments of Israel and the United States to promote cutting edge, collaborative agricultural R & D activities of interest to both countries in public and non-profit private institutions. The annual income for the fund is about \$12.5 million. About 90 percent of the income is allocated for research grants supporting collaborative projects involving both U.S. and Israeli scientists. Some 3 percent of the income is invested in post-doctoral training and in sponsoring workshops. In 20 years of operation, BARD has awarded \$120 million in research grants for 800 joint projects in the agricultural sciences. Grants are typically three years in duration and provide from \$300,000 to \$350,000.

IANR scientists receiving awards in recent years include Raul Barletta (Veterinary and Biomedical Sciences), Mark Morrison (Animal Science) and Martin Dickman (Plant Pathology). Please consider submitting a joint grant proposal with an Israeli colleague during the next round of competition.

John B. Campbell — USDA/ARS — Biology and Control of Stable Flies Afflicting Cattle in Pastures — \$45,000

Z B Mayo — USDA/ARS — The Role of the Greenbug Holocycle in Generating Biotypic Diversity — \$1,000

Fernando A. Osorio — USDA/FAS/MSD — Characterization of an Emerging Vesicular Disease that can be Mistaken for Foot-and-Mouth Disease — \$10,000

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Milton, Todd — Fort Dodge Animal Health	32,400
Pomp, Daniel — UN Foundation	47,210
Miscellaneous grants under \$10,000 each	36,404
Biochemistry	
Banerjee, Ruma — NIH	277,454
Biological Systems Engineering	
Martin, Derrel — Burlington Northern — UN Foundation	16,350
Biometry	
Stroup, Walt — Pfizer Animal Health	14,400
Center for Rural Development	
Cordes, Sam — University of Missouri	55,000
Entomology	
Danielson, Stephen — U.S. Fish and Wildlife	40,000
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Panhandle Research and Extension Center	
Hein, Gary — USDA/CSREES	68,136
Hibberd, Charles — Agronomics International	40,000
Rush, Ivan G. — Vitamins, Inc.	13,500
Smith, John — Western Sugar Company	50,000
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Plant Pathology	
VanEtten, James — NIH	229,465
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School of Natural Resources	
Harvey, F. Edwin — Nebraska Department of Water Resources	38,250
Harvey, F. Edwin — USEPA	36,310
Kuzelka, Robert — Nebraska Groundwater Foundation	60,000
Spalding, Roy — NDEQ	150,000
Volk, Bob — USDA/ARS	300,000
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South Central Research and Extension Center	
Miscellaneous grants under \$10,000 each	72,150
Veterinary and Biomedical Sciences	
Barletta, Raul — Texas A&M	20,000
Donis, Ruben — Pfizer	45,000
Moxley, Rodney — National Beef Council	24,950
Moxley, Rodney — National Pork Producers	18,500
Schmitz, Jack — Pfizer	25,000
Wills, Robert — National Pork Producers	18,181
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West Central Research and Extension Center	
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Grand Total	3,120,890

New or Revised Projects

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

NEB-11-111 (Biological Systems Engineering) Characterization and Modeling of Odor Emissions from Animal Production Facilities
Investigator(s): D. D. Schulte, S. B. Verma, D. P. Billesbach, and R. K. Koelsch
Status: New State project effective July 1, 1998

NEB-12-268 (Agronomy) Sustainable Farms, Landscapes and Rural Communities in Nebraska: An Agricultural Systems Team Approach
Investigator: Charles A. Francis
Status: New Hatch project effective July 1, 1998

NEB-12-269 (Agronomy) Cropping Systems for Uncertain Environments: Decision Aids for Managing Soil and Weather Variability
Investigator: Robert M. Caldwell
Status: New Hatch project effective July 1, 1998

NEB-13-142 (Animal Science) Value-Added Processed and Manufactured Meat Products
Investigator: Roger W. Mandigo
Status: New Hatch project effective June 11, 1998

NEB-13-143 (Animal Science) Enhancing the Global Competitiveness of U.S. Red Meat
Investigator(s): Chris R. Calkins and Dillon M. Feuz
Status: New Hatch project that contributes to regional project W-177 effective Oct. 1, 1997

Successful Grant Proposal Writing

Contracts and grants continue to be a very important component of support for ARD faculty research, providing about one-third of the research support annually. While the amount of grant and contract support needed for individual programs to be successful varies greatly, nearly all programs require some external support in addition to appropriated funds if they are to be cutting-edge productive efforts.

The growth in contract and grant support for ARD faculty is good evidence of improved grantsmanship skills and effort. ARD encourages research faculty to continue to improve their skills through various opportunities, such as training workshops conducted by the UNL Office of the Vice Chancellor for Research, self-study with references such as the ARD publication *"Playing to Win"* by Dr. David Stanley, participation in review panels, and other opportunities.

A recent article in the publication *E-TRAIN*, The Environmental Training Newsletter for Small Communities, noted some other opportunities for improving proposal writing skills. It identified three Internet sites that provide information aimed at improving proposal writing skills.

The first site, "Grantseeking 101," is a commercial site with basic grant finding and writing information. It also offers a forum for discussion with other people interested in sharing advice or resources for grant writing. The site has an online catalog selling grant writing-related books and software. The site address is: <http://www.grantscape.com/omaha/grants/services/101.html>

The second site, "A Proposal Writing Short Course," is maintained by a nonprofit service organization, The Foundation Center, and includes a two-part free proposal writing course. It also provides links to the foundation's other services related to grantsmanship. The site address is: <http://dncenter.org/onlib/prop.html>

The third site has an interesting title, "Some Reasons Why Proposals Fail." It contains many aspects of grant proposal writing and is maintained by the University of Wisconsin Grants Information Center. It also provides information about other sites related to this subject. Address of this site is: <http://www.library.wisc.edu/libraries/Memorial/grants/proposal.htm>

In the area of grantsmanship, anything a faculty member can do to help get a competitive edge through writing better proposals or identifying additional sources will be helpful. These web sites can be an opportunity to enhance skills of ARD faculty.

Agricultural Research, Extension and Education Reform Act of 1998

The portion of the Farm Bill that authorizes all of the USDA research programs was finally passed by Congress and signed by President Clinton in the early summer. This legislation will have a significant impact on many of our research programs. A summary of major changes mandated by this legislation is presented below:

- Land Grant Universities must show that they have obtained input from stakeholders regarding research needs and priorities. We intend to use the IANR strategic planning process to obtain broad-based stakeholder input.
- We must submit a "plan of work" to CSREES that documents all programs to be funded by Hatch and regional research funds during the next five years. This is a new requirement that will require significant effort by the ARD office.
- The ARD peer and merit review procedures must be approved by CSREES before Hatch funds are allocated to the University of Nebraska.
- Twenty-five percent of Hatch funds must be spent on multi-state, multi-disciplinary and multi-functional programs. These allocations must be documented in the "plan of work."
- The indirect cost rate for NRI grants was increased to 19 percent.
- The "Initiative for Future Agricultural and Food Systems" was authorized. This new initiative provides \$120 million per year for five years for competitive grants addressing "mission oriented" research.

Diane says

Correction can help, but encouragement can help far more.