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ARD

Agricultural Research Division News

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October 1999 Volume 34, Number 1

Comments from the Dean

Dear Colleagues:

The rate of change continues to increase at the campus, state and national levels. Little did we realize one year ago that there would be a world-wide concern expressed about food made from genetically modified crops (GMOs). The first concerns were expressed by environmental activists in Europe and the issue has spread to Asia and North America. People opposed to GMOs have been on the offensive (including destroying test plots of GMO crops) and their story has been carried in the popular press. The university community has been uncommonly silent about the GMO controversy although we have a large stake in the public policy debate that will ensue. I believe that it is time for knowledgeable faculty to share their expertise regarding the GMO issue with citizens so that informed public policy is developed. We cannot present a biased view regarding GMOs, but we can provide information about the usefulness and safety of GMO crops to allow the public to make an enlightened decision for themselves. IANR will be appointing a task force to address this issue. We hope that the task force will develop a series of "white papers" addressing various aspects of the issue. These "white papers" will be disseminated to the popular press and presented on a special IANR web site devoted to the issue. Electronic versions of the "white papers" also will be sent to the National Agricultural Biotechnology Council for posting on their web site.

At the national level, Congress has almost finished the USDA appropriation for FY 2000. All that remains is passage of the Conference Committee report by the Senate and the President's signature. The FY 2000 appropriation will have major impacts on Cooperative Extension and Experiment Stations. Congress created a new Integrated Activities section in the CSREES budget that combined the funding previously earmarked for research and extension in areas of water quality, food safety, and pesticide impact assessment. Research and extension funding for these programs was combined and Congress added $5.6 million of new dollars. Allocations from Integrated Activities accounts will be made through a competitive grants process. This is a marked change for extension since funding for these programs has traditionally been made on a formula basis. The appropriation for base programs and the National Research Initiative was held constant from FY 1999 levels. Given the Congressional budget caps, the appropriation for FY 2000 represents a significant accomplishment for the Land Grant System since several other federal agencies will experience a decrease in funding.

To obtain a 7% increase in Hatch funds for FY 1999, the SAES Directors agreed to target the increased funds to specific research areas that represent national priorities. ARD issued a request for proposals in the areas of food safety, functional genomics, strengthening communities, and irrigated maize production systems. Four interdisciplinary proposals were selected for funding by a subcommittee of the ARD Advisory Council. A listing of the funded projects is contained in this issue of **ARD News**. These projects will receive funding for two years and a new request for proposals will be issued in January 2001 to address other national priority areas.

Although the areas around Lincoln and Omaha are doing well economically, poor farm profitability is having a serious impact in rural areas of Nebraska. Cooperative Extension is working with other agencies to mitigate some of the impacts of the farm economic situation through targeted programs. I am asking faculty with research appointments to consider initiating research projects that could improve the profitability and reduce the risk in production agriculture. It is likely that many of the faculty with ARD appointments could play a significant role in helping our rural people through this crisis.

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.

At the campus level, nearly all of the reallocation tax decisions have been made. On average, IANR units contributed 2.33% of their state-aided base budgets as a reallocation tax. This amount of funding will pay the IANR tax for the current fiscal year. We anticipate another reallocation tax assessment for FY 2001 which begins July 1, 2000. The FY 2001 tax will be paid at the CASNR/division and IANR levels (units will not be reassessed during the current biennium). At this time, the level of taxation assigned to IANR by Central Administration and UNL has not been determined. Although the FY 2001 tax will be paid at levels above that of departments and centers, units will be impacted since much of the funding will need to come from the faculty salary pool.

Best wishes for continued success in your research program.

Darrell W. Nelson
Dean and Director

Y2K – Some Last Minute Precautions

Efforts to prepare for Y2K have been going on for months and even years in some cases. With all this preparedness, what could possibly go wrong, right? In all likelihood, nothing will go wrong, but it's probably still wise to take some extra precautions for some university programs, particularly as related to the possibility of the interruption of utility services.

A letter to Deans and Directors dated August 31, 1999, from the late Melvin W. Jones, vice chancellor for business and finance, outlined precautionary steps that might reduce any negative impacts should any utility service interruptions occur. Such interruptions in service may involve telecommunications, electrical power, water supply, sewer service, steam for building heat, and chilled water for air conditioning. Problems could arise due to university dependance on, or interconnection with, systems that are under the control of other entities, i.e., businesses, utility suppliers, electric generators, or government agencies.

Facilities management and planning units have developed contingency plans to prevent domestic and chilled water systems from freezing in the event that our external sources of electrical power are curtailed and to reduce electrical loads by eliminating the operation of some building systems. In addition to these actions, the UNL communities have been asked to support the effort to reduce a possible impact of utility service outages by taking precautionary steps.

Some general recommendations are as follows:

- Avoid starting research or experiments that will be significantly affected by time, temperature, or the loss of utilities.
- If research or experiments are running, make alternative plans for utilities in case there is a disruption.
- Notify the office of the Vice Chancellor for Research of all research activities that cannot be suspended because they are critically dependent on uninterrupted utility services.
- Eliminate the use of laboratory fume hoods and move chemicals to safe storage to reduce the likelihood of accumulation of hazardous fumes if the hoods lose electrical power.
- Further reduce electrical requirements during this critical time period by turning off computers and other electrical equipment.
- Help identify research animal locations so that appropriate arrangements can be made if necessary.

Facilities management will have additional personnel working at the utility plants and maintenance staff will be on duty on the eve of Y2K. There also will be additional staff on hand for telecommunications, information service, and police services. It is hoped that none of these precautions will be necessary, but it is certainly better to be prepared for the worst and not realize it than the alternative. Individuals wishing to know additional details of the UNL preparedness and planning activity can look up the Y2K web site at **www.unl.edu\year2k**.

ARD Publication Process

Refereed Scientific or Professional Journal Articles

The refereed scientific or professional journal article makes a significant contribution to the discipline and is uniquely recognized within ARD by the assignment of a journal series number. Assigning an ARD journal series number formally recognizes the contributions of the Agricultural Research Division and its faculty in published research. A journal series number will be assigned to a publication submitted to a refereed scientific or professional journal that is authored or co-authored by a faculty member with an ARD appointment.

- A journal article typically includes reports of original research and critical reviews intended for publication in refereed professional or scientific journals.
- Refereed journals are defined as scientific or professional publications with a discipline-based, external peer review process. Reviewed internal publications such as departmental reports or symposium do not constitute a refereed scientific or professional journal.
- Journal articles carry a footnote indicating the journal series number:

USDA Organization for Science and Education

The current organizational charts for the USDA Office of the Under Secretary for Research, Education and Economics (REE) and the Cooperative States Research, Education and Extension Service (CSREES) are below. These are the USDA agencies that provide financial support for land-grant university research, teaching and extension programs. These organizational charts provide contact information for key individuals within the agency.

Research, Education, and Economics

I. Miley Gonzalez
Under Secretary
720-5923

Office of the Under Secretary

Eileen Kennedy
Deputy Under Secretary
720-8885

- USDA Global Change Program Office
- Office of Water Quality
- National Agricultural Pesticide Impact Assessment Program
- Office of REE Advisory Committee

Agricultural Research Service (ARS)
Administrator
Floyd Horn
720-3656

Cooperative State Research, Education, and Extension Service (CSREES)
Administrator
Charles Laughlin
720-4423

Economic Research Service (ERS)
Administrator
Susan Offutt
694-5000

National Agricultural Statistics Service (NASS)
Administrator
Donald Bay
720-2707

Administrative and Financial Management (AFM)
Acting Deputy Administrator
Wiz Horner
690-2575

U.S. Department of Agriculture

Cooperative State Research, Education, and Extension Service

Partnerships
George Cooper
Deputy Administrator
Email: gcooper@reeusda.gov
Phone: 202-720-5623
Fax: 202-720-4924

Office of the Administrator

Charles Laughlin
Administrator
Email: claughlin@reeusda.gov
Phone: 202-720-4423

Colien Hefferan
Associate Administrator
Email: chefferan@reeusda.gov
Phone: 202-720-7441

Betty Lou Gilliland
Assistant Administrator
for Management and Policy
Email: bgilliland@reeusda.gov
Phone: 202-720-7441

A. J. Dye
Assistant Administrator
for Program and Analysis
Email: adye@reeusda.gov
Phone: 202-690-0745

Fax: 202-720-8987

Civil Rights
Curt Deville, Director
Email: cdeville@reeusda.gov
Phone: 202-720-2700
Fax: 202-720-6954

Budget
Christina Buch, Director
Email: tbuch@reeusda.gov
Phone: 202-720-2810
Fax: 202-720-2750

Science Policy and Legislative Affairs
Philip M. Schwab, Advisor
Email: philip.schwab@usda.gov
Phone; 202-720-4118
Fax: 202-690-2842

Families, 4-H, and Nutrition
Alma Hobbs, Deputy Administrator
Email: ahobbs@reeusda.gov
Phone: 202-720-2908
Fax: 202-690-2469

Natural Resources and Environment
Ralph Otto, Deputy Administrator
Email: rotto@reeusda.gov
Phone: 202-401-4555
Fax: 202-401-1706

Plant and Animal Systems
Edward Wilson
Deputy Administrator
Email: ewilson@reeusda.gov
Phone: 202-401-4329
Fax: 202-401-4888

Economic and Community Systems
Bob Koopman
Deputy Administrator
Email: rkoopman@reeusda.gov
Phone: 202-720-7948
Fax: 202-690-3162

Science and Education Resources Development
Jane Coulter, Deputy Administrator
Email: kcbulter@reeusda.gov
Phone: 202-720-3377
Fax: 202-720-3945

Competitive Research Grants and Awards Management
Sally Rockey, Deputy Administrator
Email: srockey@reeusda.gov
Phone: 202-401-1761
Fax: 202-401-1782

Communications, Technology, and Distance Education
George Cooper, Acting Deputy Administrator
Email: gcooper@reeusda.gov
Phone: 202-720-6133
Fax: 202-690-0289

Proposals Submitted for Federal Grants

The following is a listing of proposals that were submitted by faculty for federal grant programs after August 1999. While not all grants will be funded, we are appreciative of the faculty member's effort in submitting proposals to the various agencies.

Anne K. Vidaver — NSF through Kansas State University — Great Plains Cereal Biotechnology Consortium — $176,404

Douglas G. Rogers — USDA/ARS — The Role of *Chlamydia suis* in Conjunctivitis in Pigs — $15,000

Mark Morrison — USDA/BARD — Molecular Analysis of Cellulosome Organization in *Ruminococcus albus* and *Fibrobacter intestinalis* for Optimization of Fiber Digestibility in Ruminants — $335,000

Z B Mayo — USDA/ARS — The Role of the Greenbug Holyocycle in Generating Biotypic Diversity — $1,500

Walter Schacht — USDA/FS — The Biomass Production and Quality of Various Forage Grasses Under Differing Shade Levels — $57,500

Michael M. Meagher and **Jicai Huang** — U.S. Dept. Of Energy — Thin-film Silicalite Filled Silicone Composite Membranes for Recovery of ABE from Fermentation Broth — $35,928

David Marx — USDA/ARS — Spatial Statistical Methods for Assisting Mid South Area Scientists — $45,000

Raymond Chollet — NSF — Eastern Europe (EE) Program Supplement to Grant No. MCB-9727236 — $29,508

Grants and Contracts Received August and September, 1999

Agronomy	
MacKenzie, Sally — NSF	$ 43,794
Schacht, Walter — USDA/FS	57,500
Staswick, Paul and Clemente, Tom — University of Minnesota	36,600
Miscellaneous grants under $10,000 each	14,500
Animal Science	
Calkins, Chris and Burson, Dennis — Nebraska Beef Council	29,250
Calkins, Chris and Mandigo, Roger — National Cattlemen's Beef Association	27,735
Mandigo, Roger — Nebraska Beef Council	28,200
Nielsen, Merlyn — NIH	35,280
Pomp, Daniel — NIH	232,597
Miscellaneous grants under $10,000 each	15,697
Biochemistry	
Banerjee, Ruma — NIH	208,910
Ragsdale, Stephen — NIH	100,000
Spreitzer, Robert — USDA/CSREES	120,000
Biological Systems Engineering	
Miscellaneous grants under $10,000 each	10,000
Biometry	
Eskridge, Kent — Nebraska Department of Health and Human Services	20,420
Entomology	
Siegfried, Blair — Agreva USA	19,220
Siegfried, Blair — Novartis Agribusiness Biotechnology Research, Inc.	25,000
Miscellaneous grants under $10,000 each	9,000
Food Science and Technology	
Benson, Andrew — Beacon Venture Management	188,980
Brashears, Mindy — National Pork Producers	17,500
Bullerman, Lloyd — USDA/ARS	16,260
Hefle, Susan — USDA/CSREES	140,340
Hutkins, Robert — Illinois Corn Board	47,000
Taylor, Stephen — USDA/CSREES	395,759
Taylor, Stephen — USDA/CSREES	39,295
Miscellaneous grants under $10,000 each	12,407
Horticulture	
Miscellaneous grants under $10,000 each	6,800
Industrial Agricultural Products Center	
Hanna, Milford — USDA/CSREES	59,878
Northeast Research and Extension Center	
Miscellaneous grants under $10,000 each	7,000
Panhandle Research and Extension Center	
Baltensperger, David — University of Missouri	171,311
Baltensperger, David — Thomas D. Buckley Trust	20,000
Miscellaneous grants under $10,000 each	58,655
Plant Pathology	
Dickman, Martin — Idun Pharmaceuticals	72,000
Powers, Thomas — NSF	53,464
VanEtten, James — NIH	236,262
Miscellaneous grants under $10,000 each	2,800
School of Natural Resource Sciences	
Brandle, James and Young, Linda — USDA/FS/RMRS	72,158
Hu, Steve — University of Missouri	56,190
Peters, Edward — U.S. Fish and Wildlife	57,512
Spalding, Roy — Nebraska Dept. of Agriculture	18,100
Spalding, Roy — Central Platte NRD	95,000
Spalding, Roy — Nebraska Corn Growers	15,000
Walter-Shea, Elizabeth — NASA	115,520
Miscellaneous grants under $10,000 each	20,700
South Central Research and Extension Center	
Benham, Brian — Upper Big Blue NRD	24,978
Benham, Brian — Little Big Blue NRD	12,487
Veterinary and Biomedical Sciences	
Barletta, Raul — USDA/CSREES	210,000
Donis, Ruben — Schering and Plough	22,435
Miscellaneous grants under $10,000 each	2,100
West Central Research and Extension Center	
Miscellaneous grants under $10,000 each	10,659
GRAND TOTAL	$ 3,312,253

Diane says

It is often surprising to find what heights may be obtained merely by remaining on the level.

This manuscript has been assigned Journal Series No. _____, Agricultural Research Division, University of Nebraska.

It is recommended that this be so designated as a footnote, appended to the title on the first page of the manuscript.

- Request for journal series must be submitted before the research is published to ensure appropriate recognition. Post-publication requests for journal series numbers are not accepted.
- Faculty are encouraged to submit work that they have collaborated on with other institutions, even when the other institution is submitting it under its' journal series. In this case both experiment stations are acknowledged.
- Faculty should not request ARD journal series numbers for research published from activities at their preceding institution or Ph.D. program.
- Faculty must ensure that former graduate students who publish their research after they leave UNL process the manuscripts to obtain an ARD journal series number. For those students preparing theses and dissertations in a chapter format for publication, advisors should integrate the ARD manuscript review process and have journal series numbers assigned as part of the graduate program if the chapters are to be sent as manuscripts to refereed journals.
- Publications in teaching or extension professional publications are not considered for an ARD journal series number unless there is a research component supported by ARD.

Research Bulletins

Research bulletins are usually written for a limited and specific technical audience. Their quality is equal to publication standards of scientific journals and their audiences are similar. Research Bulletins are submitted to ARD and the bulletin series number is assigned by CIT. Research bulletins are listed in the ARD Annual Report.

Book Chapters

These are reviewed according to departmental/unit policy and the unit administrator gives final approval. Book chapters are listed in the ARD Annual Report.

Symposium or Proceedings

Symposium and proceedings (refereed and non-refereed) are not submitted for journal series numbers. These are reviewed according to departmental/unit policy and the unit administrator gives final approval. However, significant **refereed** national or international symposia or proceedings can be included for listing in the ARD Annual Report.

Departmental Reports

This includes progress reports, research summaries and publications pertaining to research grants or programs within the department. These are reviewed according to departmental/unit policy and the unit administrator gives final approval. These are not included in the ARD Annual Report.

Other

These are publications that do not fit other categories. Examples of other publications are historical publications, data summaries, and special reports printed in limited quantities. These are reviewed according to departmental/unit policy and the unit administrator gives final approval. These are not included in the ARD Annual Report.

Abstracts

These include unpublished papers presented at scientific meetings. These are reviewed according to departmental/unit policy and the unit administrator gives final approval. These are not included in the ARD Annual Report.

The State Agricultural Experiment Station System

The State Agricultural Experiment Station system traces its origin to actions by the U.S. Congress more than 112 years ago, which recognized the need for research to benefit agriculture, rural life, and the environment. This federated system of research management that balances the needs of the states, regions and nation, is part of the land-grant university system, which began with passage of the Morrill Act of 1862. This Act provided for education by establishing land-grant universities in every state and territory. The provision for research was not included until 1887 when the Hatch Act was enacted and a State Agricultural Experiment Station was established in each state to provide research to undergird the educational mission of the universities. In 1890, Congress created 17 additional land-grant colleges by providing funding for agricultural research and education in institutions that had traditionally served African-American students and rural people.

Publicly supported agricultural research is conducted through agencies of the USDA and the State Agricultural Experiment Stations (SAES) and the 1890 institutions. The Hatch Act provided the basis for a state-federal partnership in funding the SAESs. The Cooperative State Research Education and Extension Service (CSREES) of USDA coordinates the federal research programs of the Stations and 1890 institutions and interfaces with other federal agencies. The Stations and 1890 institutions have the flexibility to respond to specific local and regional needs as they contribute to solving problems related to agriculture, natural

resources, and rural communities. There are now 57 State Agricultural Experiment Stations located in states, territories, and the District of Columbia. The Agricultural Research Division is the Nebraska Agricultural Experiment Station.

Distribution of Agricultural Research Efforts by Agency

Agency	% of Total Effort
State Agricultural Experiment Stations	60
Agricultural Research Service	23
Forest Service	6
Economic Research Service	4
Other (1890 Colleges; Schools of Forestry; Schools of Veterinary Medicine)	7

The NASULGC Organization

We have frequently used acronyms in **ARD News** that may not be familiar to a number of the faculty. Many of these acronyms relate to component parts of the National Association of State Universities and Land Grant Colleges (NASULGC). NASULGC is a voluntary association representing 202 institutions — state universities, the nation's land-grant colleges and universities, and several public university systems. Founded in 1887, NASULGC is the oldest higher education association in the nation with campuses located in all 50 states, the U.S. territories, and the District of Columbia. NASULGC provides its members with a forum for coordinating the expression of support for teaching, research and public service.

NASULGC is organized around a series of Councils and Commissions. Included are the Council of Presidents, Council on Academic Affairs, Council on Research Policy and Graduate Education, etc. The Commissions are: Food, Environment, and Renewable Resources (CFERR); Human Resources and Social Change; Information Technology; International Affairs; Outreach and Technology Transfer; and the Urban Agenda.

CFERR is composed of a series of Boards. These include the Board on Agriculture, Board on Human Sciences, Board on Veterinary Medicine, Board on Renewable Resources, and Board on Oceans and Atmosphere.

The Board on Agriculture (BOA) is the primary entity within NASULGC giving coordination to agriculture and natural resource programs at land-grant universities. The BOA consists of the Administrative Heads Section (AHS) — deans and vice presidents of agriculture; Academic Programs Section (APS) — Associate Deans/Deans for Academic Programs; Extension Section (ES) — Cooperative Extension Directors; Experiment Station Section (ESS) — Experiment Station Directors; International Programs Section (IPS) — International Programs Directors, and the Council on Agricultural Research, Extension and Teaching (CARET). CARET is an organization of lay citizens that provides political support for legislation and appropriations assisting research, teaching and extension at the national level.

The day-to-day activities of APS, ES, ESS, and IPS are carried out by the Academic Committee on Organization and Policy (ACOP), Extension Committee on Organization and Policy (ECOP), Experiment Station Committee on Organization and Policy (ESCOP), and the International Committee on Organization and Policy (ICOP), respectively. During the past year, Darrell Nelson has served as Chair of ESS and ESCOP and is a member of the BOA; Dale Vanderholm has served as a member of ESCOP; and Don Edwards has served as Chair Elect of APS and ACOP. Ken Bolen has served as ECOP representative to the BOA.

Allocation of Increased Hatch Funds

Effective July 1, 1999, the Agricultural Research Division had approximately $145,000 of new Hatch funds for allocation to research projects. These funds were retained at the ARD level and allocated through a competitive process. The intent of this particular program was to provide two years of seed funding to allow teams of faculty opportunities to develop enough data to be competitive for external funding. These were restricted to interdisciplinary teams conducting research in following areas: food safety, irrigated maize production systems, functional genomics and strengthening communities. Thirteen proposals were received in the ARD office. Listed below are the four projects that were selected by the ARD Advisory Committee:

Drs. Jeffrey Gray, Laura Hungerford, Terry Klopfenstein, C.Todd Milton, Rod Moxley, and David Smith (Veterinary and Biomedical Sciences and Animal Science)
"Development and Validation of a Novel Strategy to Test Beef Feedlots for Salmonella spp."
Total allowed: $26,000

Drs. Kulvinder Gill, Daniel Pomp, K. Arumuganathan, and Paul Staswick (Agronomy and Animal Science)
"Gene Chips for Economically Important Plants and Animals"
Total allowed: $45,500

Drs. Andrew Benson and Stephen Scott (Food Science and Technology and Department of Computer Science)
"Bioinformatics Tools for Detecting Gene Transmission in Foodborne Pathogens"
Total allowed: $41,000

Drs. Rochelle Dalla, John Allen, Sheran Cramer, and Kay Stanek (Family and Consumer Science, Agricultural Economics, and Nutritional Science and Dietetics)
"The Food Processing Industry Life Cycle: Community Impacts in Rural Nebraska"
Total allowed: $40,000