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## Agricultural Experiment Station News April 1981

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



April, 1981 Vol. 14 No. 9

# Agricultural Experiment Station News

## From the Director's Desk

**Who determines research priorities?** In determining research program priorities, Agricultural Experiment Station scientists and administrators have available to them input from many and varied sources. These include:

- Clientele....organizations and individual citizens Directly, or through Cooperative Extension programs  
Advisory committees
- USDA  
Agency research priorities  
Joint Council recommendations  
Research and Extension Users Advisory Board Recommendations
- Other Federal and State Agencies
- U.S. Congress and State Legislature  
Stated intent (Farm Bill, for example)  
Appropriations
- Professional and Scientific Organizations  
Research committees  
Research priorities assessment conferences
- Professional colleagues
- Unit administrators

Position descriptions define the general areas of research responsibility for Station scientists. Using their knowledge, disciplined powers of observation and creativity, scientists consider the research needs expressed through the aforementioned input sources, and translate these inputs into planned, structured research projects. Thus, research scientists, exercising their ideas, initiative and imagination, determine research programs and priorities addressed within the Agricultural Experiment Station.

Periodic review and discussion of research projects and programs are intended to maintain a dynamic research program, capable of responding to emerging problem areas.

**Funding of Agricultural Experiment Station research.** In an earlier newsletter, the fiscal year 1979 funding breakdown for the Agricultural Experiment Station was reported. Summary data for fiscal year 1980 (July 1, 1979 to June 30, 1980) are now available, and are presented below. I will be pleased to respond to questions concerning funding of Nebraska Agricultural Experiment Station research programs.

Type of Funds	Percentage of total Experiment Station Budget
<b>GENERAL FUNDS<sup>1</sup></b>	
State Appropriations	49.3%
Federal (Hatch Formula)	8.5
<b>RESTRICTED FUNDS<sup>2</sup></b>	
Federal Agencies	15.2
State Agencies	1.2
Industry	4.3
Foundations	0.5
<b>REVOLVING<sup>3</sup></b>	<u>21.0</u>
	100.0%

1) GENERAL FUNDS are Federal formula funds and state appropriations to the Agricultural Experiment Station, generally without specific identification of programs to be supported.

2) RESTRICTED FUNDS include grants, contracts, cooperative agreements or other earmarked funds to support specific research projects or programs.

3) REVOLVING FUNDS result from sale of products or services. Income from these sales supports costs of supplies, equipment, facilities and personnel for the production enterprise or service provided. Production units exist for the purpose of carrying out research programs, as defined by approved Agricultural Experiment Station projects relating to these production activities. REVOLVING FUNDS are subject to the greatest fluctuation from year to year due to variation in prices, influence of weather on production, etc.

Roy Arnold  
Dean and Director

## Letter from Governor Thone to Director Arnold

This is to acknowledge receipt of a copy of the Ninety-Fourth Annual Report of the Agricultural Experiment Station of Nebraska. You are to be commended in your efforts to provide quality service to the people of Nebraska. Please express my appreciation also to your staff for a job well done. Together we can look forward to continued improvement in the delivery of services to all Nebraskans.

## 1982 IANR Conference Dates

Dates for the 1982 IANR Conference are January 5, 6 and 7, 1982. Further details of the Conference are being planned and will be shared with you as they become available. If you have questions, please call Kathy Prochaska-Cue at 2-2957 or the Committee Chairperson, Duane Eversoll, at 2-3471.

### Sahs Sez:

Now is the time to test your irrigation systems, i.e. motors, pumps, tire inflation, flat tires and check for freeze damage. The condition of stored shell corn should be monitored due to the unseasonably warm temperatures and high humidity.

## Grants and Contracts

Aiken, J. D. (Ag Economics) - Union Pacific Foundation via UN Foundation	7,411
Arnold, R. G. (Director's Office) - USDA/SEA/CR	27,819
Ball, E. M. (Plant Pathology) - Western Potatoes, Inc.	2,080
Compton, W. A. (Agronomy) - Asgrow Seed/Upjohn Company	200
Compton, W.A. (Agronomy) - Hoegemeyer Hybrids, Inc.	500
DeShazer, J. (Ag Engineering) - Nebraska Pork Producers Association	1,500
Fischer, L. K. (Ag Economics) - Cooper Foundation via UN Foundation	2,000
Froning, G. W. (Animal Science) - Poultry Science Association	150
Gardner, C. O. (Agronomy) - Garst and Thomas Hybrid Corn Company	3,000
Gustafson, W. A. (Southeast Extension & Research Center) - Greiner & Sons - Donation/Gift	740
Gustafson, W.A. (Southeast Extension & Research Center) - Nebraska Nut Growers Association - Donation/Gift	385
Hergert, G. W. (North Platte Station) - Phillips Chemical Company	1,000
Klopfenstein, T. (Animal Science) - Farmland Industries	8,000
Laughlin, J. (Textiles, Clothing & Design), Gold, R. E. Environmental Programs), Easley, C. (Textiles, Clothing & Design), Tupy, D. (Agronomy) - North Central Regional-Pesticide Assessment Program	20,100
Olson, R. A. (Agronomy) - Tennessee Valley Authority	9,000
Olson, R. A. (Agronomy) - Phillips Chemical Company	1,000
Peterson, G. A. (Agronomy), Sander, D. H. (Agronomy) - Phillips Chemical Company	4,000
Riordan, T. P. (Horticulture) - Nebraska Turf Foundation	2,000
Shahani, K. M. (Food Science & Technology) - National Dairy Council	20,100
Splinter, W. E. (Ag Engineering), Schulte, D. (Ag Engineering) - U. S. Department of Energy	580,000
Wagner, F. W. (Ag Biochemistry) - National Science Foundation	30,000
Wicks, G. A. (North Platte Station) - Shell Development Company	2,000

## Special Grants

There were five Special Grants submitted through the Ag Experiment Station for submission to the USDA/SEA. The breakdown of the areas are as follows:

- Beef Cattle - Reproduction
- Beef Cattle - Respiratory Disease Complex
- Swine - Enteric Diseases
- Swine - Parasites
- Swine - Respiratory Disease

Thank you to the Department of Veterinary Science for their preparation of the grants and their cooperation with the Experiment Station on submittal of the grants.

The Agricultural Experiment Station provides information and educational programs to all people without regard to race, color or national origin.

NEBRASKA AGRICULTURAL EXPERIMENT STATION PUBLICATIONS - March 1981

Journal Articles - Submitted for Publication (contact authors for more information)

6015. Isoation and Characterization of the Major Bean Protein from Great Northern Beans (*Phaseolus vulgaris*). K. C. Chang and L. D. Satterlee. Journal of Food Science.
6016. Factors Affecting the Use of Time by a Selected Group of Vocational Agriculture Instructors. Roy D. Dillon. Journal of Vocational Education Research.
6017. Nitrogen Fixation (Acetylene Reduction) by *Klebsiella pneumoniae* in Association with "Park" Kentucky Bluegrass (*Poa pratensis* L.). L. B. Wood, R. V. Klucas, and R. C. Shearman. Canadian Journal of Microbiology.
6018. Sterol Methyltransferase from *Uromyces phaseoli*: An Investigation of the First and the Second Transmethylation Reactions. Surendra K. Bansal and Herman W. Knoche. Phytochemistry.
6019. Effect of Temperature on Susceptibility of Normal and Aberrant Ratio Corn Stocks to Barley Stripe Mosaic and Wheat Streak Mosaic Viruses. Myron K. Brakke and Richard Samson. Phytochemistry.
6020. Absorption and Effect of Simazine and Atrazine on *Elodea Canadensis* Michx. Simon Dabydeen and J.R.C. Leavitt. Bulletin of Environmental Contamination and Toxicology.
6021. Fringed Sagebrush (*Artemisia frigida*) Control in Western Nebraska. R. G. Wilson and J. Stubbendieck. Weed Science.
6022. Industrial Alcohol Production Via Whey and Grain Fermentation. B. A. Friend, M. L. Cunningham and K. M. Shahani. American Dairy Science Association.
6023. Introducing Neophytes to Statistical Analysis Via STATAN. Anne M. Parkhurst. Proceedings of American Statistical Association.
6024. Potential of Milk Yield in Short Segments of Early Lactation as Covariates in Feeding Experiments. S. R. Lowry and F. G. Owen. Journal of Dairy Science.
6025. Influence of Windbreak-Shelter on Light Interception, Stomatal Conductance and CO<sub>2</sub>-Exchange Rate of Soybeans. S. N. Ogbuehi and J. R. Brandle. Transactions of the Nebraska Academy of Sciences.
6026. Comparison of Alfalfa Silages and Hays in Corn Silage Rations. V.E. Krause and R. A. Britton. Journal of Animal Science.
6027. An Evaluation of Native and Exotic Grass Species for Ornamental Use in Nebraska. D. H. Steinegger, R. C. Shearman and D. E. Janssen. HortScience.

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Journal Abstracts - Submitted for Publication (contact authors for more information)

- 80-1476. Influence of Soybean Pubescence Type on Radiation Balance. David C. Nielsen, Blaine L. Blad and Shashi B. Verma. 15th Conference on Agriculture and Forest Meteorology of the American Meteorological Society, Riverside, CA, March 30-April 3, 1981.
- 80-1477. Dark Respiration on Soybeans (*Glycine max* (L.) Merr.) José M. N. DeCosta, Shashi B. Verma and Norman J. Rosenberg. 15th Conference on Agriculture and Forest Meteorology of the American Meteorological Society, Riverside, CA, March 30-April 3, 1981.
- 80-1478. Planting Time Applications of Insecticides for Control of Chinch Bugs on Grain Sorghum, 1980. S. D. Kindler, R. Staples and L. R. Cobia. Insecticide and Acaracide Tests.
- 80-1479. Foliar Applications of Insecticides for Control of Chinch Bugs on Grain Sorghum, 1980. R. Stables, S. D. Kindler and L. R. Cobia. Insecticide and Acaracide Tests.
- 80-1480. The Relationship Between Anatomical and Physiological Aspects of Field Bindweed Under Water Stress Conditions. M. H. Rashed and L. C. Haderlie. North Central Weed Control Conference.
- 80-1481. Control of Field Bindweed with Glyphosate and Growth Regulator Combinations. M.H. Rashed and L.C. Haderlie. North Central Weed Control Conference.
- 81-1482. In-Floor Storage of Solar Heat. Gerald R. Bodman, James A. DeShazer, Michael F. Kocher, James A. Lamb.
- 81-1483. The Influence of Environmental Variables on Nitrogen Efficiency in Grain Sorghum. T. R. Zweifel, J. W. Maranville, W. M. Ross and R. B. Clark. Proceedings of SICNA Conference, Lubbock, Texas.
- 81-1484. Evaluation of Libido in Young Boars. D. G. Levis and R. K. Christenson. Journal of Animal Science.
- 81-1485. Age at Puberty and Estrous Activity in Purebred and Reciprocally Crossbred Gilts. R. D. Allrich, R. K. Christenson and J. J. Ford. Journal of Animal Science.
- 81-1486. Influence of Photoperiod (16L:8D vs 8L:16D) and Size of Rearing Group (10 vs 30) on Age at Puberty in Confinement-Reared Gilts. M. E. Wise, R. D. Allrich, A. Jones, R. J. Kittok and Dwane R. Zimmerman. Journal of Animal Science.

BULLETINS PRINTED

- SB 546. An Evaluation of Native and Exotic Grass Species for Ornamental Use in Nebraska. D. H. Steinegger, R. C. Shearman and D. E. Janssen.