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Agricultural Research Division News

The Institute of Agriculture and Natural Resources

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University of Nebraska-Lincoln

April 1992

Volume 26, Number 5

COMMENTS FROM THE DEAN

Dear Colleagues:

During a recent meeting of the ARD Advisory Council, a number of questions were raised regarding the format used for the 1991 Annual Report of Faculty Activities (ARFA). The Council suggested that I address these questions in the ARD News so that all faculty will be aware of the answers. I have chosen to use a question and answer approach in responding.

When and how were changes in the ARFA format made?

A broad based IANR committee worked during the summer of 1990 to improve all of the administrator and faculty reporting and evaluation forms. New formats and forms were used for evaluations of 1990 performance. Administrators observed some problems with the 1990 formats and recommended that changes be made for 1991. A variety of suggestions for change in the ARFA format were collected by Deans Edwards and Nelson. These changes were incorporated into a draft format for the ARFA. The draft format was reviewed at least twice by the Vice Chancellor's Council and the IANR Liaison Committee. Feedback received from the reviews was used to redraft the format. Several iterations were needed during the spring and summer of 1991 to arrive at the ARFA format used in the last evaluation cycle. Faculty had input on the format through the IANR Liaison Committee and through their unit administrators. Several faculty members provided direct input to the Deans.

Why were full citations and journal series numbers requested for journal articles? Why were most recent publications to be listed first? Why were publications to be numbered?

During the past several years, faculty in some departments have been bypassing the ARD internal review policy and sending manuscripts to journals without internal review, approval by the department head, or assignment of a journal series number by ARD. Last year, we decided to publish in the ARD Annual Report only those journal articles that had gone through internal review and had been assigned a journal series number. This action was taken to encourage faculty to adhere to the long standing policy regarding internal reviews.

Units use the journal article listings in the faculty ARFAs to construct the unit publication list for the ARD Annual Report. The format changes in the ARFA were made to simplify the process for departmental secretaries and faculty members so that the ARFA listing can be used directly for other purposes, i.e., all of the required citation would be available. A full literature citation in the ARFA is also useful to faculty members and administrators in preparing award nominations, revising resumes and completing Form AD 421 each year.

Reordering and numbering the publications was designed to be an aid to departmental secretaries in extracting the journal article citations from faculty ARFAs. We have observed that some ARFA listings contain a mixture of journal articles, abstracts, book chapters, symposia proceedings, presentations and departmental reports under a general heading of publications. It is difficult for administrators to provide an appropriate evaluation of the individuals performance when faced with such disorganized materials and nearly impossible for departmental secretaries to determine what should be included in the ARD Annual Report listing.

Why are "accepted" and "in press" manuscripts listed in the "Additional Research Accomplishments" section? Why were Abstracts and Technical Papers combined into one part of the "Publications" section of the ARFA?

Previous formats for the ARFA did not specify what is to be done with manuscripts that are "accepted" or "in press". Some faculty listed in such manuscripts in the "Publications" section, others listed them in "Additional Research Accomplishments" section and others did not list the manuscripts. There was a need to clearly define where "accepted" and "in press" manuscripts should be listed in the ARFA. Over the years, administrators have observed that a significant percentage of the manuscripts that are listed as "accepted" or "in press" are not actually published. Most people believe that appropriate "credit" should be given for "accepted" and "in press" manuscripts but the amount of recognition should be less than that of a manuscript that is published. Therefore, the recommendation was made to list the "accepted" and "in press" manuscripts in "Additional Research Accomplishments" section.

The Agricultural Research Division provides information and educational programs to all people without regard to race, color, national origin, sex or handicap.

Many administrators feel that too much detail is included in some ARFAs. Combining the Abstracts and Technical Papers listings was an attempt to cut down on the size of the ARFA. There is excessive duplication in the current ARFA. For example, abstracts are listed in the "Publications" section and the presentation corresponding to each abstract is listed in the "Presentations" section. Is there a need for this duplication?

General Comments

The most effective ARFAs are concise, free from duplication, and easy to read. Trust administrators to evaluate faculty appropriately even though their ARFA's do not contain overwhelming detail on all their yearly activities. We take a longer term view of faculty contributions (five years) and hope to see steady and sustained output from research programs. ARD does not have unrealistic expectations for faculty output but we all must strive for excellence in our programs and we must be accountable for the resources provided to IANR by taxpayers.

ARD VISION STATEMENT

There is a need for organizations to have a concise and clearly defined vision for the future. Listed below is the ARD Vision Statement developed by the ARD staff. We welcome your input on this statement.

The Agricultural Research Division strives to be a progressive, dynamic and creative organization that:

* Conducts high quality, relevant applied and basic research addressing current and future needs relating to agriculture, agribusiness, natural resources, family life and human nutrition, and educates scientsits in these program areas.
* Encourages interdisciplinary, team research attempting to better understand natural and manmade "systems".
* Makes research results available in a timely manner to educators and other disseminators of information.
* Emphasizes excellence in research and stresses professionalism by administrators, faculty and staff.
* Maintains the highest level of accountability for public investments and continually attempts to improve efficiency in the use of resources.
* Insists upon full adherence to scientific ethics by faculty and graduate students.
* Supports policies that provide rewards to faculty in relation to their accomplishments and contributions and that encourage continued professional development of all employees.
* Promotes energetic, innovative, forward thinking and risk-taking leadership at all levels from project leader to dean.

Darrell W. Nelson
Dean and Director

GREAT PLAINS AGRICULTURAL COUNCIL MEETS IN LINCOLN

The Great Plains Agricultural Council will meet in Lincoln at the Cornhusker Hotel on June 9-11. All faculty and graduate students are invited to attend the meetings. Unit administrators have been provided with a tentative program for the meetings. The final program with registration material will be disseminated in April.

The Great Plains Agricultural Council consists of Agricultural Experiment Station and Cooperative Extension Directors in the Great Plains states and administrators of USDA agencies. The Council supports studies of policy issues that are of critical importance to the Great Plains. The Council meets in Nebraska once each ten years.

NATIONAL RESEARCH INITIATIVE ALLOCATIONS TO THE NORTH CENTRAL REGION DURING FY1991

Researchers at the University of Nebraska had modest success in National Research Initiative (NRI) funding competition during FY1991. A listing of NRI awards by state in the North Central Region are given below:

State	Awards, $	% of total Land Grant Univ. awards
Iowa	1,415,000	2.9
Illinois	1,694,309	3.4
Indiana	1,316,242	2.7
Kansas	853,374	1.7
Michigan	2,087,590	4.2
Minnesota	1,270,370	2.6
Missouri	1,253,094	2.5
N. Dakota	170,000	0.3
Nebraska	482,677	1.0
Ohio	1,131,000	2.3
S. Dakota	156,854	0.3
Wisconsin	3,701,207	7.5
NC Total	15,531,717	31.6

IANR faculty members have submitted many more grant proposals for the FY1992 NRI program than were submitted in FY1991. We anticipate having more success in FY1992. ARD commends all faculty members who have put forth the effort to write NRI grant proposals during the past year.

The Land Grant Universities in the North Central Region continue to receive a disproportional large share of NRI funds. This reflects the high quality research that is underway in our region. California and New York received that largest proportion of NRI funds in FY1991 (11.5 and 8.8% of the total, respectively).

GRANT AND CONTRACT INCOME OBTAINED BY UNITS DURING THE LAST THREE CALENDAR YEARS

Listed below is the grant and contract income obtained by units during the last three calendar years. Grants obtained by interdisciplinary centers are not listed. Units not listed are either service-oriented or represent disciplines with very limited opportunities for grant funding. Congratulations to Agricultural Economics, Agronomy, Biochemistry, Biological Systems Engineering, Entomology, Forestry, Fisheries & Wildlife, Horticulture, Northeast Res & Ext Center, Panhandle Res & Ext Center, Plant Pathology and West Central Res & Ext Center for significantly increasing grant and contract income in 1991 as compared to 1990.

UNITS	1989	1990	1991	Average 1989-1991
	----------$/research FTE/year----------			
Agricultural Economics	1,451	8,889	12,609	7,650
Agricultural Meteorology	94,938	201,807	148,341	148,362
Agronomy	25,179	43,230	51,022	37,279
Animal Science	46,626	62,670	48,404	52,233
Biochemistry	68,042	57,967	138,550	88,186
Biol Systems Engineering	12,982	16,512	33,533	21,009
Entomology	38,906	29,915	47,024	38,448
Food Science & Technology	58,433	67,233	50,442	58,703
Forestry, Fisheries & Wildlife	7,639	67,804	76,290	50,578
Horticulture	74,147	47,437	156,351	92,645
Northeast R/E Ctr	32,671	27,737	33,885	31,431
Nutr Sci & Hosp Mgm	57,072	19,630	3,817	26,840
Panhandle R/E Ctr	37,769	40,588	61,340	46,566
Plant Pathology	59,686	79,714	111,623	83,674
South Centr R/E Ctr	28,246	30,101	31,980	30,109
Textiles, Clothing & Design	13,001	698	0	4,566
Veterinary Science	42,056	97,114	95,469	78,213
West Centr R/E Ctr	46,205	31,650	56,731	44,862
Simple Average	41,395	51,622	64,301	52,297

NEBRASKA GOOD SEED WEEK

The Nebraska Legislature designated the week of March 8 to 14, 1992 as "Nebraska Good Seed Week". The Legislative Resolution that designated "Nebraska Good Seed Week" pointed out the contribution that high quality seed of adapted varieties has made and continues to make to the profitability and competitiveness of Nebraska's agriculture. The Resolution also commends the efforts of IANR faculty, the Nebraska Crop Improvement Association, the Nebraska Seedsmen Association, and the State Department of Agriculture for their roles in developing, producing and marketing high quality seed.

FUNDING SOURCES FOR AGRICULTURAL EXPERIMENT STATIONS

Presented below is a table giving the average proportion of research expenditures in 55 SAESs funded from varying sources for fiscal years 1978 and 1990. For comparison, the data for Nebraska in fiscal year 1990 are included. The Nebraska AES derives a smaller proportion of research expenditures from formula funds, CSRS competitive grants and other federal competitive grants than the average of other SAESs. We have much higher levels of "Other USDA" funding, primarily cooperative agreements, than the average of other SAESs. The proportion of Nebraska expenditures covered by state appropriations is somewhat lower than the average of all SAESs whereas the reverse is true for product sales and industry grants.

	Ave. of ag experiment stations		Nebraska AES
Source	FY1978	FY1990	FY1990
	----------Expenditures, % ----------		
Federal:			
CSRS Formula	16.7	10.3	8.4
Other CSRS	2.9	3.7	1.2
Other USDA	2.4	3.1	8.3
Other federal	9.0	9.0	5.5
State Approp.	54.7	55.0	49.0
Sales (revolving)	5.8	5.8	15.8
Industry grants	5.1	7.1	8.7
Other support	3.3	6.0	3.1
Total expenditures $, millions	681	1,596	36.9
Scientist years, SY	6,936	6,690	149
$/SY, thousands	98	239	246

DR. JEFF KEOWN SELECTED FOR LEADERSHIP DEVELOPMENT COURSE

Dr. Jeff Keown, Professor of Animal Science, has been selected for participation in the 1992-93 SAES/ESCOP Leadership Development Course. Jeff will complete a three phase program that features a week-long "introduction to leadership" workshop in September, an administrative internship in the ARD office from October through June, and a series of capstone seminars with federal agency personnel and Congressional staff members in Washington during June. We look forward to having Jeff join the ARD administrative team.

IANR RESOURCE ALLOCATION PHILOSOPHY

The draft IANR Resource Reallocation Policy document that is currently being examined by faculty members and unit administrators has raised questions about the philosophy currently being used for resource allocation. This article is written to describe the basis currently used in making resource allocation decisions by the IANR Administrative Council and the IANR Divisions/College. These processes have been in place for five years.

Faculty Positions:

When faculty positions become vacant through retirement or resignation, the positions are automatically eliminated from the unit and the associated salary and fringe benefit funds are retained by the Vice Chancellor in an Institute-wide faculty salary pool. The unit experiencing the vacancy is expected to conduct a complete evaluation and assessment of future programmatic needs for faculty expertise. After the evaluation is completed, the unit having the vacancy may propose to establish a faculty position in the area of greatest need by providing a justification and draft position description to the cognizant deans. Other new positions are periodically identified through the IANR strategic planning process and by unit planning activities. The deans examine all proposals for the establishment of new positions or reestablishment of positions in units and recommend to the Administrative Council the release of those positions most critical to accomplishing the overall mission of their division/college and IANR. Release of positions is constrained by the amount of funds available in the Vice Chancellor's salary pool. Since most faculty positions are joint between two divisions/college, two deans normally support the release of a position. The Administrative Council considers the recommendation of the deans and then provides an overall recommendation to the Vice Chancellor regarding release of specific faculty positions. If the Vice Chancellor concurs with the Council's recommendation, a unit is permitted to initiate the recruitment process. This reallocation process is designed to fill those faculty positions most important to the accomplishment of IANR's role and mission, to facilitate reallocation to the highest priority programs, and to implement The IANR Strategic Plan.

Staff Positions:

When managerial/professional or office/service staff positions become vacant, the positions revert to the division/college providing the salary and fringe benefits. Units wishing to refill vacant positions provide justification to the cognizant dean(s). In most cases, the staff positions are returned to the unit and recruiting is initiated immediately to fill the vacancy. In some cases, staff positions may be held by the dean to accumulate salary savings or removed from the unit experiencing the vacancy for reallocation to another unit.

Support:

Allocation of new operating, hourly, or GRA funds is normally made by a competitive process. Administrators are periodically asked to provide rationale and justification for the assignment of new resources to their units. It is expected that the new resources will contribute to accomplishment of the unit's action plans. The deans make allocations of new resources based on relative need, proposed use of the resources with consideration given to new and innovative programs, and relative priority of the program in the IANR Strategic Plan.

If a faculty position is permanently eliminated from a unit, a portion of the support provided to the position is also removed from the unit. ARD removes 50% of the average total support (staff salaries, operating, hourly, GRA, etc) provided to the unit on a $/FTE basis when a faculty position is eliminated. These resources are then reallocated to other units when new faculty positions are established.

PROPOSALS SUBMITTED FOR FEDERAL GRANTS

The following is a listing of proposals that were submitted after February 1, 1992 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.

Swey-Shen Alex Chen - National Institute of Health - Molecular Mechanisms of Perinatal IgE Tolerance - $833,041

James E. Partridge - United States Agency for International Development - Molecular and Genetic Markers for Salt Tolerance in Maize (*Zea mays* L.) - $130,500

Anne K. Vidaver - National Science Foundation - Renovation and Replacement of Greenhouses - $668,500

Michael Zeece - National Science Foundation - Development of Microemulsion Capillary Zone Electrophoresis - $265,706

David Warren Stanley-Samuelson - National Institute of Health - Eicosanoids Modulate Mosquito Malpighian Tubule Function - $499,272

Leon G. Higley - National Science Foundation - Young Investigator Awards Program - $125,000

Blair D. Siegfried - Environmental Protection Agency - Biochemical Determinants of Pyrethroid Toxicity to Selected Aquatic Insects - $143,256

Frederick P. Baxendale - Environmental Protection Agency - Effects of Subsurface Placement on Insecticide Movement in Turfgrass - $124,250

Marion H. O'Leary - National Institute of Health - Heavy-Atom Isotope Effects on Enzymatic Reactions - $133,415

Constance V. Kies - National Institute of Health - Obesity/ Nutrition Research Center for Nebraska - $3,716,764

James L. Van Etten - National Science Foundation - Algal Virus Restriction/Modification Enzymes - $24,723

Milford A. Hanna - Special Research Grants/USDA - Investigating Milkweed as an Alternative Source of Fiber - $75,777

Charles A. Francis - Special Research Grants/USDA - Sustainable Agriculture Systems - $66,305

James L. Stubbendieck, Kenneth G. Hubbard and Anne M. Parkhurst - Special Research Grants/USDA - Relationship of Rangeland Vegetation Dynamics to Climate Change - $77,841

Milford A. Hanna - Special Research Grants/USDA - Industrial Agricultural Products Center - $104,133

Clinton Jones - National Research Initiative Competitive Grants Program - Regulation of Bovine Herpes Virus 1 Transcription During a Latent Infection - $186,808

Rangan Chinnaswamy and Milford A. Hanna - National Research Initiative Competitive Grants Program - Reactive Processing for Starch Grafts - $182,628

Randy L. Wehling, Michael G. Zeece and David R. Shelton - National Research Initiative Competitive Grants Program - Characterization of Wheat Proteins and Their Relationship to Breadmaking Quality - $91,789

Glenn W. Froning and Michael G. Zeece - National Research Initiative Competitive Grants Program - Surimi-Like Processing of Mechanically Deboned Poultry Meat - $59,444

Steven J. Jones - National Research Initiative Competitive Grants Program - Identification of the Mode of Action of Anabolic Steroids Used for Increasing Muscle Mass in Beef Cattle - $200,799

Debora L. Hamernik - National Research Initiative Competitive Grants Program - Regulated Expression of the FSH Receptor Gene in Cattle - $243,484

Michael M. Meagher and Fred W. Wagner - National Research Initiative Competitive Grants Program - Purification and Characterization of an - Glucuronidase from Trichoderma Reesel - $105,888

James E. Kinder - National Research Initiative Competitive Grants Program - Ovarian Follicular Development in Prepubertal Heifers: Role of LH and Estradiol - $236,499

David Scott Jackson - National Research Initiative Competitive Grants Program - Optimization of Processing Conditions for Corn Wet Milling - $167,591

H. Edward Grotjan and Debora L. Hamernik - National Research Initiative Competitive Grants Program - Bovine Luteinizing Hormone Bioactivity: Role of Oligosaccharides - $253,683

Blair D. Siegfried, Tony Zera and Z B Mayo - National Research Initiative Competitive Grants Program - Biochemistry and Genetics of Insecticide Resistance in the Greenbug, Schizaphis *graminum* (Homoptera: Aphididae) - $256,705

Ruben O. Donis and Swey-Shen Alex Chen - National Research Initiative Competitive Grants Program - SCID Mice with Bovine Immune System: Model Development and Characterization - $272,662

Raul G. Barletta - National Research Initiative Competitive Grants Program - Molecular Genetic Analysis of *Mycobacterium paratuberculosis* - $251,563

Ruben O. Donis - National Research Initiative Competitive Grants Program - Site-Directed Mutagenesis of the p125 Polypeptide of Bovine Viral Diarrhea Virus - $267,246

Jerry D. Eastin and James E. Partridge - National Research Initiative Competitive Grants Program - The Biochemical Nature of Developmental Stress Resistance Mechanisms in Sorghum - $190,539

Jerry W. Maranville and Blaine E. Johnson - National Research Initiative Competitive Grants Program - The Biochemical and Molecular Basis of Nitrogen Use Efficiency in Maize - $125,514

Swey-Shen Alex Chen, Ruben O. Donis and Fernando A. Osorio - National Research Initiative Competitive Grants Program - Molecular Analysis of the Mammary Gland T Cell Repertoire in Bovine Mastitis - $279,021

Azzeddine M. Azzam, E. Wesley F. Peterson and Nancy Cottrell - National Research Initiative Competitive Grants Program - The Impact of Cultural Factors on Import Demand for Consumer Oriented High Value Products - $136,714

E. Wesley F. Peterson and Dale G. Anderson - National Research Initiative Competitive Grants Program - Trade Effects of Agricultural Development: The Case of Taiwan - $161,453

GRANTS AND CONTRACTS RECEIVED FEBRUARY & MARCH, 1992

Agricultural Economics	
Miscellaneous grants under $5,000 each	5,298
Agronomy	
Johnson, B., Wilhelm, W., Francis, D. & Maranville, J. - UN Foundation	14,750
Miscellaneous grants under $5,000 each	16,300
Animal Science	
Miscellaneous grants under $5,000 each	19,563
Biochemistry	
Golbeck, J. - National Science Foundation	8,000
Golbeck, J. - UN Foundation	9,265
Biological Systems Engineering	
Miscellaneous grants under $5,000 each	590
Entomology	
Miscellaneous grants under $5,000 each	5,500
Environmental Programs	
Miscellaneous grants under $5,000 each	3,000
Food Processing Center	
McAuliffe, T. - UN Foundation	5,000
Miscellaneous grants under $5,000 each	7,455
Food Science & Technology	
Miscellaneous grants under $5,000 each	7,705
Forestry, Fisheries & Wildlife	
Holland, R. S. & Peters, E. J. - Nebraska Game & Parks Commission	176,264
Hoagland, K. D. - U.S. Army Corps of Engineers	23,901
Miscellaneous grants under $5,000 each	300
Horticulture	
Riordan, T. - U.S. Golf Association	22,500
Miscellaneous grants under $5,000 each	11,572
Industrial Ag Products Center	
Chinnaswamy, R. - American Soybean Association	56,780
Northeast Research & Extension Center	
Miscellaneous grants under $5,000 each	27,313
Nutritional Sciences & Hospitality Management	
Kies, C. - American Soybean Association	76,445
Panhandle Research & Extension Center	
Lyon, D. & Arkebauer, T. - UN Foundation	10,000
Wilson, R. and Kerr, E. - Western Sugar Company	28,350
Wilson, R., Hein, G., Smith, J. & Yonts, D. - Western Sugar Company	30,900
Miscellaneous grants under $5,000 each	1,440
Textiles, Clothing & Design	
Crews, P. & Niemeyer, S. - Nebr. Dept. of Environmental Control	9,786
Veterinary Science	
Miscellaneous grants under $5,000 each	9,755
West Central Research & Extension Center	
Miscellaneous grants under $5,000 each	5,000
Grand Total	**592,732**

NEW OR REVISED PROJECTS

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

12-217 (Agronomy) Nutrient Use Efficiency in Sorghum and Pearl Millet
Investigator: J. W. Maranville
Status: New State project effective July 1, 1991

13-111 (Animal Science) Processed and Manufactured Meat Technology
Investigator: R. W. Mandigo
Status: New Hatch project effective February 1, 1992

13-112 (Animal Science) Protein and Energy Constraints of Rapid Lean Growth
Investigator(s): P. S. Miller and A. J. Lewis
Status: New Hatch project effective February 24, 1992

15-062 (Biochemistry) Mammalian Cobalamin-Dependent Enzymes
Investigator: R. Banerjee
Status: New Hatch project effective March 1, 1992

21-046 (Plant Pathology) Host-Parasite Interactions Between Fungal Pathogens and Their Hosts
Investigator: J. E. Partridge
Status: New Hatch project effective October 8, 1991

26-019 (Forestry, Fisheries & Wildlife) Primary Water Quality Determinents of Attached Algal Communities in Nebraska
Investigator: K. D. Hoagland
Status: New Hatch project effective March 1, 1992

42-010 (Northeast Research & Extension Center) Improving Feeder Pig Performance
Investigator: M. C. Brumm
Status: Revised Hatch project effective November 7, 1991