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Agricultural Experiment Station News June 1980

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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



Vol. 13, No.12, June 1980

FROM THE DIRECTOR'S DESK

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Experiment Station

Activities Update:

Additional visits to Experiment Station programs have included:

- Animal Science - Marvel Baker Hall research facilities and programs
- South Central Station
- North Platte Station

A recent Research Administrators Workshop in Washington, D.C., provided an opportunity to meet Science and Education Administration (SEA) and Cooperative Research (CR) administrators, learn about current policies and procedures, discuss trends and issues relative to Experiment Station research programs, discuss the federal budget process with staff of House and Senate budget, appropriations, and agriculture committees.

From the workshop, two areas are deserving of further comment at this time. The first topic is the Technical Information Systems Division of SEA. Next month's newsletter will discuss the National Agricultural Research and Extension Users Advisory Board.

Technical Information Systems Division (TIS), SEA, USDA

TIS consists of the National Agricultural Library and related automated information systems. Services available to Experiment Station Scientists include Current Awareness Literature Service (CALs), Current Research and Information System (CRIS) and Food and Nutrition Information Center (FNIC).

CALS is a computer-based literature searching system which searches several abstracts and indices. This service is available at no direct charge to Experiment Station scientists. Profile output is updated regularly and mailed. Files are searched recurrently on each profile submitted by users. A users guide may be obtained from CALs, NAL Building, 5th floor, Beltsville, MD 20705 (301-344-3859).

CRIS is a computer-based information storage and retrieval system which serves as the USDA/State documentation and reporting system for publicly supported agriculture and forestry research in the United States. CRIS provides retrieval services in response to requests for project information. Output is in the form of a printout of a one-page abstract for each retrieval project. The abstract includes investigators' names, location, project title, objectives, approach, most recent progress reports, and publications resulting from the research. This service is available to Experiment Station scientists without direct charge. Users should submit requests on CRIS form AD-427, "Request for Information Retrieval", available in the Station office.

FNIC provides customized service to persons seeking information or educational materials in the area of food and human nutrition. Books and audiovisual materials are available for free loan on request. Customized computer searching services are provided. The center maintains a 24-hour telephone answering service; telephone number is (301-344-3719).

Experiment Stations provide financial support for the operation of TIS. The services are available for your use, and their use is encouraged. It is reasonable to expect that project proposals should reflect evidence of use of these services.

Roy G. Arnold
Dean & Director

GRANTS & CONTRACTS

Arnold, R. G. - Ag Experiment Station - Nebraska Dept. Economic Development	\$ 4,300
Boosalis, M. G. - Plant Pathology - USDA/SEA	6,000
Burnside, O. C. - Agronomy - USDA/SEA	80,000
Burnside, O. C. - Agronomy - miscellaneous donors	2,100
Compton, W. A. - Agronomy - miscellaneous donors	2,100
Coyne, D. - Horticulture - Rocky Mountain Bean Dealers Assoc.	4,000
Farlin, S. D. - Animal Science - Eli Lilly & Company	13,133
Fenster, C. R. - (PH Station) - Agronomy - miscellaneous donors	1,500
Frank, K. D. - (SC Station) - Agronomy - Dow Chemical	1,000
Gessaman, P. H. - Ag Economics - NC Regional Center for R. Development	1,575
Gold, R. E. - Environmental Programs - USDA/SEA	14,787
Hergert, G. W. - (NP Station) - Dow Chemical	2,000
Moomaw, R. S. - (NE Station) - Agronomy - miscellaneous donors	1,450
Penas, E. J. - (SE Station) - Agronomy - Dow Chemical	1,000
Roeth, F. W. - (SC Station) - Agronomy - miscellaneous donors	4,350
Shahani, K. M. - Food Sci. & Tech. - Egypt Cultural & Education Bureau	1,500
Steadman, J. R. - Plant Pathology - BASF Wyandote Corporation	1,000
Torres-Medina, A. - Vet Science - Norden Laboratories	8,100
Waller, S. S. - Agronomy - Little Blue Natural Resources District	1,750
Wilson, R. G., Jr. - (PH Station) - Agronomy - miscellaneous donors	7,100
Yonts, D. C. - (PH Station) - Ag Engineering - BASF Wyandotte Corp.	1,800
Zimmerman, D. R. - Animal Science - USDA/SEA	10,500

The Nebraska Soybean Development, Utilization and Marketing Board, through a supplemental appropriation, is supporting 6 additional projects for FY 1979-80:

- A. D. Flowerday - Agronomy - "Cultural Practices for Increasing Soybean Yields" - \$10,500
- A. P. Handel - Food Sci. & Tech. - "Equipment for Soybean Oil Research" - \$1,585
- M. A. Hanna & J. D. Summers - Ag Eng. - "Evaluation of Mechanical Damage to Soybeans Caused by Threshing" - \$4,359
- R. W. Klucas & F. W. Wagner - Ag Biochemistry - "Enzymes and Metabolic Pathways During Nodule Senescence" - \$2,000
- J. Norman, J. Specht, B. Blad, S. Verma, N. Rosenberg & J. Williams - Agronomy & Ag Meteorology - "Instrumentation for Soybean Water Use Research" - \$3,800
- J. H. Williams & J. E. Specht - Agronomy - "Equipment for Soybean Breeding and Physiology Research" - \$4,600

Sahs sez:

1. Gary Lesoing has been chosen to be an administrative assistant/research technologist (Agronomy) at the IANR Field Laboratory. Gary's main duties will carry responsibilities in organic recycling projects, public relations of the Field Laboratory, and handling tours to the facility. Gary earned a M of Sc degree in Animal Science and worked with Range Management projects at the North Platte Station.
2. A pesticide disposal pit, a concrete wash down floor for sprayers, and an allied chemical storage building is under construction at the IANR Field Laboratory Agronomy headquarters. The facility is a needed and welcome facility to the complex. Documentary filming is carried out during construction, the filming to be used for educational meetings at a later date. The facility will also be highlighted at subsequent field days. It is hoped that this prototype disposal pit can be built at other IANR locations at a later date.
3. Field Laboratory renovation crews are busy renovating roofs, utilizing LB309 Deferred Maintenance funding for the necessary materials.

W. W. Sahs

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

- 80-1346. Breed Effects and Heritability of Testis Measurements in Sheep. N. M. Fogarty, D. D. Lunstra, L. D. Young and G. E. Dickerson.
- 80-1347. Determining Economic Weights for Selection Index Equations from Simulation Models and Selection Experiments. G. L. Bennett, G. E. Dickerson and M. W. Tess. Journal of Animal Science.
- 80-1348. Pantothenic Acid Content of Human Milk. H. Fox and L. J. Schroeder. Western Hemisphere of Nutrition VI.
- 80-1349. Dietary Fiber Intake and Circulating Blood Lipid Levels of Adult and Adolescent Humans Fed Laboratory-Controlled Diets. C. Kies, H. M. Fox, K. Stanek, S. Balters and A. Joseph. Western Hemisphere of Nutrition VI.
- 80-1350. Maternal Efficiency of Rats Selected for Rapid or for Efficient Postweaning Lean Growth. E. R. Cleveland, C. T. Wang, R. Allrich, W. R. Lamberson and G. E. Dickerson. Journal of Animal Science.
- 80-1351. Indication of Testing Emphasis in Swine Breeder Advertisements. William T. Ahlschwede. Journal of Animal Science.
- 80-1352. Influence of Dietary Energy During Lactation on Post Weaning Estrus in Swine. D. E. Reese, B. D. Moser, E. R. Peo, Jr., D. R. Zimmerman, J. E. Kinder, R. K. Johnson and A. J. Lewis. Journal of Animal Science.
- 80-1353. Apparent Metabolizable Energy and Digestibility of Reconstituted or Harvested High Moisture Milo and Dry Milo for Swine. J. D. Crenshaw, E. R. Peo, Jr., A. J. Lewis, B. D. Moser and T. D. Crenshaw. Journal of Animal Science.
- 80-1354. Effects of Threonine and Isoleucine Additions to a Diet Containing Corn, Lysine and Tryptophan on Nitrogen Excretion of Young Pigs. D. A. Grosbach, A. J. Lewis, E. R. Peo, Jr., B. D. Moser and T. D. Crenshaw. Journal of Animal Science.
- 80-1355. Effects of Fiber on Phosphorus Utilization of Cereal Grains by G-F Swine. R. L. Moser, E. R. Peo, Jr., B. D. Moser and A. J. Lewis. Journal of Animal Science.
- 80-1356. The Influence of Age on the Uptake of Stable Strontium by Various Bones in Pigs. T. D. Crenshaw, E. R. Peo, Jr., A. J. Lewis, B. D. Moser and D. Knudsen. Journal of Animal Science.
- 80-1357. Effects of Fiber and Dietary Energy on Phosphorus Utilization of Cereal Grains by G-F Swine. R. L. Moser, E. R. Peo, Jr., B. D. Moser and A. J. Lewis. Journal of Animal Science.
- 80-1358. Vacuum Mixing Influence on Characteristics of Sectioned and Formed Beef Steak. A. M. Booren, R. W. Mandigo, D. G. Olson and K. W. Jones. Journal of Animal Science.

BULLETINS PRINTED

- MP 38. The Impact of the Sugarbeet Industry on the Nebraska Panhandle Economy. Clifford D. Jones, Jr. and Robert E. J. Retzlaff.

NEBRASKA AGRICULTURAL EXPERIMENT STATION PUBLICATIONS - May 1980

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

5868. Effect of Cattle Finishing Ration on Physical and Sensory Characteristics of Longissimus Steaks. D. G. Olson, H. D. Loveday, R. W. Mandigo, F. Caporaso, T. J. Klopfenstein and R. A. Britton. *Journal of Animal Science*.
5869. Long Term Effects of Dietary Additions of Alfalfa and Tallow on Sow Reproductive Performance. D. S. Pollmann, D. M. Danielson, M. A. Crenshaw and E. R. Peo, Jr. *Journal of Animal Science*.
5870. Notes on Density and Body Weights of Plains Pocket Gophers (*Geomys Bursarius Majusculus*) in Nebraska. Dale G. Luce and Ronald M. Case. *Journal of Mammalogy*.
5871. A Longitudinal Study of the Cognitive Development of 3-5 Year Old Rural Children. Violet Kalyan-Masih. *International Journal of Behavioral Development*.
5872. Plant Architecture and Crop Yield: A Plant Breeder's Perspective. Dermot P. Coyne. *Journal of American Society of Horticultural Science*.
5873. Ultrastructure of Rizomania (Beet Necrotic Yellow Vein) Virus in Chenopodium and Sugarbeet Leaves. Luciano Giunchedi, Willem G. Langenberg and Francesca Marani. *Phytopathology*.
5874. Federal Funding Affects You, and Vice Versa. James T. Horner. *Agricultural Education*. pages 5-7, February, 1980.
5875. Influence of *Lactobacillus Acidophilus* Inoculum on Gnotobiotic and Conventional Pigs. D. S. Pollmann, D. M. Danielson, W. B. Wren, E. R. Peo, Jr. and K. M. Shahani. *Journal of Animal Science*.
5876. Inhibition of Ribulose 1,5-Bisphosphate Carboxylas-Oxygenase Activities by Hydroxylamine. Hugh M. Brown, Joan M. Rejda and Raymond Chollet. *Biochimica Et Biophysica Acta*.
5877. Some Applications of Wind Data in Agriculture. S. B. Verma. To be presented at the Workshop on Wind Climate, Asheville, North Carolina, Nov. 12-13, 1979.
5878. *In* Bean and Cowpea Production and Use: A State of the Art Analysis. M. L. Schuster and D. P. Coyne. Chapter. *Bacterial Diseases of Beans: Biology, Epidemiology, Genetics, and Breeding in Lesser Developed and Developed Countries*.
5879. Effects of *Lactobacillus Acidophilus* in Starter Pigs Fed a Diet Supplemented with Lactose. D. S. Pollmann, D. M. Danielson and E. R. Peo, Jr. *Journal of Animal Science*.
5880. Effects of Microbial Feed Additives on Performance of Starter and Growing-Finishing Pigs. D. S. Pollmann, D. M. Danielson and E. R. Peo, Jr. *Journal of Animal Science*.
5881. HOUSE--An Energy Utilization Management Tool. Gerald R. Bodman, Thomas L. Thompson, Charles W. Anderson and Ardis C. Hutchins. *Transactions of the ASAE*.

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