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THE AGRICULTURAL EXPERIMENT STATION
INSTITUTE OF AGRICULTURE
AND NATURAL RESOURCES
UNIVERSITY OF NEBRASKA-LINCOLN 68583-0704

Agricultural Experiment Station News

JULY 1984

VOL 18 NO 1

FIELD LABORATORY TASK FORCE REPORT

The special task force appointed in August 1983 has submitted its report of recommendations for the future administration and development of the University of Nebraska Field Laboratory to the Director of the Agricultural Research Division. The recommendations have been shared with all IANR department heads and the university administration. The report was presented to the agricultural subcommittee of the Board of Regents on July 27, 1984. Several follow-up meetings are being scheduled to discuss the recommendations before finalizing the long-range plans for the Field Laboratory.

Faculty with research programs at the Field Laboratory who have not seen the report are encouraged to review the report and give their comments to the Director. Task Force members and all IANR Department Heads have copies available for review.

Members of the Task Force Committee were: **Roger D. Uhlinger**, Horticulture (chair); **Kenneth R. Bolen**, CES; **James R. Brandle**, F F & W; **Max D. Clegg**, Agronomy; **Earl F. Ellington**, College of Ag; **Richard L. Fleming**, Ag Comm; **Merwin L. Frey**, Vet Sci; **Robert D. Fritschen**, Ani Sci/P.H. Station; **Gayle L. Hattan**, Saunders Co.; **Stanley G. Jensen**, Plant Path; **Terry J. Klopfenstein**, Ani Sci; **Z B Mayo**, Entomology; **William L. Miller**, Ag Econ; **Warren W. Sahs**, ARD/Field Lab; **Dennis D. Schulte**, Ag Engr; **Robert C. Shearman**, Horticulture; **James E. Specht**, Agronomy; and **Shashi Verma**, CAMaC.

The report includes the following general recommendations:

CAPITAL CONSTRUCTION

- *Headquarters Complex Highest Priority
- *Additional Pesticide Disposal Needed

PERSONNEL

- *A-Line Superintendent Recommended
- *No Resident Scientists
- *Upgrade Unit Manager Positions
- *Rely on Rural Fire Department for Protection
- *Contract for Professional Security Personnel

OPERATIONS

- *Appoint an Oversight Liaison Committee
- *Provide Residences for Unit Managers

- *Greater Emphasis on Appearance
- *Develop Demonstration Sites and Signs
- *Explore Lincoln-Mead Mass Transit System
- *Secure Increased Operating Budgets
- *Obtain Improved Phone Linkage to Lincoln
- *Visit Other Facilities for Ideas

LAWSUITS INVOLVING SCIENCE

In a signed opinion column published July 13, 1984, in The Wall Street Journal, **Bernard D. Davis**, professor of bacterial physiology at the Harvard Medical School, provided a plea for the American judicial system to find a better way to handle lawsuits involving complex scientific problems.

Dr. Davis' comments were in response to the injunction granted by **Federal Judge John J. Sirica** which delayed the first proposed outdoor experiment using organisms produced by genetic engineering. Judge Sirica's decision was rendered in a suit filed by **Jeremy Rifkin**, a crusader against genetic engineering. Judge Sirica granted the injunction on narrow legal grounds, emphasizing that he did not judge the scientific arguments. Davis said one must respect the judge's humility in the fact of complex scientific issues, but it is artificial to separate scientific issues from the legal discussion.

In noting that Judge Sirica created a precedent for future judicial interference in the embryonic science, Davis wrote: "What is most disturbing to scientists in this suit is not the demand for an environmental impact statement; it is the way a determined individual, without scientific credentials, can use our legal system to block thoroughly safe, carefully planned and legally approved experiments. Also disturbing is the nature of the movement that has benefited from this legal support. For while the suit emphasizes only the need for prudence in the release of modified bacteria, Mr. Rifkin's books have a larger aim: presenting mystical personal philosophy and apocalyptic visions. He preaches we should not tamper with living nature. One wonders if he would have approved of the agricultural revolution 10,000 years ago that made civilization possible.

—CSRS Newsletter

NAME CHANGES FOR DISTRICT STATIONS

The Academic Affairs Subcommittee for the Board of Regents discussed name changes for the District Stations on July 28, 1984. The following name designations will be officially acted upon by the Board at their September meeting:

University of Nebraska Panhandle Research and Extension Center, Scottsbluff

University of Nebraska West Central Research and Extension Center, North Platte

University of Nebraska Northeast Research and Extension Center, Concord

University of Nebraska South Central Research and Extension Center, Clay Center

University of Nebraska Southeast Research and Extension Center, Lincoln

The Board is also scheduled to act on officially designating the Agricultural Experiment Station as the **Agricultural Research Division** of IANR.

IANR AG EXPO

Special appreciation is extended to the IANR AG EXPO Planning Committee, the Southeast District Extension Agents, the University Field Laboratory personnel and the faculty and staff in Agricultural Communications, Agricultural Economics, Agricultural Engineering, Agronomy, Animal Science, and Veterinary Science who went all out to make the first IANR AG EXPO a success.

It is estimated that 4,500 persons attended the event on July 26, 1984 at the University Field Laboratory. However, more important is the fact that they were exposed to a wide range of research results and educational information pertaining to beef cattle, dairy cattle, sheep, swine and pastures.

The initial response from those who participated was very favorable, but the results of a formal evaluation will be available for use in planning the 1985 IANR AG EXPO. Field Crops will be the general theme and **Loyd Young** and **Warren Sahs** will continue to serve as co-chairs for 1985.

NEW FACULTY APPOINTMENTS

The following appointments have been approved by the Board of Regents for new IANR faculty with research appointments:

David J. Andrews, Professor of Agronomy. Research and International Programs. Effective: July 1, 1984.

Michael B. Liewen, Assistant Professor of Food Science and Technology. Research and Teaching. Effective: July 11, 1984.

Emilio Pagoulatos, Professor of Agricultural Economics. Research and Teaching. Effective: July 11, 1984.

Robert J. Spreitzer, Assistant Professor of Agricultural Biochemistry. Research and Teaching. Effective: September 1, 1984.

GRANT PROPOSAL OPPORTUNITIES

Nebraska Pork Producers Association. Research proposals for 1985 are due in the Agricultural Research Division Director's Office by **September 1, 1984**. IANR Unit Administrators with swine programs have proposal information or call the Dean and Director's Office.

Calf Scour Royalty Research Proposals. Proposals for funding effective January 1, 1985 are due in the Director's Office by **September 1, 1984**. Proposals should be related to high priority research involving livestock diseases. IANR Unit Administrators have details regarding the proposal request if you are interested and have not received a copy.

UNL Research Council Grants. Proposals for research travel to scholarly meetings and visiting scholars for October, November and December of 1984 are due **September 4, 1984**.

IPM North Central Proposals. The Nebraska Agricultural Experiment Station will be invited to submit one single-authored proposal and one multi-authored, interdisciplinary proposal plus one jointly-submitted proposal with one or more other states in the North Central Region involving IPM research related to corn, confinement livestock or potatoes. Persons interested in submitting proposals should contact the Director's office for additional information. Proposals will be due in the Director's office by **September 15, 1984** and with the peer review being handled by the Minnesota Station before October 25, 1984.

Biological Instrumentation. Multi-user instrument or instrument development. NSF. Deadline: **September 30, 1984**. Contact Dr. Arthur Kowalsky (202) 357-7654.

Environmental Biology Postdoctoral Research Fellowships. NSF. Deadline: **October 1, 1984**. Research Fields: Systematics, population biology, ecology, or ecosystems. Contact NSF Postdoctoral Fellowship Program Office (202) 357-7332.

IANR WATER POLICY COMMITTEE

The Water Policy Committee has oversight responsibilities for water quality programs, projects and activities for IANR. This includes review, coordination, guidance and development of recommendations for consideration by the IANR Vice Chancellor, Deans and Directors.

The current Committee consists of **Bill Powers**, Water Resources Center (Chair); **Roger Gold**, Environmental Programs; **Gary Hergenrader**, Forestry, Fisheries and Wildlife; **Bill Miller**, Ag Economics; **Darrell Nelson**, Agronomy; **Norm Rosenberg**, CAMaC; and **Bill Splinter**, Ag Engineering.

Ad hoc task forces, such as the Nitrate Task Force and the Chemigation Task Force report to the Water Policy Committee.



USDA RESEARCH BUDGETS

Federal funding, through the U. S. Department of Agriculture, for research and education programs in support of agriculture and forestry have increased significantly over the last decade in current dollars from \$595 million in FY 1974 to \$1,242 million (estimated) for FY 1984. In constant 1972 dollars, however, total funding actually declined from \$518 million to \$507 million. USDA funding for research rose over the period in constant dollars, from \$336 million to \$366 million (estimated) in FY 1984. Funding for education decreased from \$182 million to \$141 million.

RESEARCH ADMINISTRATIVE CHANGES

Bob Kleis was named Executive Dean for International Affairs for UNL in addition to being Dean and Director of the IANR International Programs Division effective July 1, 1984. This necessitated Dr. Kleis relinquishing his 20% appointment in the Agricultural Research Division. However, high priority will be placed on maintaining close liaison between the Agricultural Research Division and the International Program Division where faculty with research appointments are involved. Involvement in international research projects is an important part of the Agricultural Research Division program.

Bill Powers, Director of the Water Resources Center, will serve as an Assistant Director for Water Research in the Agricultural Research Division in addition to his other responsibilities. He will assist in coordinating water-related research project activities involving IANR faculty with research appointments. Previously, Water Center funded projects conducted by persons on research appointments never got included as a part of the Nebraska Agricultural Experiment Station research program and Nebraska's actual research effort in the water area has been underestimated. Dr. Powers will also be available to serve as he chair of peer review panels for water-related projects.

Home Economics research programs are no longer being coordinated by **John Woodward**. The Home Economics department chairs will assume the same type of leadership for research administration in their respective departments as previously been the case for Agricultural department heads. Dr. Woodward will continue to temporarily represent the Director's office as the administrative advisor for NC-158, NC-164 and NCR-11, but the remainder of his IANR appointment is as a researcher in the Department of Human Development and the Family.

USDA FIVE-YEAR PLAN

The Joint Council on the Food and Agricultural Sciences has issued a Five-Year Plan to the Secretary of Agriculture. It is a conceptual plan, listing the kinds of activities that will be necessary as a first step toward eventually solving long-range problems. The report is divided by subject matter categories listing long range and short range goals and present and projected resource allocation. It provides a forum for evaluating goals and objectives, a standard for evaluating progress, a planning aid for decision makers and an accounting of resource allocation. The Council is co-chaired by **James Anderson**, Dean of Agriculture at Michigan State, and **Orville Bentley**, Assistant Secretary for Science and Education. **Bob Kleis** is a member of the Council representing international programs.

Most IANR units received a copy of this report and faculty and graduate students are encouraged to review it. Contact the Director's Office if there is not a copy available for review in your unit.

CAPITAL CONSTRUCTION REQUEST PRIORITIES

The following are the top ten items on the University Capital Construction List approved by the Board of Regents on July 28, 1984 for the 1985-86 Budget Request:

Priority	Campus	Project Title	Project Cost
1	U-Wide	Fire & Life Safety Code Compliance	\$2,877,200
2	U-Wide	1983 Project Reserve Fund	1,765,000
3	U-Wide	Computer Equipment	3,855,000
4	UNO	Circulation Road, Parking, Annex Renov./Demo.	686,400
5	UNL	Modernize Classrooms & Teaching Labs	423,920
6	UNL	Greater Nebraska IANR Facilities	2,339,900
7	UNMC	Renovate Swanson Center	1,785,000
8	UNL	Long Range Comprehensive Planning	100,000
9	UNMC	Chiller Replacement, Central Utilities	426,000
10	UNL	Utilities—Boiler, East Campus	325,000

This represents a slip in priority for the IANR Greater Nebraska package from the 1984-85 Budget Request.

PROJECT ACCOMPLISHMENTS

Project No. 13-022

Title: Mineral Requirements of Swine

Leader: Ernest R. Peo, Jr.

The Nutrient Requirements of Swine published in 1979 by the National Research Council gives the industry-accepted requirements for calcium and phosphorus for boars and gilts based largely on requirements established with growing-finishing swine. Results from this project indicate that the NRC requirements for calcium and phosphorus for boars and gilts may be too low.

When levels of calcium and phosphorus were fed at recommended NRC levels (0.65% and 0.50% of the diet, respectively), and at 150% or 200% NRC requirements, there was no difference among levels in gains or feed conversions in growing or developing boars. However, bone integrity of the boars on the NCR recommended levels was inferior to that achieved with 150% or 200% NCR. No advantage was noted in feeding levels of calcium and phosphorus beyond 150% NRC.

Gilts fed the NRC recommended levels of calcium and phosphorus during the growing-developing phase of their life-cycle showed evidence of mineral inadequacy during reproduction. Thirty-three percent of the gilts fed the low level of calcium and phosphorus failed to complete one reproductive cycle. Based on these results, it is recommended that developing gilts and boars be fed 0.90% calcium and 0.75% phosphorus which is approximately 50% greater than the current NCR requirements.

Research conducted on the bioavailability of zinc from inorganic or amino acid-chelated sources clearly indicated that there was no difference in bioavailability between the sources of zinc. The least expensive source of zinc is recommended in swine diet formulations.

Project No. 91-021

Title: Changing Food and Nutrition Attitudes and Practices for Improved Nutrition

Leader: Hazel M. Fox

Emphasis on this project centered on nutrition behavior in the grocery store and the use of the grocery store for nutrition education purposes. Food patterns of Moroccan and American adolescents were also studied as a part of this project.

In two separate studies, nutrition education appeared to influence food shopping favorably, i.e., to increase nutritional value of the food and to decrease the amount of money spent for food. Younger shoppers generally were more efficient planners and shoppers than older shoppers. Decreased expenditures for snacks, convenience foods and meats were ways shoppers reported adjusting to rising food practices.

The grocery store was used as a site of nutrition education in three studies. Leaflets describing oranges or whole wheat bread or actual oranges and bread samples were both successful in increasing sales of these foods but the actual samples, especially in the case of bread, had a greater effect than the leaflets. Similarly, recipes improved sale of fresh cabbage and frozen lima beans to almost the same extent as recipes and samples of the products. Recipes again proved successful in improving food habits of shoppers exposed to a series of information and recipes on basic, inexpensive foods. Shoppers are receptive to nutrition ideas in the grocery store when they are presented in a meaningful way.

Food patterns of Moroccan and Nebraskan adolescents differed mainly with regard to amounts of meat and bread in the diet. Moroccans consumed less meat and more bread than Nebraskans. Moroccans also weighed less and had less serum cholesterol, fasting glucose, hematocrit and blood urea nitrogen levels than Nebraskans. It appears that the Moroccan diet may be preferable to the American diet in view of mortality statistics which reflect a rise in degenerative diseases.

1985-86 OPERATING BUDGET REQUEST

The Board of Regents approved a budget request representing a 12.9% increase in General Funds for 1985-86. As indicated in the June newsletter, salaries for faculty and staff are the top priority. The Budget Guidelines as approved were as follows:

<i>1985-86 Increases</i>	<i>Amount</i>
Differentiated Salary:	
Academic/Administrative	2.76%*
Mgr/Prof & Cler/Serv	4.5%
Keep-Pace Salary:	
Academic/Administrative	7.0%
Mgr/Prof & Cler/Serv	7.0%
Benefits:	
Corresponding Benefits	14.0%
Health Insurance	10.0%
Purchased Utilities	11.1%
General Operating Expenses:	
Medical Sup. & Exp.	7.0%
Library Acquisitions	10.0%
Purchased Goods & Svcs.	3.5%
Replacement Equipment	\$200,000
Preventive Maintenance	\$300,000
Computing Acad/Admin:	
Academic	\$1,150,000
Administrative	\$500,000
Special Contracts & Prog.	\$194,000
General Fund Increase	12.97%

*Academic/Administrative Salary Increases
 UNL 3.7%
 UNMC 2.0%
 UNO 2.0% (Non-AAUP, AAUP to be negotiated)
 CA 3.2%

NEW OR REVISED PROJECTS

11-070

Title: Vegetable Oils as an Alternative Fuel for Diesel Engines

Leader: Milford A. Hanna, Agricultural Engineering

Objectives: (1) Determine the critical properties and required modifications of fuels containing vegetable oils necessary for their acceptable use in modern diesel engines. (2) Evaluate equipment and procedures for recovering, processing, transporting and storing fuel-grade vegetable oils. New Hatch project effective March 1, 1984 that contributes to NC-177.

12-137

Title: Methods to Improve Production of Grazing Livestock

Leader: Bruce Anderson, Agronomy

Objectives: (1) Evaluate mid-summer grazing alternatives that will provide increased economical gains/animal and carrying capacity. (2) Develop and evaluate management practices to improve the forage quality of pastures. (3) Evaluate, using grazing animals, forage species that have been genetically improved for in vitro forage quality. New Hatch project effective June 5, 1984.

14-033

Title: Nutritional Impact on Colonic Structure and Function

Leader: Edward T. Clemens, Veterinary Science

Objectives: (1) Measure the effects of diet alterations on the colonic microstructure of swine. (2) Measure the rate of change in electrolyte composition within the colon and histological changes of large bowel epithelium during diet alteration. (3) Measure epithelial transport systems associated with colonic electrolyte composition and colonic microstructure as influence by diet alterations. New Animal Health project effective June 7, 1984.

16-040

Title: Analytical Methods for Food Process Control and Measurement of Processing Induced Changes

Leader: Randy L. Wehling, Food Science and Technology

Objectives: (1) Development of practical, rapid analytical process control methods for quantitating important chemical constituents of dairy products and cereal based foods, the investigation of varietal differences in the protein fraction of hard wheats that affect baking quality. Development and application of analytical methods for measuring processing effects on the vitamin content of food. New Hatch project effective June 21, 1984.

17-032

Title: Biology and Integrated Control of the Greenbug and Other Arthropods on Grain Sorghum

Leader: S. Dean Kindler, Entomology

Objectives: Develop new or effective procedures for the management and integrated control of sorghum insect pests with special emphasis on host plant resistance to the European corn borer and to biotypes of the greenbug. Revised Hatch project effective May 22, 1984.

26-001

Title: Impacts of Erosion Silt and Sedimentation on Fish Populations

Leader: Edward J. Peters, Forestry, Fisheries & Wildlife

Objectives: Determine how suspended solids effect the growth rates, feeding rates and movements of selected species of Nebraska fishes. Revised Hatch project effective July 1, 1984.

IANR GRANTS

IANR received 404 of the 620 grants awards for UNL during January 1, 1984 through June 30, 1984. The IANR grants accounted for \$9,987,743 (61.3%) of the UNL total of \$16,306,147 for this period.

Distribution by the IANR Division is:

Research	\$1,545,672	15.5%
Teaching	18,223	.2%
Extension	1,679,845	16.8%
Water Resources	181,647	1.8%
International Programs	6,063,702	60.7%
Conservation & Survey	498,654	5.0%
Totals	\$9,987,743	100.0%

RESEARCH GRANTS AND CONTRACTS RECEIVED JUNE & JULY 1984

<i>Agricultural Engineering</i>		
Miscellaneous Grants Under \$5,000 each		4,500
<i>Agronomy</i>		
Sander, D. H. - Potash & Phosphate Institute		8,500
Miscellaneous Grants Under \$5,000 each		43,590
<i>Animal Science</i>		
Kinder, J. E., Ward, J. K., & Ferguson, D. L. (Vet Science) - Pfizer, Inc.		11,371
Stock, R. A. - Eli Lilly and Company		21,792
Miscellaneous Grants Under \$5,000 each		23,367
<i>Ag Biochemistry</i>		
Chollet, R. - U. S. Department of Energy		40,000
<i>Center for Agricultural Meteorology & Climatology</i>		
Wilhite, D. A. & Rosenberg, N. J. - National Science Foundation		17,500
<i>Entomology</i>		
Miscellaneous Grants Under \$5,000 each		6,150
<i>Environmental Programs</i>		
Miscellaneous Grants Under \$5,000 each		2,800

Food Science and Technology

Rupnow, J. H. - Ralston Purina	6,400
Shahani, K. M. - Dairy Bureau of Canada	49,549
Shahani, K. M. - Roberts	7,000
Miscellaneous Grants Under \$5,000 each	4,400

Horticulture

Miscellaneous Grants Under \$5,000 each	10,530
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Plant Pathology

Miscellaneous Grants Under \$5,000 each	2,500
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Veterinary Science

Miscellaneous Grants Under \$5,000 each	3,000
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Northeast Station

Witkowski, J. F. - Dow Chemical, USA	7,000
Miscellaneous Grants Under \$5,000 each	16,549

North Platte Station

Miscellaneous Grants Under \$5,000 each	23,100
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Panhandle Station

Smith, J. A., Yonts, C. D., Wilson, R. G., Kerr, E., Robb, J. - Nebraska Bankers Association & UN Foundation	14,639
Miscellaneous Grants Under \$5,000 each	29,350

South Central Station

Roeth, F. W. - Stauffer Chemical Company	11,000
Miscellaneous Grants Under \$5,000 each	8,300

Southeast Extension and Research Center

Miscellaneous Grants Under \$5,000 each	600
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Total	<u>600</u> \$373,487
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CORN BOARD SUPPORT

The following projects were approved by the Nebraska Corn Development, Utilization and Marketing Board for funding for FY 84-85:

K. D. Frank	Increased Nitrogen Utilization by Corn	15,000
G. Hergert		
J. S. Schepers		
R. Stock	Maximizing the Feeding Value of Corn Gluten Fiber and Corn Gluten Feed	26,100
K. M. Shahani	Optimization of Corn and Whey	16,154
C. E. Walker	Cofermentation	
J. H. Rupnow	Corn Germ Protein Isolate-Functional Properties	10,840
C. E. Walker	Multi-Disciplinary Corn Utilization	70,930
J. Kendrick	Research	
Z. B. Mayo		
P. J. Mattern		

WHEAT BOARD SUPPORT

The following projects were approved by the Nebraska Wheat Board for funding for FY 84-85:

P. J. Mattern	Selecting Nebraska Wheats for Processing	19,000
J. W. Schmidt	Needs of Domestic and Foreign Markets	
V. A. Johnson		
M. G. Boosalis	Development of Cultural Practices for the	6,000
J. W. Schmidt	Control of Cephalosporium Stripe of Wheat	
G. A. Wicks		
B. Doupnik		
J. W. Schmidt	Improving Wheat for Nebraska	12,000
V. A. Johnson		
P. J. Mattern		

SOYBEAN BOARD SUPPORT

The following projects were approved by the Nebraska Soybean Development, Utilization and Marketing Board for funding for FY 84-85:

D. M. Danielson	Utilizing Raw Soybeans	14,000
R. Britton	Altering Rumen Degradability of Soy Proteins	21,475
L. A. Klepper	Evaluation of the Effectiveness of Soy Oil Formulations as Carrier for Post-Emergent Herbicides	7,250
R. S. Moomaw	Soybean Production Practices for Sandy Soils in Northeast Nebraska	6,695
D. P. Shelton		
R. W. Elmore	Soil Moisture Depletion versus Growth Stage as Scheduling Criteria for Sprinkler Irrigation Management in Soybeans	15,000
D. Eisenhauer		
J. E. Specht		
J. H. Williams	Development of Improved Soybean Varieties for Nebraska	15,000
J. H. Williams		
J. E. Specht		
E. J. Penas	Soybean Variety Evaluation on High pH Soils	13,600
R. W. Elmore		
P. H. Grabouski		
R. S. Moomaw		
T. W. Dorn	The Effect of Various Tillage Systems on the Utilization of Off-Season Moisture in Irrigated Soybean Stubble	3,590
E. Dickey		
P. Fischbach		
O. C. Burnside	Selective Control of Velvetleaf in Soybeans	11,500
G. A. Wicks	Black Nightshade Control in Soybeans	3,800
A. L. Frederick	Nebraska Farmers' Stake in International Markets	3,423
D. G. Anderson	Prospects for Shipments of Nebraska Soybeans to West-Coast Ports Under Contract Rail Rates and Implications for Elevators and Producers	12,560
L. H. Lutgen	Soybean Production Cost and Marketing Alternatives for Nebraska Soybean Producers	13,900
J. E. Specht	Soybean Genetic Improvement by Parasexual Hybridization	26,000
D. W. Galbraith		
R. V. Klucas	Factors Limiting Nitrogen Fixation in Soybeans: Functional Leghemoglobin	10,380

GRAIN SORGHUM SUPPORT

The following projects were approved by the Nebraska Grain Sorghum Development, Utilization and Marketing Board for funding for FY 84-85:

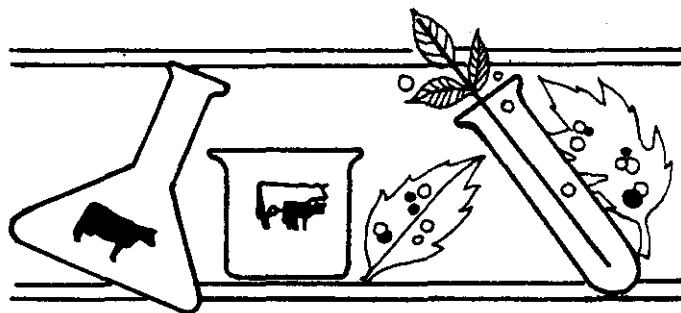
R. Stock	Improving the Feeding Values of Grain Sorghum	11,590
R. Britton		
D. Brink		
C. E. Walker	A Sorghum Based Breakfast Cereal	14,415
L. A. Klepper	Use of Grain Sorghum Particles to Produce Controlled-Release Type Herbicide Granules	9,200
T. Klopfenstein	Protein Value of Milo Distillers Grains for Beef Calves	13,200
R. Britton		
D. M. Danielson	Comparative Feeding Value of Sorghum Parent Lines and Selected Hybrids When Fed to Growing-Finishing Pigs	8,000
P. T. Nordquist		

P. T. Nordquist J. Partridge	Later Season Selection of Sorghum for Improved Stalk Strength	13,500
G. A. Wicks	Weed Control in Continuous No-Till Sorghum	4,450
E. A. Dickason S. D. Kindler	Stimulating Effect of Systematic Insecticides on Yield of Grain Sorghum	5,700
E. A. Dickason	Relationship of Greenbug Feeding Stress and Occurrence of Stalk Rot of Grain Sorghum	6,400
M. D. Clegg C. Y. Sullivan J. D. Eastin	Maximizing Grain Sorghum Yields with Limited Irrigation	4,000
L. A. Klepper J. W. Maranville J. M. Norman C. Y. Sullivan	Biochemical and Physiological Influences of Nitrogen on Water Use Efficiency in Sorghum	10,915
M. G. Boosalis D. H. Yocum G. A. Wicks	The Influence of Mycorrhizae on the Productivity of Field Crops	6,750
J. D. Eastin D. Andrews	Screening for Cool Temperature Germination and Growths	10,300

SALE OF FAWCETT FARM AUTHORIZED

The Board of Regents has authorized that the Fawcett Farm in Cheyenne County be offered for sale with the proceeds to be invested in a University Endowment Fund. The annual income will be used to support dryland agricultural research.

A real estate broker will be selected using sealed bids and the selected broker will be awarded an exclusive contract for sale of the farm by public auction. The 1,120 acres were given to the University as a bequest of William F. Fawcett in 1952. The will provided that the land could not be sold for 21 years and that his niece and her husband could remain as tenants as long as they wished. The will also stipulated that the land was to become a part of the UNL permanent endowment with the annual income to be used for agricultural research.



BIOTECHNOLOGY ENDORSEMENT

The National Science Board passed a resolution supporting an initiative on research related to biotechnology. The initiative supports basic research underlying the field of biotechnology which the Board hopes will stimulate multidisciplinary activities among the biological sciences, chemistry and engineering.

In its resolution, the Board stated, "Advances in biotechnology not only result from scientific progress but also stimulate it...The United States is now the world leader in the fundamental aspects of biotechnology and its commercialization. That leadership is vital for the industrial and economic health of the nation and for the quality of life of our citizens." The resolution pointed out that it will be difficult for the U. S. to maintain that leadership role in the face of increasing competition from other countries.

The Executive Budget Recommendations included \$28,500,000 in USDA Competitive Grants for Biotechnology for 1984-85. However, the House Bill reduced the amount included to \$10,000,000. The Experiment Station Directors through its budget committee members worked to get the original amount restored as it moved through the Senate. The Senate Subcommittee restored the amount to \$28,500,000. It is hoped that this amount will survive the House-Senate Conference that should occur in early August.