ARD News April 1996
COMMENTS FROM THE DEAN

Dear Colleagues:

Even though the semester is coming to a close, there are many changes underway that impact ARD. We are involved in the initial phase of assuming the FTE and salary obligations for tenured and tenure-track faculty currently paid in part by Nebraska Research Initiative funds. IANR and the colleges will be "purchasing" 75 percent of the salaries of NRI-funded faculty over a six-year period. This change was necessitated because the NRI Centers have not received increased funding for the last six years and salary increases for faculty and staff during this time have stripped the Centers of flexibility to enhance programs. Once on the regular IANR budget, salary increases will be provided through increased state appropriations.

During the past year, a group of faculty have been engaged in a process to develop a UNL "signature" program in the plant sciences. Once defined, this program will seek a large endowment to support the effort, hire one or two very distinguished plant scientists, and develop an international reputation within 10 years.

Concurrent with the Plant Science Initiative is an effort by a group of faculty to elevate the level of collaboration and interaction in the plant sciences on the campus. This group is planning programs that will enhance the broad scope of plant science at UNL.

The Areas of Concentration Program within the Biotechnology Center is seeking to provide special funds for focused, interdisciplinary efforts in "plant genetic engineering" and "comparative pathobiology." The groups carrying out these research efforts are using the Biotechnology Center funds as the base for attracting external funds to the effort.

A faculty committee has finished their deliberations regarding the need for increased focus on natural resources within UNL. They have recommended the formation of a School of Natural Resources and Environmental Programs. Input on the proposal now is being received from IANR units, and a decision on forming the School will be made in mid-April.

Although these efforts have required significant faculty involvement, the long-term benefits will be tremendous. It is great to see faculty enthusiasm and interest in these changes. We are definitely moving forward.

Darrell W. Nelson
Dean and Director

NO UNIVERSITY FUNDS MAY BE USED FOR INDIVIDUAL MEMBERSHIPS AND SUBSCRIPTIONS

The Vice Chancellor's Council recently 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 pay individual memberships in professional societies or purchase subscriptions to journals 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 pay for personal memberships or subscriptions if individual endowments are established for this purpose.

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

It is the policy of the University of Nebraska-Lincoln Institute of Agriculture and Natural Resources not to discriminate on the basis of sex, age, handicap, race, color, religion, marital status, veteran's status, national or ethnic origin or sexual orientation.
ARD-ADMINISTERED GRANT AND AWARDS PROGRAMS

The Agricultural Research Division administers several grant and recognition programs using ARD funds, NU Foundation funds and funds from other sources. Some of these are awarded annually on a regular schedule and some on an ad hoc basis as funds permit. The following summary explains some of these programs and how they are currently being administered.

NU Foundation Endowments

Anna H. Elliott Fund Grants
Awarded every two years as endowment income permits. Income is about $60,000 annually and program is oriented to plant science research directed to western Nebraska. RFP issued about Dec. 15.

Sampson Range and Pasture Management Endowment
Awarded every two years as endowment income permits. Three research, extension or teaching projects are funded every two years. The program is directed at pasture and rangeland management and the study of native grasses. RFP issued about Jan. 15.

Mussehl Poultry Research Endowment
Awarded every two years as endowment income permits. Income is about $25,000 per year. Research in poultry management, health, nutrition, physiology, waste management and utilization, and poultry product research is supported by the endowment. RFP is issued about June 1.

Widaman Trust Graduate Fellowship
Awarded annually. $2,000 added to stipend of outstanding graduate students. Nominations are due about May 10.

Hardin Distinguished Graduate Fellowship in Plant Stress Physiology
Awarded annually. $2,000 added to stipend of a selected student plus $1,000 to the department to assist student’s research. One fellowship awarded annually. Nominations are due about May 10.

Mary and Charles C. Cooper/Emma I. Sharpless Fellowships
Jointly awarded on an annual basis by ARD and CASNR. $1,000 or $2,000 added to stipend of selected graduate students for assistance in recruitment. Applications are accepted throughout the year.

Junior Faculty Excellence in Research Recognition (Ruth E. Branham Endowment)
Up to two junior faculty recognized per year. Recognition consists of certificate, plaque, and $3,000 for use in research or professional development. Call for nominations is issued on June 1.

Burlington Northern Water-Science Endowment
Awarded on a bi-annual basis for water science research. Approximately $60,000 is available every two years. RFP is issued about Jan. 15.

Helen Porter Van Sprossen Charitable Trust
The annual income from the Trust will be used to partially support ($9,000) one GRA in the range and livestock research program. This will be a named assistantship assigned to an approved ARD project in range and livestock research at the Guthnundsen Sandhills Laboratory. Awarded every two years. RFP issued about Feb. 1.

Ralph H. Bainbridge Memorial Fund
The annual income will be used to partially support research in beef production and grassland management. Grants will be awarded on a competitive basis to interdisciplinary teams. Matching funds will be required. Awarded every two years. RFP issued about Feb. 1.

Agricultural and Water Research Fund
Interest income will be used in conjunction with the current Burlington-Northern Water Science Endowment to enhance biannual awards in water science and irrigation management research. This is awarded every two years in concurrence with the Burlington Northern Water-Science Endowment. RFP issued about Jan. 15.

Jorgensen Fund
The interest income will be used to partially support a GRA for a graduate student conducting research at the Guthnundsen Sandhills Laboratory on beef-range systems. Awarded every two years. RFP issued about Feb. 1.

Channing B. and Katherine W. Baker Fund
Interest from the endowment will be used to support one GRA in the areas of (i) soil conservation and management or (ii) breeding and genetics of food and feed grains. Preference in awarding the GRA will be given to Ph.D. students. Awarded every two years. RFP issued about Feb. 1.

ARD/International Programs Indirect Cost Funds

ARD Foreign Travel Awards
One or more grants of up to $1,000 each awarded. $3,000 is usually available annually for research-related foreign travel (not for professional society meetings). RFP issued when funds are made available.

ARD Research Facility Renovation Funds
Funding is provided to units for renovation of research facilities. Amount of funding available depends on indirect cost recovery within IANR units. Requests are received from unit administration throughout the year.
ARD Discretionary Funds

Interdisciplinary Research Grants
Awarded annually depending on availability of funds. Two or three grants awarded for up to two years duration and for up to $20,000 annually. RFP issued about Feb. 1.

Innovative and High Risk Research Program
Awarded annually depending on availability of funds. The purpose is to provide initial funding for innovative research that will lead to extramural grant proposals. $15,000 will be provided for these one-year projects. Applications accepted anytime during the year although call for proposals will be issued about June 1. Relatively few proposals have been received for this program. Faculty redirecting research thrusts are encouraged to prepare proposals. Evaluations of proposals will occur about Oct. 15, Jan. 15, April 15, and July 15 each year.

Graduate Student Recruitment Funds
Awarded as requested by departments. Up to two per department per calendar year. Award pays up to 50 percent of expenses or $200 per student. Purpose is to reimburse recruitment visits to UNL for students offered assistantships.

ESCP/ACOP Leadership Development Course
One or two faculty members are selected for participation each year. Award consists of tuition and travel expenses associated with ESCOP/ACOP Leadership Development Course. Participants spend about 10 percent of their time serving as administrative interns in ARD. Request for applications is issued about Feb. 1.

ARD/State Budget Funds

ARD Research Equipment Awards
Awarded annually, as provided in state appropriations. Approximately $225,000 awarded annually to all ARD units, according to prioritized requests. RFP issued about Sept. 1.

Other Programs Coordinated by ARD

Layman Awards (NU Foundation Funds)
Awarded annually for research support. Size of awards vary from $4,000 to $7,000. RFP issued about Oct. 1.

NU Foundation Grants (NU Foundation Funds)
Awarded annually for support of special programs that are designed by the President. Size of awards vary from $10,000 to $50,000 RFP issued about March 1.

Nebraska Bankers Association Grants
Awarded annually for research/education programs relating to economic development. Size of awards vary from $5,000 to $20,000. RFP issued about Sept. 1.

Nebraska Commodity Check-off Board Grants
Annual research grants usually in the $5,000 to $20,000 range. RFP issued about Oct. 1.

The Agricultural Research Division also helps process research grant proposals directed to federal and state agencies, foundations, corporations, and private organizations. The Dean for Agricultural Research has final sign-off authority for all proposals directed to USDA agencies. Proposals to other agencies and organizations are sent by ARD to the Office of Research Grants and Contracts for final processing.

Anyone with questions about these programs is encouraged to contact the Agricultural Research Division office.

NEW OR REVISED PROJECTS

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

NEB-10-130 (Agricultural Economics) Technical Efficiency Analysis for Livestock and Dairy Operations in Nebraska
Investigator: A. M. Azzam
Status: New Hatch project effective Aug. 24, 1995

NEB-10-132 (Agricultural Economics) Water Conservation, Competition and Quality in Western Irrigated Agriculture
Investigator: R. J. Supalla
Status: New Hatch project effective Dec. 1, 1994 that contributes to regional project W-190

NEB-12-193 (Agronomy) Investigating Alternative Grain and Oil Crops for Nebraska
Status: Revised Hatch project effective Nov. 1, 1995

NEB-12-194 (Agronomy) Novel Methods for Soybean Genetic Improvement and Genomic Analysis
Investigator: J. E. Specht
Status: Revised Hatch project effective Dec. 1, 1995

NEB-12-197 (Agronomy) Tissue and Cell Physiology with Emphasis on Sorghum
Investigator: M. D. Clegg
Status: Revised Hatch project effective Feb. 1, 1996

NEB-13-104 (Animal Science) Optimizing the Utilization of Dietary Fiber and Lipids by Dairy Cows
Investigator: R. J. Grant
Status: Revised Hatch project effective Dec. 1, 1995

NEB-13-110 (Animal Science) Molecular Mechanisms Regulating Skeletal Muscle Growth and Differentiation
Investigator: S. J. Jones
Status: Revised Hatch project effective Oct. 1, 1995 that contributes to regional project NC-131
NEB-15-076 (Biochemistry) Hemoglobins in Higher Plants  
Investigator: R. V. Klucas  
Status: New Hatch project effective Nov. 1, 1995

NEB-16-068 (Food Science and Technology) Fate of Fumonisin B1 in Heat Processed Corn Products  
Investigator: L. B. Bullerman  
Status: New Competitive Grant effective Sept. 1, 1995

NEB-16-069 (Food Science and Technology) Role of Proteolysis in Myofibrillar/Cytoskeleton Structure and Integrity  
Investigator: M. G. Zece  
Status: New Hatch project effective March 1, 1996

NEB-17-062 (Entomology) Arthropods Associated with Buffalograss and Other Turfgrasses in Nebraska  
Investigator: F. P. Baxendale  

NEB-21-064 (Plant Pathology) Fusarium Mycotoxins in Cereal Grains  
Investigator: M. B. Dickman  
Status: New Hatch project effective Nov. 1, 1995 that contributes to regional project NC-129

NEB-92-022 (Family and Consumer Sciences) Retirement Economic Well-Being for Women in Nebraska and Cross-Culturally  
Investigator: S. L. Craner  

NEB-92-023 (Family and Consumer Sciences) Economic Well-Being of Nebraska Households: A Comparison of Alternative Measures  
Investigator: E. P. Davis  
Status: New Hatch project effective Feb. 27, 1996

Animal Science  
Calkins, C. — Purdue University  40,000  
Calkins, C. and Narayanan, R. — Nebraska Beef Council  21,250  
Klopfenstein, T. — Carrell Corn Milling Div.  62,175  
Miscellaneous grants under $5,000 each  17,199

Biochemistry  
Banerjee, R. — NIH  133,097  
Ragsdale, S. — U.S. Department of Energy  102,000

Biological Systems Engineering  
Miscellaneous grants under $5,000 each  6,136

Center for Grassland Studies/Agronomy  
Stubbendieck, Jim — Nebraska Environmental Trust Fund  72,000

Center for Rural Revitalization  
Allen, J. C. — University of Missouri  83,933

Entomology  
Siegfried, B. D. and Mayo, Z B — Ohio State University  13,000  
Siegfried, B. D., Wilkowski, J. F., and Wright, R. — Brit Management Working Group  22,000  
Stanley-Samuelson, D. — Oklahoma State University  25,497  
Miscellaneous grants under $5,000 each  26,440

Food Science and Technology  
Bullerman, L. — Illinois Institute of Technology  7,500  
Meagher, M. — Department of Defense-Army  36,260  
Taylor, S. — USDA/CSREES  297,518  
Taylor, S. — USDA/CSREES  39,470  
Zece, M. — USDA  20,000  
Miscellaneous grants under $5,000 each  15,433

Forestry, Fisheries and Wildlife  
Hergenrader, G. and Workman, S. — USDA/FSA  31,471  
Peters, E. — Nebraska Game and Parks Commission  9,260  
Miscellaneous grants under $5,000 each  500

Horticulture  
From, M. and Read, P. — Nebraska Environmental Trust  15,000  
Shearman, R. — National Turfgrass Federation  60,055  
Miscellaneous grants under $5,000 each  12,522

Northeast Research and Extension Center  
Krahn, W., Shapiro, C., Brumm, M., Anderson, B., Schulte, D. — Nebraska Pork Producers  12,600  
Miscellaneous grants under $5,000 each  18,819

Nutritional Science and Dietetics  
Miscellaneous grants under $5,000 each  8,000

Panhandle Research and Extension Center  
Kerr, E. — Western Sugar Co. Growers Research Committee  21,652  
Lyon, D. — Washington State University  84,000  
Lyon, D. — Nebraska Wheat Board  7,000  
Reece, P. — UN Foundation  14,691  
Smith, J. Yonts, C. D., Wilson, R. — Western Sugar Company  29,750  
Miscellaneous grants under $5,000 each  46,790

Plant Pathology  
Powers, T. — USDA/APHIS  10,000  
Miscellaneous grants under $5,000 each  4,620

South Central Research and Extension Center  
Miscellaneous grants under $5,000 each  14,500

Veterinary and Biomedical Sciences  
Chen, Swoo-Shen Alex — Smokeless Tobacco Research Council, Inc.  83,934  
Lou, M. — National Institutes of Health  223,639  
Miscellaneous grants under $5,000 each  8,566

Water Center/Environmental Programs  
Spalding, R. — National Water Research Institute  100,000  
Volk, B. — USDA/ARS  200,000  
Miscellaneous grants under $5,000 each  10,000

West Central Research and Extension Center  
Hergert, G. and Nordquist, P. — UN Foundation  15,000  
Wicks, G. — State University  20,000  
Miscellaneous grants under $5,000 each  20,825

GRAND TOTAL  2,337,971

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GRANTS AND CONTRACTS RECEIVED  
FEBRUARY AND MARCH, 1996

Agricultural Meteorology  
Walter-Shea, E. A. and Arkebauer, T. J. — NOAA  47,712

Agronomy  
Baenziger, P. S. — Pioneer Hi-Bred  18,000  
Clegg, M. — USAID  10,000  
Comfort, S. — Kansas State University  15,034  
Diebler, D. — Purdue University  22,723  
Johnson, B. — Pioneer Hi-Bred  15,000  
Specht, J. E. — North Carolina University  62,700  
Miscellaneous grants under $5,000 each  22,700
PROPOSALS SUBMITTED FOR FEDERAL GRANTS

The following is a listing of proposals that were submitted after Jan. 26, 1996 by faculty for federal grant programs. While not all grants will be funded, we applaud the faculty member’s effort in submitting proposals to the various agencies.

Steven J. Jones — National Research Initiative Competitive Grants Program — Ribosomal Translation in Myogenic Cells — $144,646

Gautam Sarath and Robert V. Klucas — National Research Initiative Competitive Grants Program — Symbiosome Proteins from Soybean Root Nodules — $179,574

Mark Morrison and Richard J. Grant — National Research Initiative Competitive Grants Program — Molecular and Kinetics Analyses of the Adherence of Ruminooccus albus 8 to Cellulose — $262,248

Shripat T. Kamble — USDA/NAPIAP — Nebraska Participation in the National Agricultural Pesticide Impact Assessment Program (NAPIAP) — $22,527


Robert V. Klucas, Gautam Sarath and Raul Arredondo-Peter — National Research Initiative Competitive Grants Program — Nonsymbiotic Plant Hemoglobins — $135,000

Daniel Pomp and Rodger K. Johnson — National Research Initiative Competitive Grants Program — Screening the Pig Genome for QTL Controlling Reproduction — $270,953

Daniel Pomp and Merlyn K. Nielsen — National Research Initiative Competitive Grants Program — A Genome-Wide Screen for QTL Controlling Maintenance Energy Requirements — $294,400

Terry Klopfenstein, Lowell Moser, Richard Clark and Chris Calkins — National Research Initiative Competitive Grants Program — Beef/Forage Systems to Produce Lean Beef — $308,528

John Allen, Bruce Johnson and Duane Olson — National Research Initiative Competitive Grants Program through Iowa State University — Telecommunications for Rural Community Economic Development — $38,503

Daniel Pomp — National Institutes of Health — Identifying Loci Controlling Body Composition in Mice (subcontract through North Carolina State) — $388,902

Dennis Jelinski — NASA — Surface Energy and Water Balances of Forest and Wetland Subsystems in the Boreal Forest — $42,000


Michael Zeece and David Hage — National Research Initiative Competitive Grants Program — Enhancement of Capillary Electrophoresis — $35,910


Bahman Eghball — National Research Initiative Competitive Grants Program — Site-Specific Manure Application for Improving Soil Productivity — $131,131


Shashi Verma, Timothy Arkebauer and David Billesbach — National Science Foundation — Field Micrometeorological Measurements, Process-Level Studies and Modeling of Methane and Carbon Dioxide Fluxes in a Boreal Wetland Ecosystem — $165,000

Elizabeth A. Walter-Shea and Timothy J. Arkebauer — National Aeronautics and Space Administration — Radiation and Gas Exchange of Understory Species at BOREAS — $36,502


John H. Golbeck — National Science Foundation — Research Experience for Undergraduates — $10,000

Sharon Quisenberry and David W. Stanley-Samuelson — National Science Foundation — Renovation of Entomology Research and Research Training Facilities — $194,547
1995-96 GRADUATE STUDENT ENROLLMENT

The March issue of CASNR Bullet provided information about the enrollment of graduate students by major. CASNR units had 560 graduate students on the rolls with 86 percent enrolled in the fall term. This is approximately 36 less than reported for the fall term of the 1994-95 school year. Although there may be an actual decline in graduate students, the change also reflects differences in the way that data was collected for this year. Only students that were within the time restrictions for the respective graduate programs were counted, and care was taken to minimize double reporting for jointly advised students.

CHRFS units had 167 graduate students on the rolls with 86 percent enrolled during the fall term. This is 29 more students than were reported for the fall term in the 1994-95 school year. The increase likely reflects a larger number of students enrolled in the CHRFS distance education M.S. program. The total number of graduate students in IANR units for the current school year is 727, which is a slight decrease from the 734 reported for the 1994-95 school year.

Fifty-two percent of graduate students in CASNR units were pursuing Ph.D. degrees whereas only 19 percent of CHRFS students were enrolled for Ph.D. degrees. The proportion of graduate students pursuing Ph.D. degrees has increased slightly in both CASNR and CHRFS during the past two years. Women students currently represent 28 percent of CASNR graduate students. The proportion of students who are women has increased during the past three years.

In CASNR units, graduate students are supported as follows: state GRA, 18 percent; grant-funded GRA, 36 percent; state GTA, 3 percent; international agency, 14 percent; fellowship, 1 percent; and own funds, 28 percent. In CHRFS units, graduate students are supported as follows: state GRA, 11 percent; grant-funded GRA, 5 percent; fellowship, 1 percent; state GTA, 16 percent; and own funds, 67 percent.

FACTS ABOUT THE FY 1995 NATIONAL RESEARCH INITIATIVE

In FY 1995 the National Research Initiative Competitive Grants Program (NRICGP) received an appropriation of $103,123 million of which $2.5 million was earmarked for the BARD program. A total of 28 research programs within eight major program areas was funded. The eight program areas and funds committed to each are presented below:

<table>
<thead>
<tr>
<th>Program Area</th>
<th># of Awards</th>
<th>Total $ Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural resources and environment</td>
<td>120</td>
<td>$17,341,044</td>
</tr>
<tr>
<td>Nutrition, food safety and health</td>
<td>49</td>
<td>$6,593,747</td>
</tr>
<tr>
<td>Animal systems</td>
<td>158</td>
<td>$20,397,323</td>
</tr>
<tr>
<td>Pests, biological control and insect mgmt</td>
<td>144</td>
<td>$15,540,572</td>
</tr>
<tr>
<td>Plant systems</td>
<td>197</td>
<td>$20,560,631</td>
</tr>
<tr>
<td>Markets, trade and rural development</td>
<td>35</td>
<td>$3,296,204</td>
</tr>
<tr>
<td>Enhancing value and use of ag and forest products</td>
<td>69</td>
<td>$8,255,264</td>
</tr>
<tr>
<td>Agricultural systems research</td>
<td>11</td>
<td>$1,811,497</td>
</tr>
<tr>
<td>Grand total</td>
<td>783</td>
<td>$93,796,282</td>
</tr>
</tbody>
</table>

Agricultural systems research is funded by a 2 percent surcharge on all other program areas.

A total of 3,214 proposals was considered for funding in 1995. Thirty-four peer panels reviewed and ranked these proposals. The success rate was 24 percent. The average grant award for a regular research program was $122,773 with an average duration of 2.13 years. The NRICGP also funded approximately $14 million in Agricultural Research Enhancement Awards (Postdoctoral Fellowships, New Investigator Awards, and Strengthening Awards).

The Agricultural Research Enhancement Award program is similar to EPSCoR in other federal agencies. The University of Nebraska does not qualify for this program because we have been too successful in obtaining USDA funds. About 64 percent of the awards were fundamental research and 36 percent mission-linked research. Multi-disciplinary research and single discipline research were 26 percent and 74 percent of the total, respectively.

FY 1997 PRESIDENT'S BUDGET PROPOSAL

The FY 1997 President's Budget Proposal was released recently. Research and development activities fared reasonably well given the push to reduce the federal budget deficit. Total R & D was proposed at a level of $72,679 billion (up 1.6 percent from FY 1996). The President proposed increases in research funds for NIH, NSF, and NASA at 3.9 percent, 4.6 percent, and 0 percent, respectively. Increases for USGS, USEPA Office of Research, NOAA, and DOE biological research were 3.2 percent, 16.9 percent, 5.7 percent, and -6.6 percent, respectively.

The President proposed reducing funding for CSREES research programs by 1.2 percent from the FY 1996 level (see table below). Most of the reduction occurred in state-specific special grants. Funding for the National Research Initiative was proposed at $33 million greater than FY 1996. Other programs targeted for increases were "Emerging Pest and Disease Issues," "Integrated Pest Management and Biological Control" and "Pesticide Clearance" within the Special Research Grants category.

<table>
<thead>
<tr>
<th>Program Area</th>
<th>FY 1996 Approp</th>
<th>FY 1997 Proposal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Programs</td>
<td>222,017</td>
<td>222,017</td>
</tr>
<tr>
<td>Special Research Grants</td>
<td>59,615</td>
<td>30,337</td>
</tr>
<tr>
<td>National Research Init.</td>
<td>96,735</td>
<td>130,000</td>
</tr>
<tr>
<td>Other Research</td>
<td>24,062</td>
<td>15,218</td>
</tr>
<tr>
<td>Total</td>
<td>402,429</td>
<td>397,572</td>
</tr>
</tbody>
</table>

The President's Budget Proposal recommends deleting all funding for buildings and facilities within the CSREES budget ($57.838 million in FY 1996). The budget proposal also recommends a 1 percent decrease for Cooperative Extension funding in FY 1997. This decrease would occur through elimination of state-specific grants. The Agricultural Research Service has been recommended for a 7.9 percent increase in funding from the FY 1996 level.

**Diane Says**

Your chief competition is yourself.