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THE AGRICULTURAL EXPERIMENT STATION
INSTITUTE OF AGRICULTURE
AND NATURAL RESOURCES
UNIVERSITY OF NEBRASKA-LINCOLN
ROY G. ARNOLD, DIRECTOR

Agricultural Experiment Station NEWS

Vol.14, No.1, July 1980

FROM THE DIRECTOR'S DESK

Activities Update

Additional activities involving Experiment Station units have included:

- Plant Pathology departmental visit
- Agronomy Department statewide tour; participated in three days of tour, which included stops at North Platte Station, High Plains Ag Lab, Panhandle Station, Northwest Ag Lab, and several farm, ranch and related commercial operations.
- Meeting of Evaluation Committee of the Nebraska Stock Growers Association at North Platte
- Turfgrass Field Day at Mead, and related Regional Research Committee meeting
- Several research project reviews

National Agricultural Research and Extension Users Advisory Board

The National Agricultural Research and Extension Users Advisory Board was established by Congress in the 1977 Farm Bill. The Board brings together varied points of view and prepares independent comments and statements of opinion relative to priority needs and budget priorities for research and extension work in the food and agricultural sciences.

Food and agricultural sciences are defined in the broadest sense, including social, economic, and political consideration of:

A. Agriculture, including soil and water conservation and use, the use of organic waste materials to improve soil tilth and fertility, plant and animal production and protection, and plant and animal health;
B. The processing, distributing, marketing and utilization of food and agricultural products;
C. Forestry, including range management, production of forest and range products, multiple use of forest and range lands, and urban forestry;
D. Aquaculture;
E. Home economics, human nutrition and family life, and
F. Rural and community development.

The Users Advisory Board is made up of 21 citizens representing the following interests as authorized by Congress:

- Producers of agricultural commodities, forest and aquacultural products
- Consumers
- Farm suppliers and food and fiber processors
- Food or agriculture related labor organizations
- Environment
- Private sector development in developing countries
- Human Nutrition
- Animal Health
- Food transportation
- Food marketing
- Rural Development

The Board is authorized by Congress to prepare two reports each year:

- One to the President and Congress appraising the President's Budget for food and agricultural sciences.
- One to the Secretary of Agriculture recommending allocations of responsibilities and funding for agricultural research and extension in accordance with the Board's priorities.

The Board's latest reports call for significant increases in funding for agricultural research and extension. In its March, 1980, Report to the President and Congress, the Board states, "It is our unified judgement, across our diverse areas of separate interest, that the resource base for agricultural research and extension must be increased beyond the 2 percent total of total Federal R&D funding it has remained at for the past 10 years if the Nation is to continue increased growth in its ability to produce and export food and agricultural products, while simultaneously maintaining the fertility and productivity of our land and other renewable resources."

Further, the Board has identified in its reports the following high priority areas for increased attention in future budgets"

- Basic research
- Integrated pest management
- Food security
- Structure of the food and agricultural system
- Water and agriculture
- Agricultural transportation and distribution
- Energy and agriculture
- Competition in the food and agriculture system
- Human nutrition
- Soil and land management

During the past year, the Board has reviewed USDA in-house research programs (SEA-AR). They plan to focus attention on research programs of cooperating Experiment Stations (SEA-CR) during the next year. As research scientists, we need to understand the Board's role and impact on research funding priorities within SEA. And, we need to be prepared to explain to them the nature and importance of our research projects and programs.

Copies of the Board's reports are available in the Experiment Station Office for any who might wish to review them.

Roy G. Arnold
Dean & Director

GRANTS & CONTRACTS

Ball, H. J. - Entomology - Miscellaneous Donors	$ 1,900
Burnside, O. C. - Agronomy - BASF Wyandotte Corporation	750
Dickason, E. A. - Entomology - Fison Incorporated	750
Fenster, C. R. - Agronomy - (PH Station) - Monsanto	500
Gast, R. G. - Agronomy - Miscellaneous Donors	5,950
Gilley, J. R. - Ag. Engineering - USDA/SEA	57,500
Gold, R. E. - Env.Programs - Velsicol Chemical Corporation	4,000
Gustafson, W. A., Jr.- Horticulture - (SE Station) - NE Nutgrowers Assoc.	1,000
Handel, P. A. - Food Sci. & Tech. - CFS Continental	2,500
Kies, C. & H. Fox - Food & Nutrition - Syntex Corporation	34,720
Klopfenstein, T. J.- Animal Science - USDA/SEA Special Grants	100,000
Knoche, H. W. - Ag Biochem. - National Science Foundation	38,000
Martin, A. R. - Agronomy - Eli Lilly & Company	750
Mayo, Z. B. - Entomology - Stauffer Chemical Company	1,000
Moomaw, R. S. - Agronomy - (NE Station) - Miscellaneous Donors	900
Rhem, G. W. - Agronomy - (NE Station) - Potash & Phosphate Institute	2,000
Rhodes, M. B. - Vet Sciences - Miscellaneous Donors	669
Satterlee, L. D. - Food Sci. & Tech. - General Foods, Gaines Division	6,995
Steadman, J. R. - Plant Path. - Upjohn Company	500
Stetson, L. E. - Ag Engineering - Wisconsin Public Service Corp.	667
Sullivan, T. W. - Animal Science - American Hoechst Corporation	2,214
Vogel, K. P. - Agronomy - Anna Elliot Fund-UN Foundation	6,500
Wilson, R. G., Jr. - Agronomy - (PH Station) - Monsanto	1,750
Wicks, G. A. - Agronomy - (NP Station) - Miscellaneous Donors	1,000
Witkowski, J. G. - Entomology - (NE Station) - Stauffer Chemical Company	500

NEBRASKA AGRICULTURAL EXPERIMENT STATION PUBLICATIONS - June 1980

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

5882. A Longitudinal Study of the Drawings of Rural Children. Violet Kalyan-Masih. Child Development.

5883. Effect of Tract Element Deficiencies and Excesses on Mineral Nutrients in Sorghum. R. B. Clark, P. A. Pier, D. Knudsen and J. W. Maranville. Journal of Plant Nutrition.

5884. Sulfur-Coated Urea and Urea Compared as Nitrogen Sources for Irrigated Corn. D. H. Sander and W. J. Moline. Soil Science Society of America Journal.

5885. Damage to Alfalfa by Plains Pocket Gophers. Dale G. Luce, Ronald M. Case and James L. Stubbendieck. Journal of Wildlife Management.

5886. Weed Control in Field Beans (*Phaseolus vulgaris* L.) in Western Nebraska. R. G. Wilson, G. A. Wicks and C. R. Fenster. Weed Science. v28 (3):295-299, May, 1980.

5887. Heritability Estimates for Height, Color, Erectness, Leafiness, and Vigor in Indiangrass. K. P. Vogel, F. A. Haskins and H. J. Gorz. Crop Science.

5888. Heritability Estimates of Forage Yield, *In Vitro* Dry Matter Digestibility, Crude Protein, and Heading Date in Indiangrass. Kenneth P. Vogel, H. J. Gorz and F. A. Haskins. Crop Science.

5889. Production of Host-Specific Toxins in Liquid Shake Culture. J. L. Van Etten and J. M. Daly. Phytopathology.

5890. Glucose and Lactate Absorption and Metabolic Interrelationships in Lambs Switched from Low to High Concentrate Diets. Gerald B. Huntington, Ron L. Prior and Robert A. Britton. Journal of Nutrition.

5891. Lysine Supplementation of Proso Millet Diets for Growing-Finishing Swine. D. M. Danielson and D. S. Pollmann. Nutrition Reports International.

5892. NO_x Emission, Herbicides, Salicylic Acid. Lowell Klepper. Plant Physiology Journal.

5893. Grasshopper Control, 1979. Leroy L. Peters. Vol. 5 - Insecticide and Acaricide Tests.

5894. Sorghum Greenbug Control - 1979. Leroy L. Peters. Vol. 5 - Insecticide and Acaricide Tests.

5895. Use of the Recirculating Sprayer to Control Weed Escapes in Crops. D. R. Carlson and O. C. Burnside. Weed Science.

5896. Field Corn, Corn Rootworm Control with Counter and Mocap, 1979. Leroy L. Peters. Vol. 5 - Insecticide and Acaricide Tests.

5897. *Ascaris suum*: Immunological Studies in Swine. Marvin B. Rhodes and Renee A. Hart. Experimental Parasitology.

(over)

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

80-1359. Effect of Muscle Type and Mixing Time on Sectioned and Formed Beef Steaks. A. M. Booren, R. W. Mandigo, D. G. Olson and K. W. Jones. Journal of Animal Science.

80-1360. Characterization of Exudate Proteins Involved in Binding Meat Pieces into Sectioned and Formed Beef Steak. A. M. Booren, R. W. Mandigo and D. G. Olson. Journal of Animal Science.

80-1361. Effects of Enzyme Addition and Mechanical Tenderization on Bovine Semimembranosus Steak Tenderness. J. S. Schallenberger, D. G. Olson and R. W. Mandigo. Journal of Animal Science.

80-1362. Maternal and Individual Preweaning Effects of Selection for Postweaning Rate and Efficiency of Lean Gain in Rats. R. Allrich, G. E. Dickerson, D. R. Zimmerman and C. T. Wang. Journal of Animal Science.

80-1363. Net Life Cycle Efficiency of Rat Selected for Rate and for Efficiency of Lean Gain. C. T. Wang and G. E. Dickerson. Journal of Animal Science.

80-1364. Relation of Periparturient Administration of Selenium and Vitamins to Health in Dairy Cattle. L. L. Larson, F. G. Owen, P. H. Cole and E. D. Erickson. Journal of Animal Science.

80-1365. Ammoniation of Corn Cobs Digestibility and Rumen Rate Parameters. M. L. Nelson and T. J. Klopfenstein. Journal of Animal Science.

80-1366. Drought Risk and Response: The Great Plains of North America as a Case Study. Norman J. Rosenberg. Invitational paper for presentation at the MIT/NAS Conf. on Climate and Risk, Washington, D. C., May 27-29, 1980.

80-1367. Genetics of Flowering in Dry Beans (*Phaseolus vulgaris* L.). H. K. Leyna, D. P. Coyne and S. S. Korban. HortScience.

80-1368. The Influence of Dietary Intake on Corpus Luteum Function in Yearling Beef Heifers. K. Imakawa, J. E. Kinder, R. J. Kittok and S. R. Lowry. Journal of Animal Science.

80-1369. Testicular Growth in Swine as Influenced by Photoperiod (16L-8D *vs* 8L-16D) and Ovulation Rate Selection in Females. Dwane R. Zimmerman, M. E. Wise, A.P.K. Jones, R. D. Allrich and R. K. Johnson. Journal of Animal Science.

80-1370. The Effects of Intravenous Infusion of Lactate Isomers on Renal Clearance and Balance of Calcium, Magnesium and Phosphorus in Ewes. D. L. Harmon, R. A. Britton and James Amend. Journal of Animal Science.

80-1371. Monensin and Corn Stalk Quality on Rumen Rate Parameters. T. N. Trotter and T. J. Klopfenstein. Journal of Animal Science.

80-1372. Protein Level, Protein Heating and Monensin for Growing Calves. Russ Olson and Terry Klopfenstein. Journal of Animal Science.

80-1373. Breed of Dam Effects on Growth and Feed Efficiency. L. V. Cundiff, R. M. Koch and K. E. Gregory. Journal of Animal Science.