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## Agricultural Experiment Station News September 1982

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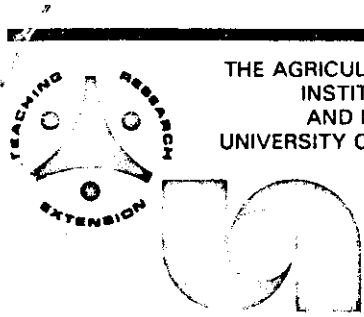
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THE AGRICULTURAL EXPERIMENT STATION  
INSTITUTE OF AGRICULTURE  
AND NATURAL RESOURCES  
UNIVERSITY OF NEBRASKA-LINCOLN 68583

# Agricultural Experiment Station News

September 1982 VOL 16 NO 2

## FROM THE DIRECTOR'S DESK

The AES Director's office recently received a memorandum from W. I. Thomas, Administrator of USDA-CSRS in Washington, D.C.

On June 11, 1982, the U.S. Department of Agriculture published final regulations in the Federal Register, Vol. 47, No. 113, prohibiting discrimination on the basis of handicap in USDA programs and activities. This rule is necessary to implement Section 504 of the Rehabilitation Act of 1973 as amended and Executive Order 12250 of November 2, 1980, Leadership and Coordination of Nondiscrimination Laws.

Section 504 of the Rehabilitation Act is designed to assure that those who receive federal assistance will not discriminate against handicapped persons. It provides in relevant part as follows:

"No otherwise qualified handicapped individual in the United States...shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."

For further information, we have a copy of the Federal Register in the Ag. Experiment Station Director's office.

**R.W. Kleis**  
Acting Dean & Director

## PROTECTION OF HUMAN SUBJECTS

The University of Nebraska has provided a formal guarantee to the Department of Health and Human Services (DHHS) that it will follow procedures which will assure the protection of all human subjects involved in research projects. This guarantee applies to research conducted by anyone on the premises of the University of Nebraska and to research conducted elsewhere by faculty, students, staff or other representatives of the University.

To comply with this assurance, the University of Nebraska has established an institutional committee competent to review research projects that involve human subjects. This committee has been designated as the Institutional Review Board (IRB).

If you have a research proposal that involves human subjects, it must be approved by the IRB prior to im-

plementation. If you have questions or need information on the procedure, contact John Woodward who is a member of the IRB.

**John C. Woodward**  
Assistant Director

## EXPERIMENT STATION SEMINAR

The Experiment Station Advisory Council has arranged a special seminar featuring Dr. Nelson R. Otto, President of Anticipatory Sciences, Inc., Minneapolis, Minnesota. Dr. Otto is an adjunct faculty member of the University of Minnesota and has served in an advisory capacity to the Rehabilitation Institute of Chicago (Northwestern University), the University of Cincinnati, the University of Michigan Research Institute, and Michigan State University, among others. Dr. Otto researches the future and is a well-known management futures consultant.

Topic of the seminar on November 11 (4 p.m. in the East Union) will be "Impact of Future Agricultural Technologies on Rural Lifestyles." All IANR staff are invited.

**Dale Anderson, Chairman**  
Ag. Experiment Station Advisory Council

## PROGRESS AT THE GUDMUNDSEN SANDHILLS RESEARCH CENTER

The Center is now in its second year of operation. During the first year most of the emphasis was placed on developing facilities for research purposes and getting the ranch stocked with cattle. Currently there are 700 cow-calf pairs and 90 bred yearling heifers on the ranch. There are also 35 bulls which are used for the breeding program. At this time this is considered fully stocked, however, with further development and new information from research it is possible that the ranch could handle more livestock. This summer about 2,000 tons of meadow hay were harvested. All in all, this has been a good year for ranching in that area.

Considerable industry support and the University of Nebraska Foundation all have been helpful in contributing funds to acquire needed facilities. A calving shed was completed before calving last spring and currently further development in the shed is being made for

handling cattle for experimental purposes. In the first year about 10 miles of new fence were built with 7 new wells and windmills. These were badly needed to distribute cattle through pastures and provide a pasture facility for some research currently in progress. A winter supplementation area is currently being laid out and hopefully 7 miles of fence and new wells and windmills will be installed this fall.

Meadow management work has begun. This work is considered high priority on our research needs. Winter supplementation work has been initiated. This summer a fly control management study is in progress, also a study to evaluate the effect of worming calves on summer pasture. Last spring a study on the association of pelvic size with calving difficulty was conducted. These are rather practical and applied type of experiments but are addressing problems that need answers for the Sandhills rancher.

**D.C. Clanton**  
**North Platte Station**

**25TH ANNIVERSARY AND FIELD DAY—  
NORTHEAST STATION**

Over 800 people attended the 25th Anniversary and Field Day at the Northeast Station at Concord on August 24.

Residents of northeast Nebraska were given research tours on a variety of topics ranging from swine nursery energy management to corn production to insecticide research to feed additives and implants for steers.

Ceremonies recognizing the 25th anniversary of the station honored members and officers of the Northeast Nebraska Experimental Farm Association, University administration and faculty and members of the C. D. Haskell family, donors of the station land.

**Terry Meisenbach**  
**Agricultural Communications**

**SAHS SEZ**

The second annual Alternate Cropping Systems (Organic Agriculture) Field Day and Farm Tour was held at the Northeast Experiment Station and three farm stops were well attended by 185 people, a 23% increase over last year.

**Warren W. Sahs**  
**Assistant Director**

**GRANTS AND CONTRACTS**

Burnside, O. C. (Agronomy) - Rohm and Haas Company	1,000
Calkins, C. R. (Animal Science) - Nebraska Pork Producers Association	5,500
Campbell, J. B. (North Platte Station) - John S. Evans	300
Chesnin, L. (Agronomy) - Anonymous	2,180
Clanton, D. C. (North Platte Station) - Eli Lilly and Company	8,430
Compton, W. A. (Agronomy) - Illinois Foundation Seeds, Inc.	1,000
Compton, W. A. (Agronomy) - Fontanelle Hybrid Seed Company	200
Compton, W. A. (Agronomy) - Pioneer Hi-Bred Seed	40
Fischbach, P. E. (Ag Engineering) - Sandia National Laboratories	34,500
Flowerday, A. D. (Agronomy) - Grain Processing Corporation	1,600
Gold, R. E. (Environmental Programs) - Merck & Company, Inc.	1,000
Lindgren, D. T. (North Platte Station) - Midwest Region, American Penstemon Society	150
Mandigo, R. W. (Animal Science) - Nebraska Pork Producers	4,000
Mandigo, R. W. (Animal Science) - UN Foundation	1,123
Moomaw, R. (Northeast Station) - Rohm and Haas Company	750
Morris, M. R. (Agronomy) - USDA/SEA	78,000
O'Keefe, R. B. (Panhandle Station) - Valley Plant Growers	80
Partridge, J. E. (Plant Pathology) - Rohm and Haas Company	500
Partridge, J. E. (Plant Pathology) - Rockefeller Foundation	30,000
Roeth, F. W. (South Central Station) - Rhone-Poulenc, Inc.	1,500
Satterlee, L. D. (Food Science & Technology) - Food Science & Nutrition Sec., Ministry of Ag. & Water Regional Ag. & Water Resources Center	240
Schmidt, J. W. (Agronomy) - Rohm and Haas Company	3,750
Specht, J. E. (Agronomy) - Union Pacific Foundation	6,400
Sullivan, C. Y. (Agronomy) - USDA/ARS	18,000
Waller, S. S. (Agronomy) - Tri-Basin Natural Resources District	750
Waller, S. S. (Agronomy) - Middle Republican Natural Resources District	750
Watkins, J. E. (Plant Pathology) - Rohm and Haas Company	750
Wilson, R. G. (Panhandle Station) - Rohm and Haas Company	2,000
	204,493

## CALENDAR OF EVENTS

<i>Day and Date</i>	<i>Time</i>	<i>Event and Place</i>
Tuesday-Thursday September 14-16	all day	Husker Harvest Days - Grand Island, Nebraska
Friday, September 17	1:30-6:30	Beef Research Field Day at University Field Laboratory, Mead, Nebraska.
Saturday-Sunday September 25-26	all day	Forestry Field Days - Horning Farm, 2 miles south of Plattsmouth, Nebraska
Wednesday, September 29	1:30 and at 5:30	No-Till Fall Field Day at the Legion Hall at Tobias, Nebraska
Friday, October 1	2:00 p.m.	Dedication Ceremonies of the Thomas H. Goodding Learning Center - three Teaching Laboratories in Room #199, Plant Science - UNL, East Campus.

NEBRASKA AGRICULTURAL EXPERIMENT STATION PUBLICATIONS - August 1982

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

6950. A Note on the Number of Pigs per Pen in Designed Experiments. M. D. MacNeil and W. G. Pond. *Animal Production*.
6951. Expected Relative Responses to Selection for Alternative Measures of Life-cycle Economic Efficiency of Pork Production. C. Smith, G. E. Dickerson, M. W. Tess and G. L. Bennett. *Journal of Animal Science*.
6952. Solar Heating Systems: Differentiation Between Stages in the Innovation-Decision Process. E. Raedene Combs and Anne M. Parkhurst. *Journal of Consumer Research*.
6953. Decreasing Aldrin LD<sub>50</sub> Values for the Adult Western Corn Rootworm in Nebraska as Related to Aldrin and Dieldrin Soil Residues-1962-1981. H. J. Ball. *Journal of Economic Entomology*.
6954. Comparative Effects of Various Sucrose-Fatty Acid Esters. L. M. Breyer and C. E. Walker. *Journal of Food Science*.
6955. Mechanisms of Yield Stability in Grain Sorghum (*Sorghum bicolor* (L.) Moench). G. M. Heinrich, C. A. Francis and J. D. Eastin. *Crop Science*.
6956. Estimates of Quantitative Traits in Sorghum Populations from Different Numbers of S<sub>1</sub> Progenies. W. M. Ross, R. L. Deaton and J. W. Maranville. *Crop Science*.
6957. Habitat Relationships of Roosting and Flocking Red-Winged Blackbirds. R. J. Johnson and J. W. Caslick. *Journal of Wildlife Management*.
6958. Auditory Pathology of Seizure-Prone Chicks. Mary M. Beck, Wayne J. Kuenzel and Robert C. Switzer III. *Brain Research*.
6959. Implication of Iron in Seizure Syndrome of Mutant Chicks (*Gallus domesticus*) Mary M. Beck, Wayne J. Kuenzel. *Journal of Comparative Biochemistry and Physiology*.
6960. Significance of Residual Organisms in Foods After Sub-sterilizing Doses of Gamma Radiation: A Review. R. B. Maxcy. *Journal of Food Processing and Preservation*.
6961. Effects of Substrate and Temperature on Aflatoxin Production by *Aspergillus parasiticus* and *Aspergillus flavus*. Kun-Young Park and Lloyd B. Bullerman. *Journal of Food Protection*.
6962. Virus Infection of Culturable Eukaryotic Algae and Development of a Biologic Assay. James L. Van Etten, Dwight E. Burbank, Daniel Kuczmariski and Russell Meints. *Science*.
6963. Irrigation of Soybean Genotypes During Reproductive Ontogeny I. Agronomic Responses. L. L. Korte, J. H. Williams, J. E. Specht and R. C. Sorensen. *Crop Science*.

6964. Agricultural Climatology of Sorghum - The Americas. R. E. Neild. Invited paper ICRISAT/WMO Symposium on Agrometeorology of Sorghum.
6965. Field Evaluation of Two Trap Designs Used for Control of German Cockroach Populations. James B. Ballard, Roger E. Gold and Roger L. Deaton. Journal of the Kansas Entomological Society.
6966. Field Windbreak Economics. J. R. Brandle, B. B. Johnson and D. D. Dearmont. Proceedings of the Annual Meeting of the Forestry Committee of the Great Plains Agricultural Council.
6967. Irrigation of Soybean Genotypes During Reproductive Ontogeny II. Yield Component Responses. L. L. Korte, J. E. Specht, J. H. Williams and R. C. Sorensen. Crop Science.
6968. Infant Feeding Practices of Low and Middle Income Families in Nebraska. Barbara D. Brogan and H. M. Fox. Journal of the American Dietetic Assn.
6969. Utilization of Proteins from Biomass By-products (A Review Article). L. D. Satterlee. I and EC Product R&D Journal.
6970. Chemistry of Dry Bean Proteins (A Review Article). K. C. Chang and L. D. Satterlee. Journal of Food Processing and Preservation.
6971. Burn Injury Accidents in Nebraska. Joan Laughlin. Nebraska Medical Journal.
6972. Economic Analysis of Windbreaks: The Case of Winter Wheat Production in Eastern Nebraska. James R. Brandle, Bruce B. Johnson and David D. Dearmont. Journal of Soil and Water Conservation.
6973. Choice of a Prediction Equation and Its Use in Subsequent Experimentation. M. D. MacNeil. Journal of Animal Science.
6974. Drought Resistance and Wheat Breeding. John W. Schmidt. Symposium - Plant Production & Management Under Drought Conditions.
6975. Improved Weed Control with a Subsurface Jet Injection System for Herbicides. J. B. Solie, H. D. Wittmuss and O. C. Burnside. Transactions of the ASAE.
6976. Maternal Performance Over Three Parities in Rats Selected for Rate or Efficiency of Protein Gain. Sara Melin Azzam, M. K. Nielsen and G. E. Dickerson. Journal of Animal Science.
6977. Inheritance and Associations of Leaf, External, and Internal Pod Reactions to Common Blight Bacterium in *Phaseolus vulgaris* L. Nicolas E. Valladares - Sanchez, Dermot P. Coyne, Robert F. Mumm and Max L. Schuster. Journal of American Society of Horticultural Science.

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

- 82-1784. Relation Between Yield Stability and Yield Components in Grain Sorghum. M. Saeed, C. A. Francis and J. F. Rajewski. Sorghum Newsletter.

- 82-1785. Genotype and Genotype X Environment Interaction Effects on Forage Yield and Quality of Crested Wheatgrasses. J. F. Swinton, K. P. Vogel and P. E. Reece. ASA 1982 Annual Meetings.
- 82-1786. Atrazine Tolerance in Warm-season Range Grasses. C. C. Bahler, L. E. Moser and K. P. Vogel. ASA 1982 Annual Meetings.
- 82-1787. Breeding for Improved Yield and Forage Quality in the Tall Bluestem and Indiangrass. Kenneth P. Vogel. ASA 1982 Annual Meetings.
- 82-1788. Response of Kentucky Bluegrass Cultivars to Stem Rust. J. E. Watkins, R. C. Shearman and T. P. Riordan. Agronomy Abstracts.
- 82-1789. Completeness of Methyl Parathion Residue Removal After Multiple Launderings of Contaminated Fabric. Carol Easley, Joan Laughlin and Roger Gold. ACPTC Proceedings.
- 82-1790. Effects of Methyl Parathion Concentration on Residue Removal Through Laundering Contaminated Denim. Joan Laughlin, Carol Easley and Roger Gold. ACPTC Proceedings.
- 82-1791. Soybean Pubescence Variants - An Isogenic Analysis of Agronomic Worth. J. E. Specht, J. H. Williams and D. R. Pearson. ASA 1982 Annual Meetings.
- 82-1792. Inheritance of Membrane Thermostability and Agronomic Characters in Two Soybean Crosses. George M. Pollak, James H. Williams and James E. Specht. ASA 1982 Annual Meeting.
- 82-1793. Genotype and Genotype X Environment Interaction Effects on Forage Yield and Quality of Intermediate Wheatgrass. P. E. Reece, K. P. Vogel and J. F. Swinton. 1982 ASA Meetings.
- 82-1794. Seedling Vigor: Opportunities to Improve Establishment. L. E. Moser and K. P. Vogel. 1982 ASA Meetings.
- 82-1795. Germination Characteristics of *Penstemon Haydeni* Wats. J. Stubbendieck, Russell K. Engel, Walter Schacht, Jayne Traeger and Ronald R. Weedon. Nebraska Academy of Sciences Meetings.
- 82-1796. Laminated Plant Mounts as Teaching Aids. S. Schuckert, J. Stubbendieck and S. S. Waller. Society for Range Management Meetings.
- 82-1797. Leaf Area Index, Light Interception, and Growth of Smooth Brome. Russell K. Engel, J. Stubbendieck and Lowell F. Moser. Society for Range Management Meetings.
- 82-1798. Effects of Seed Coating on Germination of *Andropogon hallii* and *Schizachyrium scoparium*. Eric Kocher, J. Stubbendieck and S. S. Waller. Society of Range Management Meetings.
- 82-1799. The Yield Response of Different Sorghum Plant Types Grown in 38, 76 and 114 cm Row Spacings. Max D. Clegg. ASA 1982 Meetings.