

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Agricultural Research Division News & Annual Reports

Agricultural Research Division of IANR

8-1994

ARD News August 1994

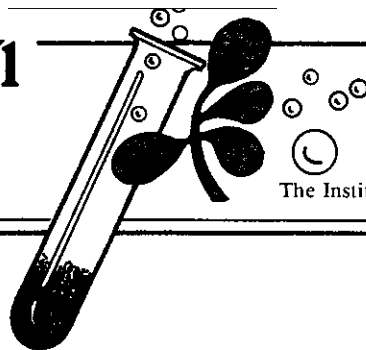
Follow this and additional works at: <https://digitalcommons.unl.edu/ardnews>



Part of the [Agriculture Commons](#)

"ARD News August 1994" (1994). *Agricultural Research Division News & Annual Reports*. 41.
<https://digitalcommons.unl.edu/ardnews/41>

This Article is brought to you for free and open access by the Agricultural Research Division of IANR at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Agricultural Research Division News & Annual Reports by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.



August 1994

Volume 29, Number 1

COMMENTS FROM THE DEAN

Dear Colleagues:

This summer, I have taken advantage of opportunities to discuss the future of U.S. higher education with administrators from other institutions. Several of these universities are facing serious funding problems because of declining support from legislators and clientele. Significant changes such as massive early retirements and major reorganizations are occurring at other campuses. The driving forces for change are decreased state funding and the imperative to demonstrate responsiveness to societal needs.

Some of the comments from other research administrators include: "Many scientists are providing answers to questions that no one has asked"; "Less than 10 percent of research findings are ever used"; and "Most scientists feel that funding from taxpayers is an entitlement."

Of even more concern are the points made by critics of research universities. These points are summarized in a recent article in *Change* magazine that stated, "Faculty bashing is becoming a growth industry. We hear that budgets are bloated by administrative excess, that our faculty salaries are high and teaching loads almost non-existent. We hear ourselves described, too, as conspirators in this grand game — as eager participants in a system that steals student dollars to line professorial pockets." Dr. Albert Yates, President of Colorado State, asks, "How did this happen? How did we arrive at the point where professors are regarded as the 'imposters in the temple' or 'the cat guarding the cream' — as two of the most recent books criticizing higher education have labeled us. How has a once universally respected profession become the target of so much cynicism, so much mistrust?"

Hopefully, these comments and statements do not apply to faculty members with ARD appointments because our research is focused on relevant questions of importance to society and we attempt to make efficient use of our resources. As Land Grant University faculty members we have a service orientation and expect to be held accountable. However, the criticism heaped on higher education and the changes occurring at other universities should give us cause to examine our actions and programs to ensure that we are living up to the philosophy and traditions of Land Grant University scientists.

Darrell W. Nelson
Dean and Director

WIDAMAN TRUST DISTINGUISHED GRADUATE ASSISTANT AWARD

The Widaman Trust was established in 1975 through a generous gift provided to the University of Nebraska Foundation by Ms. Blanch Widaman. Ms. Widaman asked that the income from the trust be used by UNL for basic research in agriculture and the funds support people rather than purchase supplies and/or equipment. She suggested that the money be used for scholarships or fellowships for graduate students conducting basic research in agriculture.

The criteria established for the Widaman Trust Distinguished Graduate Assistant Award specifies that only 5 percent of the graduate students in a department can receive the recognition and that the awardees must demonstrate outstanding scholarship and excellence in research. We congratulate the following graduate students for receiving the Widaman Trust Distinguished Graduate Student Award for 1994-1995:

Name: Samarendu Mohanty
Thesis area: International Ag Trade
Department: Agricultural Economics
Advisor: Wesley F. Peterson

Name: Ananda Weliwita
Thesis area: Industrial Organization
Department: Agricultural Economics
Advisor: Azzeddine Azzam

Name: Andrew Suyker
Thesis area: Micrometeorology
Department: Agricultural Meteorology
Advisor: Shashi Verma

Name: Daniel Anderson
Thesis area: Weed Sciences
Department: Agronomy
Advisor: Alex Martin and Fred Roeth

Name: Nandkishor Boedhram
Thesis area: Crop Physiology
Department: Agronomy
Advisor: Tim Arkebauer



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.



Name: Lakhwinder Hundal
Thesis area: Soil and Water Science
Department: Agronomy
Advisor: William Powers and Pat Shea

Name: Zhengming Li
Thesis area: Soil and Water Science
Department: Agronomy
Advisor: Steve Comfort and Pat Shea

Name: John L. Lindquist
Thesis area: Crop/Weed Ecology
Department: Agronomy
Advisor: Dave Mortensen

Name: Abdoulaye Traore
Thesis area: Crop Physiology
Department: Agronomy
Advisor: Jerry Maranville

Name: Kristin L. Barkhouse
Thesis area: Breeding and Genetics
Department: Animal Science
Advisor: Dale Van Vleck

Name: Ellen G.M. Bergfeld
Thesis area: Reproductive Physiology
Department: Animal Science
Advisor: James Kinder

Name: Brian P. Demos
Thesis area: Meat Science
Department: Animal Science
Advisor: Roger Mandigo

Name: Wesley N. Osburn
Thesis area: Meat Science
Department: Animal Science
Advisor: Roger Mandigo

Name: Xiaoli Bi
Thesis area: Plant Environmental Engineering
Department: Biological Systems Engineering
Advisor: George Meyer

Name: Howard Clyma
Thesis area: Agricultural and Biological
Systems Engineering
Department: Biological Systems Engineering
Advisor: Derrell Martin

Name: David B. Parker
Thesis area: Animal Waste Management
Department: Biological Systems Engineering
Advisor: Dean Eisenhauer

Name: Midori Ono
Thesis area: Toxicology
Department: Entomology
Advisor: Blair Siegfried

Name: Douglas Christensen
Thesis area: Food Microbiology
Department: Food Science and Technology
Advisor: Robert Hutkins and Tyrrell Conway

Name: Shyi Liang Yu
Thesis area: Fish Ecology
Department: Forestry, Fisheries and Wildlife
Advisor: Ed Peters and Kyle Hoagland

Name: Martha J. Desmond
Thesis area: Conservation Biology
Department: Forestry, Fisheries and Wildlife
Advisor: Julie Savidge and Ron Case

Name: Zhanyuan Zhang
Thesis area: Plant Molecular Biology and
Tissue Culture
Department: Horticulture
Advisor: Dermot Coyne and Amit Mitra

Name: Jeffrey S. Hampl
Thesis area: Community Nutrition
Department: Nutritional Science and Dietetics
Advisor: Nancy Betts

Name: Loren J. Giesler
Thesis area: Biological Control
Department: Plant Pathology
Advisor: Gary Yuen

Name: Robert O. Elder
Thesis area: Infectious Diseases
Department: Veterinary and Biomedical Sciences
Advisor: Gerald Duhamel

Name: Luis M. Schang
Thesis area: Virology
Department: Veterinary and Biomedical Sciences
Advisor: Clint Jones and Fernando Osorio

HARDIN DISTINGUISHED GRADUATE FELLOWSHIP FOR 1994-1995

The recipient of the Hardin Distinguished Graduate Fellowship for 1994-1995 is Robert K. D. Peterson from the Entomology Department. This is the third year that Robert Peterson has received the award. The fellowship is made possible by an endowment established at the University of Nebraska Foundation by former University of Nebraska Chancellor Clifford Hardin to support outstanding graduate students doing research in plant physiology.

Robert Peterson is completing his Ph.D. in plant stress physiology associated with biotic stressors. His research project focuses specifically on physiological responses of plants to leaf injury by arthropods, with particular emphasis on photosynthetic responses. Dr. Leon Higley in the Department of Entomology is his advisor.

Diane Says

To everything there is a reason.

CALL FOR PROPOSALS — SARE

The North Central Region Sustainable Agriculture Research and Education Program has released the 1995 Call for Preproposals. This will be a joint call for the Sustainable Agriculture Research and Education (SARE) grants program (approximately \$1,000,000 available) and the Agriculture in Concert with the Environment (ACE) research and education grants program (approximately \$300,000 available). Preproposals are due Sept. 16, 1994.

This year the priority areas for SARE are: 1) value-added regional food systems; 2) sustainable livestock systems; 3) integration of food, environment and agricultural policy; 4) alternative weed management systems; 5) farmer-based/initiated networks; and 6) systems approaches to manure management for plants, animals and the environment.

The ACE priority issues are: 1) environmentally sensitive areas including riparian protection/enhancement; wetlands protection/enhancement; surface and groundwater protection and terrestrial avian or aquatic habitat, and 2) environmentally sound management practices including alternative uses of CRP lands, non-chemical pest management, pesticide use reduction; on-farm composting; manure management; and nutrient management.

A Special Call for Proposals will be made later this fall for projects addressing quality of life and the structure of agriculture.

PROPOSALS SUBMITTED FOR FEDERAL GRANTS

The following is a listing of proposals that were submitted after June 1, 1994 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.

Garald Horst, William Powers, Patrick Shea, and Steven Comfort — USDA/Special Research Grants Program — Irrigation Schedule Modification to Minimize Chemical Transport Below Turfgrass — \$149,618

Stephen Ernst, Scott Nissen and Sandra Smith — National Science Foundation — Auxin-Mediated Cell Differentiation: Perception and Transduction of the Inductive Signal — \$388,157

James S. Schepers — USDA/Special Research Grants Program — Characterizing Potential Mineralizable Nitrogen by Remote Sensing — Kansas State University is the lead institution — \$122,736

Dean E. Eisenhauer, David D. Jones, and Michael F. Kocher — USDA/Special Research Grants Program — Balancing Environmental and Economic Risks Using Improved Nitrogen Application Systems — \$368,684

Norman Klocke and Richard Clark — USDA/Special Research Grants Program — Irrigation Management to Reduce Leaching Potential and Sustain Economic Returns — \$200,245

James R. Brandle — U.S. Forest Service — Assessment of Microenvironment Conditions Related to Use of Landscape Fabric Mulch for Protecting Newly Planted Trees in Semi-Arid Environments — \$24,000

Raymond J. Supalla, John C. Allen and Darrell G. Watts — USDA/Special Research Grants Program — Strategies to facilitate the Adoption of Improved On-Farm Management Practices to Reduce Nitrate Pollution — \$181,739

Dennis D. Schulte and Wayne E. Woldt — USDA/Special Research Grants Program — Holistic Organic Waste Management in Watersheds Using Decision Support Systems — \$301,811

Rodger K. Johnson and Terry J. Klopfenstein — USDA/Special Research Grants Program — Evaluation of Composting, Constructed Wetlands, Wet Meadows, and Irrigation in a Corn Production System for the Treatment and Utilization of Swine Wastes — \$398,823

Bahman Eghball and James F. Power — USDA/Special Research Grants Program — In-situ Field and Laboratory N and P Mineralization from Fresh and Composted Manure — \$103,569

H. Edward Grotjan and Mark Morrison — National Science Foundation — Ovine Luteinizing Hormone Bioactivity: Role of Oligosaccharides — \$382,270

H. Edward Grotjan and Mark Morrison — National Institutes of Health — Luteinizing Hormone Structure-Function Relationships — \$657,867

David W. Stanley-Samuels — National Institutes of Health — Eicosanoids Mediate Insect Immunity — \$344,040

Paul Staswick — National Science Foundation — Jasmonate Signaling in Plants — \$263,331

Stephen Ragsdale — National Institutes of Health — Enzymology of the Reductive Acetyl-CoA Pathway — \$2,338,134

Stephen Ragsdale — Department of Energy — Enzymology of Acetoclastic Methanogenesis — \$554,043

NEW OR REVISED PROJECTS

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

NEB-10-125 (Agricultural Economics) Impacts of Policies Related to Water, Commodity Programs, and Energy-Based Inputs on Nebraska Farms
Investigator(s): G. Helmers and D. Conley
Status: New Hatch project effective May 1, 1995

NEB-12-236 (Agronomy) Events, Processes and Conditions Influencing the Stability of Weed Distributions
Investigator(s): D. A. Mortensen, C. A. Gotway, L. Young and A. R. Martin
Status: New Special Grant effective June 1, 1994

NEB-14-079 (Veterinary Science and Biomedical Sciences) Synergism Between *Bacteroids* spp. and *Serpulina hyodysenteriae* in Swine Dysentery
Investigator(s): G. E. Duhamel, M. Morrison and R. A. Moxley

Status: New State project effective July 1, 1994

NEB-14-080 (Veterinary Science and Biomedical Sciences) How Does the Fungal Toxin, Fumonisin, Induce Carcinogenesis?

Investigator(s): C. Jones and M. Dickman

Status: New State project effective July 1, 1994

NEB-21-055 (Plant Pathology) Avirulence Gene D From *Pseudomonas* in a Suicide Gene

Investigator: J. E. Partridge

Status: New State project effective July 1, 1994

NEB-27-014 (Agricultural Meteorology) The Consequences of Climate Variation and Change for Agriculture and Other Resources

Investigator: W. E. Easterling

Status: New Hatch project effective July 1, 1994

NEB-44-047 (Panhandle Research and Extension Center) Wheat Curl Mite Population Dynamics and Epidemiology of Wheat Streak Mosaic

Investigator(s): G. L. Hein, R. C. French, D. J. Lyon and J. E. Watkins

Status: New Special Grant effective May 1, 1994

NEB-44-048 (Panhandle Research and Extension Center) Control of Rhizomania and Nematode Diseases in Sugar Beet

Investigator: E. D. Kerr

Status: New Hatch project effective June 1, 1994

NEB-48-022 (South Central Research and Extension Center) Crop Insect Pest Management in Nebraska: Biological Control and Sampling

Investigator: R. J. Wright

Status: New Hatch project effective May 1, 1994

NEB-48-023 (South Central Research and Extension Center) Formulation of Nitrogen Fertilization Recommendations to Maximize Economic and Environmental Goals

Investigator: R. Selley

Status: New Hatch project effective June 1, 1994

TRAVEL TO REGIONAL RESEARCH COMMITTEE MEETINGS

Agricultural Research Division faculty currently participate in a large number of regional research projects and regional research coordinating committees. The ARD considers regional research projects and committees to be valuable opportunities to improve the productivity of research programs by enhancing coordination and reducing duplication with other institutions. The regional committees normally meet annually and the ARD maintains a portion of the USDA-CSRS regional research fund allocation in a

travel fund to pay travel costs for official representatives to these annual meetings.

As a general rule, there is only one designated official representative to these committees from each Experiment Station, but additional committee and project participants also may attend the annual meetings. The ARD travel trust is used to fund only the travel of the official representative for one meeting per year. Other attendees must use departmental or other funds for travel support. This policy was reconfirmed by the ARD Advisory Council in 1993.

Official representatives are expected to place importance on the annual meetings and make every effort to attend. However, if the designated official UNL representative is unable to attend, a substitute may be approved if the substitute is also working on the project or works in a closely associated area in the case of coordinating committees. The decisions on whether to pay travel for a substitute are made by ARD administration and must be preceded by a request from the official representative at, or before, the time when the annual meeting is authorized and it is determined that the official representative is unable to attend.

Since our regional research allocations tend to be fairly level in recent years, we want to be able to allocate as much of the funds as possible to departments for carrying out their regional research activities. Accordingly, we attempt to keep the expenditures for travel as low as possible and must consider, in each case, whether it is justifiable to spend the funds for the attendance by a substitute.

Through careful management, we hope to be able to maintain significant ARD involvement in these regional activities for the foreseeable future.

DR. DAVID STANLEY-SAMUELSON SELECTED FOR LEADERSHIP DEVELOPMENT COURSE

Dr. David Stanley-Samuelson, Associate Professor of Entomology, has been selected to participate in the 1994-95 ESCOP/ACOP Leadership Development Course. David will complete a three-phase program that features a week-long "introduction to leadership" workshop in Indianapolis; an Administrative Internship in the ARD Office from July 1994 to June 1995; and a capstone seminar with federal agency leaders, lobbyists, and Congressional staff personnel in Washington, D.C.

While serving as an intern, David will lead project reviews, participate in staff meetings, undertake several special projects, and study research administration. We are pleased to have Dr. Stanley-Samuelson working in our office during the next year.

Dr. Jim Partridge, Associate Professor of Plant Pathology, has also been selected for the Leadership Development Course. Jim's participation is sponsored by the College of Agricultural Sciences and Natural Resources (CASNR). He will be serving as an Administrative Intern with CASNR during the next year.

**PROJECTS APPROVED BY THE
COMMODITY BOARDS
JULY 1, 1994 - JUNE 30, 1995**

WHEAT BOARD

The following projects were approved by the Nebraska Wheat Board for July 1, 1994—June 30, 1995 funding:

David R. Shelton P. Stephen Baenziger C. James Peterson Robert A. Graybosch	<i>Selecting Nebraska Wheats for Processing Needs of Domestic and Foreign Markets</i>	\$32,715
David R. Shelton P. Stephen Baenziger	<i>Utilization of High-Quality Nebraska Wheats in the United Kingdom</i>	6,230
P. Stephen Baenziger David R. Shelton David Baltensperger	<i>Improving Hard Red Winter Wheat Varieties for Nebraska</i>	38,500
Drew J. Lyon David D. Baltensperger	<i>Control of Winter Annual Grasses in a Reduced Tillage Wheat System</i>	11,840
Lenis A. Nelson	<i>Variety Testing of Public Winter Wheat Varieties Developed Outside of Nebraska</i>	12,000
Gary L. Hein David Baltensperger P. Stephen Baenziger	<i>Use and Development of Russian Wheat Aphid Resistant Varieties in Winter Wheat Management Systems in Western Nebraska</i>	9,962
Amit Mitra Les Lane P. Stephen Baenziger	<i>Genetic Engineering of Wheat Plants for Wheat Streak Mosaic Virus Resistance</i>	18,800
C. James Peterson P. Stephen Baenziger David R. Shelton David Baltensperger	<i>Hard White Wheat Development for Nebraska</i>	65,000
Yang Yen P. Stephen Baenziger	<i>Application of Chromosome Painting Technology in Wheat Breeding</i>	5,000
John E. Watkins P. Stephen Baenziger	<i>Lessening the Impact of Leaf Rust on Nebraska Wheat Varieties</i>	15,000

SOYBEAN BOARD

The following projects were approved by the Nebraska Soybean Development, Utilization and Marketing Board for July 1, 1994—June 30, 1995 funding:

George Graef Jim Specht	<i>Development of Improved Soybean Varieties for Nebraska</i>	\$ 91,550
Milford Hanna	<i>Soybean Oil as Drip Oil for Irrigation Pumps</i>	3,622
Milford Hanna Lloyd Bullerman	<i>Microbial Stability of Methyl-Soyate and Diesel Fuels Blends</i>	17,915
Hossein Nouredini	<i>Soybean-Based Biodiesel: Utilization of By-Product</i>	24,640
Delmar Timm Hossein Nouredini	<i>Building Materials from Recycled Paper and Soybeans</i>	48,862
Richard Grant Silvia Abel	<i>Use of Soybean Lipids to Improve Nutritional Value of Milk Fat and Protein from Dairy Cows</i>	14,192
Jim Steadman George Graef	<i>Initiation of a Search for Resistance to Sclerotinia sclerotiorum, Cause of Sclerotinia Stem Rot of Soybean</i>	18,672
George Graef Jim Steadman	<i>Winter Nursery Support for Soybean Breeding and Genetic Research</i>	18,850
Donald Lee George Graef	<i>Maintenance of Cytoplasmic and Nuclear DNA Diversity in Soybean Populations After Several Cycles of Outcrossing</i>	9,000

Delmar Timm Hossein Nouredini	<i>Biodegradable Plastics: Block Copolymers</i>	25,755
----------------------------------	---	--------

CORN BOARD

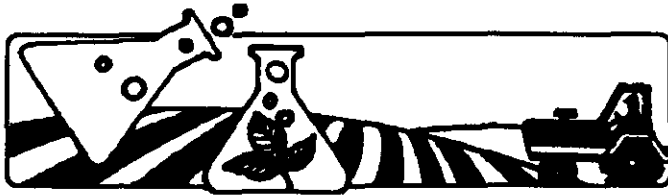
The following projects were approved by the Nebraska Corn Development, Utilization and Marketing Board for July 1, 1994—June 30, 1995:

Robert Hutkins Michael Meagher Tyrrell Conway	<i>Improving the Ethanol-Producing Ability of Genetically Modified Lactobacilli</i>	\$ 22,760
David Jackson	<i>Economic Improvement of Corn Wet Milling by Optimizing Steep Conditions</i>	14,538
Milford Hanna	<i>Starch-Vinyl Polymer Grafts for Chemical Intermediates and Biodegradables</i>	20,000
David S. Jackson Blaine Johnson Randy Wehling	<i>Application of Fundamental Chemical/Physical Properties to Corn Quality Measurement and Improvement</i>	21,498
Curtis Weller Randy Wehling Glenn Froning	<i>Supercritical Recovery of Zein from Alcohol Extraction Solvent</i>	19,260
David Jackson	<i>Development of a Nebraska Corn Quality Database</i>	12,500
Michael Meagher Robert Hutkins	<i>New Pervaporation Membranes for the Removal of Butanol-Acetone-Ethanol from Aqueous Solutions</i>	24,450
V. M. Ghorpade Milford Hanna	<i>Levulinic Acid as an Antifreeze</i>	19,475
V. M. Ghorpade Milford A. Hanna	<i>Continuous Reactive Extrusion Production of Cyclodextrins</i>	19,475
Milford Hanna	<i>Japan Corn Starch Association Research Assistant</i>	15,000

SORGHUM BOARD

The following projects were approved by the Nebraska Grain Sorghum Development, Utilization and Marketing Board for July 1, 1994—June 30, 1995 funding:

Robert Klein Paul Nordquist Fred Roeth Charles Francis	<i>Nebraska Hybrid Grain Sorghum Seed Growout</i>	\$ 7,500
P. S. Baenziger Jeffrey Pedersen Heidi Kaeppler	<i>Gene Transfer to Sorghum Using Silicon Carbide Fibers</i>	12,500
David Andrews Paul Nordquist	<i>Testing New Grain Sorghum Parental Lines in Eastern and Central Nebraska for Combining Ability, Stable Performance and Lodging Resistance</i>	15,180
David Andrews Paul Nordquist	<i>Screening Sorghum for Germination and Seedling Vigor Tolerance to Cool Soil Temperatures</i>	5,720
Paul Nordquist	<i>Breeding Sorghum for Nebraska Growing Conditions</i>	9,610
Jerry Eastin	<i>Development of Stress Resistance/Improved Seed Size Sorghums</i>	18,070
James Partridge	<i>Development of Molecular Tools for Heat Stress Selection</i>	11,190



**GRANTS AND CONTRACTS
RECEIVED
JUNE AND JULY, 1994**

Agricultural Meteorology	
Verma, S., Ullman, F. and Arkebauer, T. — NASA	\$41,000
Walter-Shea, E. — NASA	7,329
Walter-Shea, E. and Arkebauer, T. — NOAA	150,000
Agronomy	
Baenziger, S. — Pioneer Hi-Bred	25,000
Diestler, D. — Purdue University	13,163
Mortensen, D. — USDA/ARS	36,900
Mortensen, D., Gotway, C., Young, L., Wyse, D. and Martin, A. — USDA/NCIPM	75,000
Shea, P. — Ohio State University	17,000
Miscellaneous Grants under \$5,000 each	24,000
Animal Science	
Miscellaneous Grants under \$5,000 each	26,205
Biochemistry	
Banerjee, R. — March of Dimes Birth Defects Foundation	40,000
Golbeck, J. — NSF	10,000
Wei-ping Lu — NSF	92,000
O'Leary, M. — NIH	169,233
Biological Systems Engineering	
Frantl, T. — UN Foundation	20,000
Miscellaneous Grants under \$5,000 each	350
Biometry	
Miscellaneous Grants under \$5,000 each	3,000
Center for Sustainable Ag	
Francis, C. — W. Kellogg Foundation	8,000
Entomology	
Foster, J. — Pioneer Hi-Bred Int'l, Inc.	22,700
Foster, J. and D'Croz-Mason, N. — Pioneer Hi-Bred Int'l, Inc.	42,300
Siegfried, B. — Ohio State University	12,000
Stanley-Samuelson, D. — Oklahoma State University	21,350
Miscellaneous Grants under \$5,000 each	50,580
Food Processing Center	
Taylor, S. and Neumeister, D. — USDA/CSRS	44,372
Miscellaneous Grants under \$5,000 each	6,897
Food Science and Technology	
Hutkins, R. — Nat'l Dairy Promotion and Research Board	50,000
Jackson, D. and Wehling, R. — Pioneer Hi-Bred	28,500
Taylor, S. — USDA	443,726
Miscellaneous Grants under \$5,000 each	5,160
Forestry, Fisheries and Wildlife	
Brandle, J. — U. S. Forest Service	24,000
Hoagland, K. — Michigan State University	77,256
Hoagland, K. — U.S. Fish and Wildlife Service	57,597
Jelinski, D. — NASA	87,900
Jelinski, D. — U.S. Fish and Wildlife Service	124,804
Miscellaneous Grants under \$5,000 each	100
Horticulture	
Riordan, T. — Crenshaw and Doguet Turfgrass Program	26,460
Shearman, R. — National Turfgrass Evaluation	60,055
Miscellaneous Grants under \$5,000 each	7,395
Northeast Research and Extension Center	
Kranz, W. and Powell, T. — Nebraska Pork Producers Ass'n	18,500
Miscellaneous Grants under \$5,000 each	33,250
Nutritional Science and Dietetics	
Schnepf, M. — Henkel Corporation	10,640
Panhandle Research and Extension Center	
Helm, G., French, R., Lyon, D. and Watkins, J. — USDA/NCIPM	75,000
Weichenenthal, B. — Nebraska Department of Agriculture	8,000
Miscellaneous Grants under \$5,000 each	90,443

Plant Pathology	
Powers, T. — NIH	90,399
Wysong, D. — University of Iowa	6,000
Miscellaneous Grants under \$5,000 each	3,200
South Central Research and Extension Center	
Elmore, R., Cahoon, J., Selley, R., and Ferguson, R. — Crop Production Trust Fund — via UN Foundation	10,047
Miscellaneous Grants under \$5,000 each	20,300
Veterinary and Biomedical Sciences	
Jones, C. — Nebraska Department of Health	30,000
Kelling, C. — Syntorvet, Inc.	11,502
Osorio, F. — Nebraska Pork Producers	17,975
Miscellaneous Grants under \$5,000 each	16,305
Water Center/Environmental Programs	
Watts, D. — USDA	400,000
West Central Research and Extension Center	
Jacoby, P. — UN Foundation — Gudmundsen Sandhills	12,657
Wicks, G. — Anna Elliott Fund — UN Foundation	8,900
Miscellaneous Grants under \$5,000 each	17,033
Grand Total	\$2,831,483

FY1995 CSRS BUDGET PROJECTION

Discretionary spending in the FY1995 USDA budget was reduced by 6 percent from FY1994. This reduction was translated into level or reduced budgets for USDA Science and Education agencies by the Senate and House Agriculture Appropriations Committees. The budgets recently ratified by the House and Senate are provided below. A conference committee will work out the differences in the appropriations. We are disappointed that several programs important to Nebraska are being eliminated or reduced by 10 percent in the FY1995 budget.

Program	FY1994 Approp.	FY1994 Recision	FY1995 House	FY1995 Senate
----- thousands of dollars -----				
Base Funds:				
Hatch Act	171,304	171,304	171,304	171,304
McIntire-Stennis	20,809	20,809	20,809	20,809
Animal Health	5,551	5,551	5,551	5,551
National Research Initiative	112,150	103,071	103,123	103,123
National Special Grants:				
Aquaculture Research	316	297	0	0
Biofuels	500	470	0	0
Global Change	1,250	1,175	1,625	1,625
IPM/Biocontrol	3,228	3,034	2,650	2,731
Minor Use Animal Drugs	650	611	553	550
Nat. Biol. Impact Assess.	300	282	255	254
Pesticide Clearance	6,750	6,345	5,711	5,711
Pesticide Impact Assess.	1,568	1,474	1,150	1,327
Rural Develop. Centers	500	470	425	423
Water Quality	4,500	4,230	2,757	2,757
State Spec.Special Grants	33,492	33,834	18,442	23,049
Nebraska Special Grants:				
Food Processing Center	50	47	0	42
Midwest Adv. Food Manu*	500	470	425	423
Non-food Ag. Products	110	103	0	93
Rural Housing Policy	80	75	0	68
Rural Policy Institute**	525	494	0	644
Sust. Ag. Systems	70	66	0	59
Other Research Programs:				
Aquaculture Centers	3,880	3,880	3,880	3,880
Sustainable Agric.	7,400	7,400	7,400	8,825
Supp. & Altern. Crops	1,818	1,818	1,818	650
Rangeland Res.	461	461	461	0

* In partnership with 12 other North Central Region universities.
** In partnership with Arkansas, Iowa State and Missouri.

INSTITUTIONAL REVIEW BOARD (IRB) GUIDELINES FOR THE PROTECTION OF HUMAN SUBJECTS AND THEIR APPLICATION TO TEACHING AND RESEARCH ACTIVITIES

The IRB is designed to protect human subjects' rights when they provide information for teaching and research projects. Faculty and students at the University of Nebraska who abide by the regulations will be legally supported by the institution if their research is challenged on ethical issues. The IRB results from a federally mandated act, and UNL abides by the regulations to protect federal funds.

One must have IRB approval for any research study involving human subjects when the findings will *contribute to generalizable knowledge by being published in professional journals or presented at professional meetings*. This means one needs IRB approval when:

1. Findings will be published in a professional teaching or research journal or trade journal.
2. The research may be part of a larger study where someone else may publish results.
3. Findings will be presented at professional state, regional, or national meetings where presentations contribute to generalizable knowledge.
4. The research is part of grant dollars external to the Nebraska system.

Potential risk associated with research. Research considered to be *less than minimal risk* is research in which there is no known risk. Research considered *minimal risk* is that which presents only the kinds of risks encountered in daily life by most people (e.g., moderate exercise testing, psychological tests producing minor stress, surveys involving sensitive topics such as drugs, sex). *Greater than minimal risk* procedures are those that may include risk beyond that ordinarily encountered by subjects (e.g., venipuncture, maximal exercise testing, stressful psychological testing).

Exempt and non-exempt research. Research studies needing IRB approval fall either into "exempt research" or "non-exempt research" categories. Research that falls into the *non-exempt* category are those that deal with:

1. *Sensitive topics* (e.g., situations that deal with sensitive or highly personal aspects of the subject's behavior such as recreational drug use, sexual practices, alcohol use by minors, criminal actions, etc.)
2. *Vulnerable subjects* (e.g., situations where data is gathered from children under 18 when they are not in educational settings, victims, persons with mental retardation, etc.)

Decision Tree for Identifying if IRB Approval is Needed

If you answer YES to any of the following questions, you should check into obtaining IRB approval. If you answer NO to all of the questions, you probably do not need IRB approval.

- | | | |
|-----|----|---|
| Yes | No | Will the findings be published in a professional teaching or research journal? |
| Yes | No | Will the findings be shared at state, regional, or national meetings where they will contribute to generalizable knowledge? |
| Yes | No | Is the research part of external grant or contract dollar? |
| Yes | No | Will the data collection process present a situation that is minimal or greater than minimal risk? |
| Yes | No | Does the research involve sensitive topics? |
| Yes | No | Does the research involve vulnerable subjects? |
| Yes | No | Will videotaping or photography be used to collect data? |
| Yes | No | Will the information gathered be used beyond the requirements of the class? |

Additional Information

Previously Collected Data. If you have already collected data and decide that it is publishable, you should still submit an IRB protocol. Be aware that the protocol cannot receive a project number, but it can be verified that the rights of the subjects were protected.

Informed Consent. Mail and telephone surveys that are anonymous do not need separate written informed consent. However, subjects must be informed about the use of the data, assured about confidentiality, given the opportunity to not participate and given phone numbers to contact in case of dissatisfaction. A sample statement for a survey is:

Your responses are confidential¹. If you have questions or concerns about the survey, you can call (name and telephone number). By returning the survey/answering the questions, you will certify that you decided to participate. You have the right to not participate or to withdraw at any time without damaging your relationship with UNL.

If you are obtaining responses in a controlled environment, such as a classroom, where the subject cannot easily leave, then you must obtain a signed consent form from *each* subject. An example consent form is given in the IRB Guidelines Manual (August 1993). If data is collected in the classroom, ideally the instructor should not be present.

¹If you cannot maintain strict confidentiality, you can change the wording to "Efforts will be taken to maintain confidentiality."

Requesting IRB Approval

Additional information and directions for applying for IRB approval are found in the *University of Nebraska-Lincoln Institutional Review Board Guidelines for the Protection of Human Subjects in Research Studies*, August 1993. All Department Heads have a copy of the guidelines. Additional copies are available from:

Institutional Review Board
University of Nebraska-Lincoln
103 Whittier Building
P.O. Box 830849
Lincoln, NE 68583-0849
E-mail: IRB6965@UNL.EDU
Fax: (402) 472-9323
Phone: (402) 472-6965

The *Unit Review Committee* (URC) that considers teaching and research proposals for IRB approval is:

(1994-95)
Maurice Baker
Susan Cuppett
Osmund Gilbertson
Kay Rockwell

Send the original and four copies of your proposal to:

The IANR Unit Review Committee (URC)
c/o Associate Vice Chancellor
202 Agricultural Hall
UNL, 68583-0708