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## Agricultural Experiment Station News December 1977

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THE AGRICULTURAL EXPERIMENT STATION  
INSTITUTE OF AGRICULTURE  
AND NATURAL RESOURCES  
UNIVERSITY OF NEBRASKA-LINCOLN  
H. W. OTTOSON, DIRECTOR

# Agricultural Experiment Station



Vol. 10, No. 6, December 1977

## FROM THE DIRECTOR'S DESK

ENERGY WORKSHOP: Special Energy Areas Deserving Attention--10:00 AM, January 9

The Experiment Station Energy Committee will sponsor a workshop for Station staff preceding the Experiment Station luncheon of the IANR conference. This workshop will represent a final report of this committee which has been active during the past year. Dr. Splinter has chaired this committee. The room in which the session will be held will be posted on the East Campus Union bulletin board.

Howard W. Ottoson

## NEBRASKA WATER RESOURCES CENTER

The University--and especially the Institute of Agriculture and Natural Resources (IANR)--has long recognized the key role that water plays in the economic, social and environmental well-being of the state and its citizens. For many years, the Institute and its predecessor units have been involved in meeting the water resources research and educational needs of the state, region and nation. The largest part of this effort, in terms of total expenditure of resources, is in research. However, water resources extension and academic programs are also significant components of this program. At the present time practically all of the units of IANR, and many other units of UN-L and of other institutions and agencies in the state are involved to some degree in this effort.

Established in 1964, the mission of the Nebraska Water Resources Center is to coordinate, foster, administer and conduct research, information dissemination, educational and training activities which are responsive to the water resources needs of Nebraska, the surrounding region and the nation. As the Center staff is, and will remain, relatively small, its major role is in coordination--to stimulate, guide and expedite the efforts of others with interests and responsibilities in water resources.

The Center conducts a three-step planning process to determine the state's water resources research and educational needs. First, an evaluation is made of the state's water problems, through solicited input from key individuals and agencies. The second step is the delineation of research and educational programs and the setting of priorities in consultation with the Agricultural Experiment Station and other appropriate parties. The third step in the process involves planning to obtain the resources to carry out the needed projects.

The latest iteration of this planning process has led to the recognition of several critical areas of research and educational needs including: water law; atmospheric drought research and monitoring; irrigation energy efficiency; drought tolerance of plants; water quality; and economic, social and environmental implications of alternative water policies. The Water Resources Center, in cooperation with other units and agencies with an interest in water, will be doing what it can to see that these needs are met.

M. W. Hall

PERSONNEL ACTIONS

Bigbee, Daniel E. - Prof. of An. Sci. & Ext. Poultry Specialist - New Appointment  
 Francis, Charles W. - Assoc. Prof. - Vet. Science - Resignation  
 Gustafson, William, Jr. - Asst. Prof. of Hort. - Dist. V Specialist - New Appointment  
 Harrington, Constance A. - Asst. Prof. of Forestry, Dist. Ext. Forester - Resignation  
 Martineau, Jess R. - Research Asst. - Agronomy - Resignation  
 Partridge, James E. - Asst. Prof. - Plant Pathology - New Appointment  
 Torres-Medina, Alfonso - Asst. Prof. - Vet. Science - New Appointment  
 Watts, Darrell G. - Assoc. Prof. - Ag. Eng. - Transfer from N.P. to Lincoln

GRANTS AND CONTRACTS

Baker, M. - Ag. Econ. - Lower Platte South Natural Resources Dist.	\$ 2,000
Clanton, D. C. - An. Sci. (NP Sta.) - NIPAK, Inc., Eli Lilly & Co.	8,900
Cole, P. H., & L. L. Larson - An. Sci. - Mid-American Dairymen, Inc.	2,316
Fenster, C. R. - Agron. (PH Sta.) - Shell Chem. Co., PPG Ind., Inc.	2,500
Fischbach, P. E. - Ag. Eng., - Stauffer, Delmhorst Instmt., Ciba-Geigy	3,500
Kelling, C. - Vet. Sci. - USDA-ARS	10,000
Kies, Constance - Food & Nutr. - Ross Laboratories	15,000
Klopfenstein, T. - An. Sci.-Delst Chemical & Research, Inc.	4,000
Nelson, L. A., & W. A. Compton - Agron. (PH Sta.) - Anna H. Elliott Fund	8,000
Nichols, J. T. - Agron. (NP Sta.) - Anna H. Elliott Fund	10,000
Retzlaff, R. - Agron. (PH Sta.) - Dept. of Agriculture - Wheat Division	2,500
Splinter, W. E. - Ag. Eng. - Alcoa, & James F. Lincoln Arc Welding	5,250
Splinter, W. E. - Ag. Eng. - Miscellaneous Donors	2,314
Steadman, J. R. - Plant Pathology - Upjohn Company	500
Sullivan, T. W. - An. Sci. - Amer. Hoechst Corp., IMC Chem. Group, Inc.	1,005
Weiss, A. - Agron. (PH Sta.) - Anna H. Elliott Fund	1,250
Wicks, G. A. - Agron. (NP Sta.) - Stauffer Chemical Company	500
Wilson, R. G., Jr. - Agron. (PH Sta.) - Anna H. Elliott Fund	3,000
Wilson R. G., Jr. - Agron. (PH Sta.) - PPG Ind., Inc., Chevron	1,500

GENERAL NOTES

1. On December 10 the Board of Regents approved a recommendation from the IANR which changes the titles of all Chairmen of Departments in agriculture to Department Heads. In the connotations which have evolved with these titles, the term Head is more consistent with their functions in the IANR.
2. Many of you have recently been reminded of termination dates, past or pending, of your AES projects. We remind all project leaders that keeping project outlines current is one of your responsibilities.
3. Please be reminded to schedule participation in the 1978 IANR Staff Conference on January 9-12. You have each received a copy of the program developed by a committee of your peers.
4. The new headquarters facility for the South Central Station is now "on stream" and is providing a fine and much needed home for that District Station. The new swine facility at the Field Laboratory is nearing completion and will be dedicated in ceremonies January 19.
5. THE DIRECTOR'S OFFICE STAFF WISHES YOU A VERY MERRY HOLIDAY SEASON AND HAPPY 1978!

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NEBRASKA AGRICULTURAL EXPERIMENT STATION PUBLICATIONS - November 1977

Journal Articles (contact authors for more information)

5407. Use of Total Whey Constituents for Human Food. B. N. Mathur and K. M. Shahani. Journal of Dairy Science.
5408. The Effect of Preslaughter Temperature, Stress, Struggle and Anesthetization on Color and Textural Characteristics of Turkey Muscle. G. W. Froning, A. S. Babji and F. B. Mather. Poultry Science.
5409. Effect of Storage on Lipid Composition and Functional Properties of Dried Egg Products. Eng-Hwa Liew and G. W. Froning. Poultry Science.
5410. Effect of Drying Temperature on Nutritional Quality and Availability of Amino Acids in Normal and Opaque-2 Corn for Rats. Pedro H. Rivera L., E. R. Peo, Jr., B. D. Moser, T. Crenshaw and P. J. Cunningham. Journal of Animal Science.
5411. Effect of Maturity and Drying Temperature on Nutritional Quality and Amino Acid Availability for Normal and Opaque-2 Corn for Rats and Swine. Pedro H. Rivera L., E. R. Peo, Jr., Dale Flowerday, T. D. Crenshaw, B. D. Moser and P. J. Cunningham. Journal of Animal Science.
5412. Runoff Control Comparisons for Commercial Beef Cattle Feedlots. C. B. Gilbertson, J. A. Nienaber, J. L. Gartung, J. R. Ellis and W. E. Splinter. Transactions of the American Society of Agricultural Engineers.
5413. Copper Functions and Interrelationships in Poultry Nutrition. T. W. Sullivan. Federation of American Societies for Experimental Biology.
5414. Effect of Energy Sources Administered Prior to Parturition and During Lactation on Tissue Lipid, Liver Glycogen and Plasma Levels of Some Metabolites in the Newborn Pig. R. Dean Boyd, B. D. Moser, E. R. Peo, Jr. and P. J. Cunningham. Journal of Animal Science.
5415. Effect of Energy Source Prior to Parturition and During Lactation on Piglet Survival and Growth and on Milk Lipids. R. Dean Boyd, B. D. Moser, E. R. Peo, Jr. and P. J. Cunningham. Journal of Animal Science.
5416. Urea as a Dietary Supplement for Humans. Constance Kies and Hazel Metz Fox. Journal of Agriculture and Food Chemistry.
5417. A Conceptual Framework for Measurement of Adequacy of Home to Provide Symbols Congruent to Occupant's Imagery. Elizabeth R. Combs. Housing Educators Journal.
5418. Polyamine and Macromolecule Levels During Sport Germination in Rhizopus stolonifer and Botryodiplodia theobromae. Kenneth W. Nickerson, Bryan K. McCune and James L. Van Etten. Experimental Mycology.
5419. Planning Curriculum to Reflect the Purpose of Home Economics. Shirley M. Kreutz.
5420. Some Physiological Genetics on Time of Flowering of Dry Beans (Phaseolus vulgaris L.). Dermot P. Coyne. Euphytica.

Journal Abstracts (contact authors for more information)

- 77-952. Control of Established Hemp Dogbane in Dryland Corn with Herbicides Applied Preplant and Preemergence. M. E. Schultz and O. C. Burnside. North Central Weed Control Conference Reports.
- 77-953. Weed Control in Established Alfalfa. Robert G. Wilson, Jr. North Central Weed Control Conference Reports.
- 77-954. The Effect of Fat and Ralgro on Growth and Carcass Characteristics of Young Bulls. W. Wade Steen, Stanley D. Farlin and V. H. Arthaud. Journal of Animal Science.
- 77-955. The Value of Urea in High Moisture Corn Rations. G. Schindler, S. D. Farlin, V. Krause and R. Britton. Journal of Animal Science.
- 77-956. The Effects of Siduron on Seedling Emergence, Growth, and High Temperature Stress of Festuca arundinacea Schreb. 'Kentucky 31.' R. C. Shearman, E. J. Kinbacher and K. A. Reiersen. American Society of Agronomy.
- 77-957. Techniques for Determination of Associative Nitrogen Fixation in Turfgrass Communities. W. A. Pedersen, R. C. Shearman, E. J. Kinbacher and R. V. Klucas. American Society of Agronomy.
- 77-958. Characterization and Variation of Bean Bacterial Diseases. M. L. Schuster, D. P. Coyne, Lisa Brezina and E. D. Kerr.
- 77-959. Weed Control in Sugarbeets with an Electrical Discharge System. Frank N. Anderson and Robert Wilson. American Society of Sugar Beet Technologists.
- 77-960. The Influence of Successive Applications of Preemergence Herbicides on Turfgrass Performance of Kentucky Bluegrass Cultivars. K. A. Reiersen, R. C. Shearman and E. J. Kinbacher. American Society of Agronomy.
- 77-961. The Allelopathic Activity of Canada Thistle (Cirsium arvense (L.) Scop.) Residue on Crop Growth. Robert G. Wilson and Lloyd C. Haderlie. 1977 Meeting of Weed Science Society of America.
- 77-962. Velvetleaf Control in Corn with Postemergence Herbicides at Lincoln, Nebraska in 1977. Alex R. Martin. 1977 North Central Weed Control Conference Research Report.
- 77-963. Nutritional Status and Food Patterns of American and Moroccan Adolescents. C. Kies and M. Cast. Federation Proceedings.

BULLETINS PRINTED

- OTC 181. Nebraska Spring Small Grain Variety Tests 1977. A. F. Dreier, J. W. Schmidt, L. A. Nelson and R. S. Moomaw.
- OTC 182. Nebraska Varietal Tests of Fall-Sown Small Grains 1977. A. F. Dreier, J. W. Schmidt, L. A. Nelson, P. H. Grabouski, P. T. Nordquist, L. V. Svec and R. S. Moomaw.