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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 NEWS

Vol. 12, No. 8, February, 1979

FROM THE DIRECTOR'S DESK

Recently a member of California Legal Assistance discussed in Lincoln a lawsuit which that organization has filed against the University of California, alleging that its research program favors corporate farmers. A specific focus of the suit is research to develop high technology machinery, e.g., the mechanical tomato harvester. The media coverage on this matter stimulated some random thoughts about our Nebraska research program.

I believe that the Experiment Station program should serve the public interest, within the scope of our role and mission. The orientation of Experiment Station research to contribute to the establishment and maintenance of the agricultural industry, to the solving of the problems of agriculture, toward the development and improvement of the rural home and rural life, and toward a maximum contribution of agriculture to the welfare of the consumer was clear in initial Experiment Station legislation, and has been reaffirmed many times since then.

Agricultural research is problem-oriented; obviously the problems which surface as significant will be important to one or more segment of the broad spectrum of people included in the above mission statement as our clientele. We cannot, and do not, serve the interest of any narrow group.

In contemplating our research program I do not identify projects which are peculiarly biased toward a particular size of farm. Whether we are talking about crop breeding, fertility investigations, livestock nutrition, irrigation efficiency, or disease control, the results of our work should be useful to farmers of any scale operation.

Efficiency is not the only criterion we apply in defining research priorities. For example, much of our work is concerned with environmental impacts, with quality of living, safety, or consumer related problems. But efficiency has to be a most important criterion of much of our research. Efficiency is concerned with keeping Nebraska agriculture competitive with that of other areas. It has to do with resources needed for production. Producing the 1978 U.S. agricultural output with 1950 technologies would have required twice the resources - land, labor, and capital - actually used. Efficiency is basic to world trade; agricultural exports are the brightest spot in the U.S. export picture.

Concerning size of farm, I must admit, by upbringing, to a bias toward the family farm. Personally I think that the family farm is economically viable; it has been getting larger in physical size, and the financial resources used, but the dominant enterprise on the Nebraska rural scene is the family farm.

In the media coverage on agricultural research was the accusation that agribusiness can persuade a University to develop research programs to solve the problems of agribusiness by providing five percent of the costs; or put in another way, "buy $100,000 of research with a $5,000 grant". In the Nebraska Station our research program is carefully defined in our peer-reviewed projects, with defined objectives. We encourage our staff to secure grants, where they contribute to the objectives we have previously defined for our research. On the other hand, the recent publicity reminds us that we must not let grants influence our research priorities.

PERSONNEL ACTIONS

Hutchins, Ardis C. - Instr. - T.C.&D. - Resig. (to private firm, Kansas)
Laster, Danny B. - Assoc. Prof. - An. Sci. (MARC) - Resig. from Courtesy Appt.
Schneider, Norman R. - Assoc. Prof., Vet. Toxicologist - Vet. Sci. - New Appt.
Scholl, Philip J. - Asst. Professor - Entomology - Courtesy Appointment
Smith, Gerald M. - An. Sci. (MARC) - Asst. Prof. - Resig. from Courtesy Appt.

GRANTS AND CONTRACTS

Anderson, F.N. - Agron. (PH Sta.) - Grower - G.W. Joint Research Committee	$12,000
Fox, H.M., C.V. Kies - Human Nutr. & Food Serv. Mgmt. - Syntex, Inc.	34,890
Lagrone, S.F. - Agr. Economics - USDA - Economics, Stat. & Coop. Serv.	800
Moser, B.D. - Animal Science - Nebr. Pork Producers Assoc.	2,500
Nelson, L.A. - Agron. (PH Sta.) - Anna H. Elliott via Univ. of Nebr. Fdtn.	8,000
Omtvedt, I.T. - An Sci - Clyde McClymont & Sons, Inc. via Univ of Nebr Fdtn.	5,000
Shearman, R.C. - Horticulture - O.J. Noer Research Fdtn., Inc.	2,000
Stubbendieck, J.L. - Agron. - Anna H. Elliott Fund via Univ. of Nebr. Fdtn.	6,000
Underdahl, N.R. - Vet. Science - Salsbury Laboratories	10,000
Weiss, A. - Agr. Engineering (PH Sta.) - Anna H. Elliott Fund	500
Wilson, R.G., Jr. - Agron (PH Sta) - Anna H Elliott Fund via Univ of Nebr Fdtn	1,200
Wilson, R.G., Jr. - Agron (PH Sta) - Grower-G.W. Joint Research Committee	3,750

GENERAL NOTES

1. You are invited to a Station faculty seminar to hear Dr. Arnold Schaeffer of the Swanson Center for Nutrition, Omaha, to be held Wednesday, March 14 at 3:00 in the Nebraska East Union. Dr. Schaeffer will discuss the "Relationship Between Nutrition and Health in Man". Dr. Schaeffer has had much experience in this field, particularly as related to developing countries.

2. You, the AES Staff responded very well to the several recent opportunities to seek new grant support for your program. We appreciate the extensive effort involved and the stress of uncertainty of criteria and approval. But, grant support is becoming an increasingly important component of program support.

   Nine competitive grant proposals were submitted to USDA-SEA in the categories of Biological Stress (plants), Nitrogen Fixation and Food Habits.
   Four competitive grant proposals were submitted to USDA-SEA in the categories of Plant Genetics, Photosynthesis and Human Nutrition.
   Seventeen proposals were submitted to USDA-SEA under the several special categories of PL89-106.
   Ten proposals were submitted to the Nebraska Wheat Commission.

3. The moves into the new Plant Sciences building is essentially completed for Agronomy units, Plant Pathology, and Horticulture. Entomology is developing the vacated third floor of Plant Industry for expansion of their second floor base. Forestry, will occupy the first floor of Plant Industry and some of the basement. This vacates some space in Miller Hall for Southeast District Station and Biometrics Center space relief. Thus, seven major units of the IANR have improved space situations as a result of the addition of the fine Plant Sciences building.

4. President Carter's proposed 1980 budget provides for the same dollars as in 1979 for Experiment Stations (Hatch funding). This represents a "real terms" cut of about 8% following a similar dip in 1979. The 1980 proposed budget would drop rural development (Title V) and reduce by 2/3 the newly established animal health research program. It does increase competitive grant funds. There is much current activity toward causing congressional improvement of the SEA budget.

5. IANR Department Heads visited the U.S. Meat Animal Research Center, Clay Center, February 2, 1979. New facilities visited were the Agricultural Engineering building, the Abattoir, and the South Central Experiment Station headquarters. After a tour of the general research animal facilities the group discussed major research objectives and plans with MARC scientists.

6. In the game of life, you can pick the winners as those who aren't complaining about the officiating.

R. W. Kleis

NEBRASKA AGRICULTURAL EXPERIMENT STATION PUBLICATIONS - January 1979

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

5629. The Views of a Food Scientist on Promises and Problems of Leaf Protein Incorporated into our Foods. L. D. Satterlee. Journal of Agricultural Engineering.

5630. The Polyadenylate RNA Population of Dormant and Germinating *Botryodiplodia theobromae* Pycnidiospores. James L. Van Etten and Carroll D. Rawn. Canadian Journal of Microbiology.

5631. Accidental Organophosphate Toxicosis in Cattle (Case Study). Clair M. Higgs. Veterinary and Human Toxicology.

5632. Evaluation of Two Methods of Nutrition Education in the Grocery Store. Hazel Fox and Connie Shields. Journal of Nutrition Education.

5633. Monensin Effects on Diet Digestibility, Ruminal Protein Bypass and Microbial Protein Synthesis. M. I. Poos, T. L. Hanson and T. J. Klopfenstein. Journal of Animal Science.

5634. Much About Musk Thistle. M. K. McCarty. Weeds Today.

5635. Registration of N-2 Red Clover Germplasm. H. J. Gorz, G. R. Manglitz and F. A. Haskins. Crop Science.

5636. Resistance to Bacteriophage Ø6 by *Pseudomonas phaseolicola*. Diane A. Cuppels, Anne K. Vidaver and James L. Van Etten. Journal of General Virology.

5637. Simulation of Production - Marketing Alternatives for Grain Farms Under Uncertainty. Lynn H. Lutgen and Glenn A. Helmers. North Central Journal of Agricultural Economics.

5638. Pantothenic Acid Status of Free Living Adolescents and Young Adults. Joanne V. Kathman and C. Kies. Journal of the American Dietetic Association.

5639. Relationship of the Estrous Cycle to Milk Composition. C. M. Cowan and L. L. Larson. Journal of Dairy Science.

5640. Evaluation of Intermediate Wheatgrass Germplasm for Use in a Breeding Program. Kenneth P. Vogel. Crop Science.

5641. Evidence for Gene Suppression in the Virus-Induced Aberrant Ratio Phenomenon in Maize. R. G. Samson, M. K. Brakke and W. A. Compton. Genetics.

5642. Utilization of ^{15}N Fertilizer by Nodulating and Non-Nodulating Soybean (*Glycine max L.*) Isolines. E. J. Deibert, Manuel Bijeriego and R. A. Olson. Agronomy Journal.

5643. Agricultural Runoff in the Midwest. James S. Schepers, Dewey R. Andersen, Gerald E. Schuman, E. Joe Vavricka and Howard D. Witmuss. Journal of Water Pollution Control Federation.

(over)

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

78-1129. Fungicide Evaluation for Control of Helminthosporium Leaf Spot, 1978. John E. Watkins and Robert C. Shearman. Fungicide and Nematicide Tests.

78-1130. Evaluation of Fungicides for Control of Leaf Rust and Leaf Spot Diseases of Wheat, 1978. John E. Watkins and Ben L. Doupnik, Jr. Fungicide and Nematicide Tests.

78-1131. Field Bindweed Control in Western Nebraska. Robert G. Wilson. Proceedings of 1978 North Central Weed Control Conference.

78-1132. The Effect of Misinformation on Item Discrimination Indices and Estimation Properties of Multiple-Choice Test Scores. Stephen R. Lowry. 1978 AERA Annual Meeting.

78-1133. Performance of an Electrical Discharge System or a Herbicide Roller for Postemergence Weed Control in Sugarbeets. Robert G. Wilson and Frank N. Anderson. North Central Weed Control Conference.

78-1134. Phytotoxicity of Glyphosate and Glyphosate + Terbutryn at Different Growth Stages. M. S. Adhmadi, L. C. Haderlie and G. A. Wicks. 1978 North Central Weed Control Conference.

78-1135. Influence of Weed Removal, Cultivar, and Row Spacing on Soybean Growth. O. C. Burnside. 1978 North Central Weed Control Conference.

78-1136. The Carbon Exchange Rate and Water Use Efficiency of Alfalfa During the Growing Season and Under Various Environmental Conditions. Dennis Baldocchi, Norman J. Rosenberg and Shashi B. Verma. 14th Conference on Agriculture & Forest Meteorology, April 2-4, 1979, Minneapolis.

78-1137. Iron Nutritional Status of Human Adults as Affected by Dietary Hemicellulose, Cellulose, and Wheat Bran. C. Kies, H. M. Fox and L. Vaughan. Institute of Food Tech.

78-1138. Vitamin B_6 Nutritional Status of Several Strains of Mice and Rats as Affected by Pantothenic Acid Deficiency. Larry Huang, C. Kies and H. M. Fox. Institute of Food Technology.

78-1139. Zinc and Magnesium Utilization as Affected by Graded Levels of Hemicellulose, Cellulose and Wheat Bran. Helen Papakyrikos, C. Kies and H. M. Fox. Federation Proceedings.

78-1140. Blood Serum Lipid Levels and Fatty Acid Patterns of Adult Men Fed Institutional Diets Altered in Fat Source. A. Y. L. Sim, C. Kies and H. M. Fox. Institute of Food Technology.

78-1141. The Effect of Copper and Fiber Supplementation on Copper Utilization in Humans. Anne L. Plant, C. Kies and H. M. Fox. Federation Proceedings.

78-1142. Performance of Flame Retardant Work Garments and Fabrics After Selected Laundry. Joan Laughlin and Anne Marie Fehringer. Textiles and Clothing Abstracts, AHEA.