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Agricultural Research Division News

The Institute of Agriculture and Natural Resources

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COMMENTS FROM THE ASSOCIATE DIRECTOR

Dear Colleagues,

UNL Agricultural Research Division faculty have traditionally had a strong record of participation in regional research activities organized under the North Central Region Experiment Station Directors Association and in the other three regions. The ARD administration has strongly supported faculty participation in these regional activities. We are fortunate that administrators who preceded us had the foresight to maintain the USDA regional research funds independently to allow them to be used for travel to the regional meetings and to support research directly contributing to regional projects eligible for funding.

The regional research system was founded by federal legislation over 50 years ago. It has provided a mechanism for many productive cooperative efforts. It has accomplished many things that independent efforts by the State Agricultural Experiment Stations would not be able to accomplish. It has prevented much unnecessary duplication and provided for rapid transfer of research results among project participants.

Not all states operate their regional programs identically. While the system still has some problems, the Experiment Station Directors in the North Central Region and nationally remain very strong in their support of the regional research system as a way to enhance productivity and cooperation among the experiment stations.

Limited funding is causing some changes in the system, however. Federal formula funds are appropriated annually to support the regional research programs in the State Agricultural Experiment Stations (SAES). Since the formula funds have remained level, or decreased slightly in most recent years, the regional research system is hard pressed to maintain viable programs with the reduced resources. As a result, the SAES directors are looking for ways to keep the regional research system viable while making better use of the limited resources to address regional research needs of high priority.

Several recent changes in the regional research system will have impacts on how the system functions in the future. National oversight for many years has been provided by the Committee of Nine, a statutory advisory committee of the U. S. Secretary of Agriculture established by federal legislation. The 1996 Farm Bill, as part of its cost cutting focus, eliminated the Committee of Nine as well as many other USDA advisory committees and replaced them with a single group called the National Agricultural Research, Extension, Education, and Economics Advisory Board.

Since a single body such as this cannot have detailed oversight for the many operations that previously existed, a new means of national oversight for the regional research programs will be developed in the future. In the meantime, it is fortunate that the Committee of Nine recently reorganized the process to delegate more of the oversight responsibility to the SAES regional associations. For the most part, this change will not result in any obvious differences in the way that the regional research program operates at the regional and state level.

Significant changes also have occurred at each regional level in the way the review process operates and in prioritizing program areas for regional research efforts. The North Central Regional Directors Association has asked the NCA committees made up of department heads to take a stronger role in reviewing regional project activity and setting priorities for continuing or initiating new project activity.

The North Central region has developed a new set of priorities which will be used in the future to assess whether proposed regional projects and committees are high enough priority to be approved and to be awarded regional research funding through the individual SAES. The net impact of this process will be to reduce the number of regional projects and committees, but allow more resources to be expended on those selected for approval.

This will allow the scarce resources to be focused on areas most important by using the regional research structure to address high priority regional needs. It means that the days of having a regional project approved because it was very well written, even if it wasn't very high priority, are probably over. It also means that the individual station directors will be more selective on which projects they select for participation by their faculty.

These changes were adopted by the directors because they want to maintain and enhance the regional research system. It's an indication of support for the system that has made significant accomplishments in the past and that will do so in the future. The University of Nebraska Agricultural Research

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Division administration also wants to maintain a strong regional research program and has taken an active role in the planning process that led to the changes mentioned. We hope this will allow ARD scientists to continue active regional participation in the future because we believe this is a very valuable system that improves our efficiency and productivity through formal cooperation with many other states.

Dale H. Vanderholm
Associate Dean and Director

FY 1997 CSREES BUDGET

Congress has approved and the President has signed the agricultural appropriations bill for FY 1997. While there was significant concern about potential reductions in the research appropriations during the debates, the final version was not as bad as feared, with level funding in some base programs but some cuts in grant programs and other base programs. A summary of the FY 1996 and FY 1997 appropriations follows:

Program	FY 1996	FY 1997
	thousands of dollars	
Base Funds		
Hatch Act	168,734	168,734
McIntire-Stennis (Forestry)	20,497	20,497
Animal Health	5,051	4,775
National Research Initiative	96,735	94,203
Special Grants		
Emerging Pest and Disease Issues	1,623	1,623
Expert IPM/DSS	177	177
IPM	2,731	2,731
Pesticide Clearance	5,711	5,711
Pesticide Impact Assessment	1,327	1,327
Minor Use Animal Drugs	550	550
Biological Impact Assessment	254	254
Rural Development Centers	423	423
Water Quality	2,757	2,757
Global Change	1,615	1,567
Nebraska Specific Grants		
Alliance for Food Prod *	300	300
Drought Mitigation	200	200
Food Processing Center	42	42
Midwest Food Manuf. Alliance **	423	423
Non-food Agric Products	64	64
Rural Policies Res. Institute ***	644	644
Sustainable Agric. Systems	59	59
Other Research Programs		
Aquaculture Centers	4,000	4,000
Sustainable Agriculture	8,100	8,000
Rangeland	475	475

* Joint with University of Georgia
** Joint with 12 Midwestern Universities
*** Joint with Iowa State and University of Missouri

FUND FOR RURAL AMERICA

The Fund for Rural America, administered through the USDA, will issue a RFP that is expected to provide an opportunity for interdisciplinary research, as well as extension and education projects that transcend usual academic boundaries. Partnerships with other agencies (federal, state, local), institutions (academic, non-profit) and private industry will be encouraged.

Strong emphasis areas are likely on building capacity of people to cope with change, enhancing trade through lowering barriers in production and other costs, reducing risks for producers, and new educational programs. These areas are recommended by the newly created National Agriculture Research, Extension, Education and Economics Advisory Board. The Board further recommended that the Secretary allocate at least part of his discretionary portion of the FRA to expand leadership capability of local rural communities.

There will be at least $33 million available as of Jan. 1, 1997, for this program. Approximate dates for 1997 are: RFPs expected by December—proposals due by March 1 and awards announced by June 1. The dates will be moved up for 1998-99 to correspond with the federal fiscal year. Proposals can be up to five years, i.e. past the duration of the fund itself.

MUSSEHL ENDOWMENT

Eight 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 utilization, and poultry product research. The following proposals were funded:

	Funded:
Sheila Scheideler Animal Science Department *Evaluation of Spent Hen Meal in Early Lay Diets and Determination of Metabolizable Energy*	$5,580
Sheila Scheideler Animal Science Department *A Feasibility Study of Options for Recycling Nebraska Turkey Growers Processing Plant By-Products into a High Protein Feed Ingredient for Poultry*	$2,375
Terry Klopfenstein Animal Science Department *Spent Hen Meal for Ruminants*	$9,900
Milford Hanna, A. Gennadios Industrial Agricultural Products *Extrusion of Mixtures of Spent Hens and Defatted Soybean Meal into Feed*	$8,000

Curtis Weller, Milford Hanna, A. Gennadios $8,000
Biological Systems Engineering,
Industrial Agricultural Products
Egg Albumen Films

Eva Wallner-Pendleton, Gerald Duhamel $10,000
Veterinary and Biomedical Sciences
Determining the Pathogenicity of Poultry-origin Intestinal Spirochetes in Pullets: a Pullet Strain Versus Spirochete Strain Comparison

Charles Lamphear $7,250
Bureau of Business Research
The Economic Impact of the Poultry Industry in Nebraska

ESCOP/ACOP LEADERSHIP DEVELOPMENT PROGRAM

Phase I of the ESCOP/ACOP Leadership Development Program was conducted on Sept. 14-20, 1996 in Indianapolis. ARD intern Kyle Hoagland (Forestry, Fisheries and Wildlife), was one of 76 attendees at the workshop, which also included IANR participants Wes Peterson (CASNR-Agricultural Economics) and David Baltensperger (ARD-Panhandle Research and Extension Center).

Phase I is an intensive six-day workshop including stimulating presentations, exercises designed to identify and develop leadership skills, and opportunities to interact with colleagues from other land-grant universities. Workshop topics included principles of leadership, communications, personal assessment, group dynamics, managing conflict, team building, leadership styles, decision making and managing change.

Phase II (in-residence experience) and Phase III (capstone workshop with government leaders in Washington, D.C.) will round out this exceptional leadership development program. The level of participant involvement afforded at UNL ranks among the best nationwide.

NEBRASKA SOYBEAN DEVELOPMENT, UTILIZATION AND MARKETING BOARD

The following projects were approved by the Nebraska Soybean Development, Utilization and Marketing Board for July 1, 1996-June 30, 1997 funding:

George Graef **Jim Specht**	Development of Improved Soybean Varieties for Nebraska	$123,700
Jim Steadman **George Graef**	Initiation of a Search for Resistance to *Sclerotinia Sclerotiorum,* Cause of Sclerotinia Stem Rot of Soybean	$22,915
George Graef **Jim Steadman**	Winter Nursery Support for Soybean Breeding and Genetic Research	$19,800
Michael Zeece **Steve Taylor**	Improvement of Soybean Protein Healthiness by Identification of Allergenic Sequences	$20,260
Susan Cuppett **Julie Albrecht** **Jim Specht**	Phenolic Acid Content of Soybean and Soy-Based Foods	$18,148
Gail Wicks **Fred Roeth** **Alex Martin** **David Holshouser**	Response of Soybean Varieties to Postemergence Herbicides	$20,000
Roger Elmore **George Hoffmeister, Jr.**	Row Spacing and Plant Densities for Small and Large-Seeded Soybeans	$12,800
L. Davis Clements	Production of Polyester Polymers Made from Soybean Oil	$27,986
Milford Hanna **Viswas Ghorpade** **Gerald Biby**	Developing Industrial Uses Chapter for FFA Textbooks	$1,500
Gary Yuen **Jim Steadman**	Biological Control of Sclerotinia Stem Rot of Soybean with Bacteria and Chitin	$10,000
Donald Lee **George Graef**	Soybean Genotype Differences in Sulfur Metabolism and Protein Quality	$20,300
Hossein Noureddini	Oxygenated Additives for Diesel and Biodiesel Fuels	$24,159

PROPOSALS SUBMITTED FOR FEDERAL GRANTS

The following is a listing of proposals that were submitted after August 1996 by faculty for federal grant programs. While not all grants will be funded, we are appreciative of each faculty member's effort in submitting proposals to the various agencies.

Dennis Jelinski — U.S. EPA — Problem Formulation for Platte River Risk Assessment — $20,000

Milford Hanna and **Curtis Weller** — USDA/FAS/ICD/RSED — Soy Protein Solubility in Supercritical Ammonia-Water Mixtures — $10,000

Martin Dickman — USDA/BARD — Regulation of Early Events in Hyphal Elongation, Branching and Differentiation of Filamentous Fungi — $181,128

David W. Stanley-Samuelson — USDA/ARS — Pest Control by Manipulation of Insect Eicosanoid Mediated Immune Responses to Bacterial Infections — $8,000

George Meyer, Tom Franti and **Dave Mortensen** — USGS — Advanced Assessment for Spot Spraying Plants to Reduce Chemical Input and Improve Water Quality — $64,436

Tom Franti — USGS — Reducing Atrazine Contamination of Interstate Surface Water — $60,000

P. Stephen Baenziger — USDA/ARS — Utilization of Beef Cattle Feedlot Manures — $45,000

Elton Aberle — USDA/ARS — Detection and Evaluation of a Major Gene for Muscling in Sheep — $8,000

Gary Hergenrader — USDA/FS — Tree-Based Buffer Systems — $70,417

NEW OR REVISED PROJECTS

The following station projects were approved recently by the USDA Cooperative State Research Service:

NEB-12-253 (Agronomy) Characterizing Nitrogen Mineralization and Availability in Crop Systems to Protect Water Resources
Investigator(s): D. T. Walters and D. H. Sander
Status: New Hatch project effective Oct. 1, 1995 that contributes to NC-218

NEB-13-105 (Animal Science) Nutrition of Prolific Sows
Investigator(s): A. J. Lewis and P. S. Miller
Status: Revised Hatch project effective March 1, 1996

NEB-13-132 (Animal Science) Development of Flow-Sorted Chromosome Specific Pools for Mapping Disease and Production Genes in Pigs
Investigator(s): D. Pomp, S. Jones and K. Arumuganathan
Status: New State project effective July 1, 1996

NEB-17-064 (Entomology) Host-Plant Resistance, Insect Genetics, and Biological Studies of Cereal Insects
Investigator: J. F. Foster
Status: New Hatch project effective July 17, 1996

NEB-17-065 (Entomology) Selection for Resistance to Bacillus Thuringiensis in the European Corn Borer
Investigator(s): B. D. Siegfried, A. J. Zera, K. Nickerson, L. Harshman and J. F. Witkowski
Status: New State project effective July 1, 1996

NEB-44-051 (Panhandle Research and Extension Center) Agrichemical Control in Irrigation Runoff Water from Surface Irrigated Fields
Investigator(s): C. D. Yonts and R. G. Wilson
Status: New Hatch project effective Dec. 1, 1995

GRANTS AND CONTRACTS RECEIVED AUGUST AND SEPTEMBER, 1996

Agricultural Economics	
Allen, J. — City of Lincoln	$10,695
Agricultural Meteorology	
Hubbard, K. — USDA/ARS	82,000
Agronomy	
Diestler, D. — ONR	69,978
Johnson, B. — Pioneer Hi-Bred	18,700
Staswick, P. — North Central Soybean Research	33,560
Miscellaneous grants under $5,000 each	67,800
Animal Science	
Aberle, E. — USDA/ARS	39,000
Klopfenstein, T. — Nebraska Department of Agriculture	52,000
Mandigo, R. — Otsuka	23,367
Miscellaneous grants under $5,000 each	43,525
Entomology	
Meinke, L. — USDA/ARS	35,000
Siegfried, B. — Ciba Seeds	25,000
Siegfried, B. — DeKalb	25,000
Miscellaneous grants under $5,000 each	134,250
Food Processing Center	
Miscellaneous grants under $5,000 each	1,428
Food Science and Technology	
Meagher, M. — U.S. Army	96,048
Miscellaneous grants under $5,000 each	9,678
Forestry, Fisheries and Wildlife	
Hergenrader, G. — USDA/FS	70,417
Miscellaneous grants under $5,000 each	500
Horticulture	
Coyne, D. — Anna Elliott via UN Foundation	7,500
Coyne, D. and **Steadman, J.** — Michigan State University	57,500
Riordan, T. — Crenshaw and Doguet Turfgrass	29,172
Miscellaneous grants under $5,000 each	28,430
Industrial Ag Products Center	
Miscellaneous grants under $5,000 each	7,500
Northeast Research and Extension Center	
Kranz, W. — Burlington Northern — UN Foundation	12,000
Miscellaneous grants under $5,000 each	16,997
Panhandle Research and Extension Center	
Baltensperger, D. and **Shearman, R.** — Nebr. Dept. of Agriculture	70,000
Hein, G. — USDA/ARS	75,000
Miscellaneous grants under $5,000 each	111,225
Plant Pathology	
VanEtten, J. — NIH	215,355
Miscellaneous grants under $5,000 each	18,380
South Central Research and Extension Center	
Miscellaneous grants under $5,000 each	43,063
Veterinary and Biomedical Sciences	
Barletta, R. — BARD/USDA	107,400
Donis, R. and Ventzislav, V. — Pfizer	15,000
Duhamel, G. — Agrivax	34,870
Kelling, C. — Hoechst-Roussel Vet Company	40,000
Kelling, C. — Syntro Vet Inc	37,686
Miscellaneous grants under $5,000 each	29,603
Water Center	
Spalding, R. — National Water Research Institute	43,307
Volk, B. — USGS	10,000
Miscellaneous grants under $5,000 each	16,000
West Central Research and Extension Center	
Adams, D. — Sampson Memorial via UN Foundation	9,800
Hergert, G. — Burlington Northern Endowment via UN Foundation	18,000
Hergert, G. and **Nordquist, P.** — Anna Elliott via UN Foundation	13,920
Miscellaneous grants under $5,000 each	29,383
GRAND TOTAL	**$1,935,037**

Diane Says

It's the daily grind that gives you the edge.