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UNIVERSITY OF NEBRASKA-LINCOLN
COLLEGE OF AGRICULTURE
THE AGRICULTURAL EXPERIMENT STATION

H. W. OTTOSON, DIRECTOR AND
ACTING DEAN

Agricultural Experiment Station



Vol. 6, No. 11, May 1974

FROM THE DIRECTOR'S DESK

Dear Colleagues:

You may be interested in a brief report on our finances as we approach FY 1975:

- A. State Budget (please note that our budget does not become official until adopted by the Regents in June).
1. New programs. We add twelve new whole or partial research lines in seven departments and regional stations, totaling $9\frac{1}{2}$ FTEs of scientific staff.
 2. Programs of Excellence. Agronomy and Animal Science will each initiate a "program of excellence" as part of a new activity initiated in the University this year, with additional funding provided by the Legislature.
 3. The Station will allocate additional support funds totaling \$73,000 designated for research in crops, livestock, and natural resources. In addition, Food Science and Technology and Agricultural Economics were provided \$10,000 of earmarked support.
- B. Federal funds. Hearings have been held in the House and the Senate on Agricultural appropriations. Prospects still seem favorable for better treatment than usual as far as Hatch funds are concerned. We will keep you informed about developments.

Howard W. Ottoson

Suggestions for QUARTERLY authors

Timing your submissions to the FARM AND HOME QUARTERLY magazine is important. Keep in mind that people want to know about new techniques and new information just before they need to use them. An article about alternatives for grain storage, for example, should appear in the summer issue. Likewise, techniques for summer pest control, wheat harvesting, or irrigation should appear in the spring.

Please call me as soon as you begin work on a QUARTERLY article to clear the idea and help me schedule it for the most appropriate issue. Writing and clearing the article sometimes has to be a last-minute thing, but having page space "reserved" will help assure timely publication.

Marcia Pearson, Editor

GRANTS AND CONTRACTS

Burnside, Orvin C. - Agronomy - Shell Development Company	\$ 500
Burnside, Orvin C. - Agronomy - Stauffer Chemical Company	500
Burnside, Orvin C. - Agronomy - Monsanto Company	1,000
Burnside, Orvin C. - Agronomy - U. S. Borax Research	750
Burnside, Orvin C. - Agronomy - Ciba-Geigy Corporation	1,500

Grants and Contracts (continued)

Campbell, J. B. - Entomology (NP Sta.) - Chevron Chemical Company	1,000
Fenster, C. R. - Agronomy (PH Sta.) - U. S. Borax Research	750
Fenster, C. R. - Agronomy (PH Sta.) - Monsanto Company	750
Hagen, Arthur - Entomology (PH Sta.) - Stauffer Chemical Company	500
Hartung, T. E. - Food Science and Technology - U. S. Dept. of Agriculture	429
Klopfenstein, Terry - Animal Science - Liquid Feed Commodities	11,623
Klopfenstein, Terry - Animal Science - CPC International	2,950
Martin, Alex R. - Agronomy - Monsanto Company	500
Mayo, Z. B. and S. Dean Kindler - Entomology - Dow Chemical Company	850
Moomaw, Russell S. - Agronomy (NE Sta.) - Monsanto Company	500
Moomaw, Russell S. - Agronomy (NE Sta.) - Shell Chemical Company	500
Olson, R.; Peterson G. and D. Sander - Agronomy - Phillips Petroleum Co.	4,000
Peo, Ernest R. - Animal Science - BZD Livestock Products, Inc.	2,000
Salac, Sotero S. - Horticulture and Forestry - Neb. Rose Society Fund	582
Vidaver, Anne - Plant Pathology - Public Health Service	21,222

GENERAL NOTES

1. Congratulations to Dr. Myron Brakke, ARS--Plant Pathology, for the very high honor of election to the National Academy of Science. This distinction is held by no one else at the University of Nebraska that we know of.
2. Congratulations also to Dr. Dale Flowerday for election by the ASUN to receive the "Business Award for Outstanding Professor" in our College this year; to Dr. Lowell Moser for a UN-L Distinguished Teacher award for 1974; and to Dr. Newkirk as President-Elect of the American Home Economics Association.
3. Chick Hastert has resigned as Facilities Manager of the Field Laboratory effective November 1, 1974. Chick has played an extremely productive and important role in the twelve-year development and program history of this complex. We will miss him as an implementer of progress and as a fine fellow to work with. We are grateful that he will be with us yet for several months.
4. Schnieder on Safety - "As University of Nebraska employees, we are judged by our actions. When driving vehicles or operating equipment, we are particularly obligated to demonstrate adherence to safety regulations and use of safety equipment and practices."
5. Field Days scheduled to date:

May 24	- Northeast Station Beef Field Day--7:00 p.m. (twilight)
June 20	- High Plains Agricultural Laboratory Crops Field Day
June 25	- North Platte Station Wheat Field Day
July 13	- North Platte Station Lawn and Garden Clinic
August 8	- Panhandle Station Field Day
August 8	- Sandhills Agricultural Laboratory Field Day
September 17	- North Platte Station Fall Crops and Livestock Field Day
6. Sahs Sez - "Machinery is and will continue to be in short supply. Project leaders should start now planning and ordering for 1975 season needs. Weeds are surging with photosynthetic activity. Now is the time to spray waste areas, feedlot, fence-lines, roadsides, musk thistle patches, pastures and small grain fields. If you have difficulty obtaining 2,4-D, we may be able to help from on-hand inventory."
7. "It is far better to debate an issue without settling it than to settle it without debate."

R. W. Kleis

NEBRASKA AGRICULTURAL EXPERIMENT STATION PUBLICATIONS - April 1974

Journal Articles (contact authors for more information)

3772. Riser Intake Designs for Feedlot Solids Collection Basins. C. L. Linderman, N. P. Swanson and L. N. Mielke. Transactions of the American Society of Agricultural Engineers.
3773. Nutritional Evaluation of Fabricated Foods. Constance Kies. Conference proceedings of Fabricated Food Conference of AVI Publishing House.
3774. Power Factors and Electrical Demands of Center-Pivot Irrigation Machines. L. E. Stetson and S. O. Nelson. IEEE Transactions on Industry Applications.
3775. Physical and Chemical Properties of Soil Associated with Heavy Applications of Manure from Cattle Feedlots. A. E. Tiarks, A. P. Mazurak, Leon Chesnin and O. E. Cross. Soil Science of America Proceedings.
3776. The Physico-Chemical Characterization of Normal and PSE Porcine Muscle Myoglobins. M. Bembers and L. D. Satterlee. Journal of Food Science.
3777. The Adjustment Levels of Selected Individuals with Developmental Disabilities. Kay L. Hegler and Lois O. Schwab. American Journal of Mental Deficiency.
3778. Soil Associations and Satellite Imagery in the Sand Hills Region of Nebraska. David T. Lewis, Paul M. Seevers and James V. Drew. Soils Science of America Proceedings.
3779. Effects of Thermal Acclimation and Magnitude of Environmental Temperature Change on Physiological Responses of Roosters. F. B. Mather, J. A. DeShazer and Malik M. Ahmad. International Livestock Environment Symposium.
3780. Effect of Early Competition on Growth of Common Milkweed. L. L. Evetts and O. C. Burnside. Weed Science.
3781. Anatomical Response Due to Herbicide Injury in Common Milkweed Leaves. L. L. Evetts and O. C. Burnside. Weed Science Journal.
3782. Use of Antifungal Agents in Retarding Cottage Cheese Spoilage. K. M. Nilson, K. M. Shahani, J. R. Vakil and A. Kilara. Journal of Dairy Science.
3783. Effect of Antifungal Agents on the Carbohydrate Metabolism of Saccharomyces cerevisiae. K. M. Shahani, M. G. Carracedo and A. Kilara. Journal of Milk and Food Technology.
3784. Evaluation of Swine Housing Through Simulation. J. A. DeShazer and N. C. Teter. International Livestock Environment Symposium.
3785. The Nitrogen Status Beneath Beef Cattle Feedlots in Eastern Nebraska. J. R. Ellis, L. N. Mielke and G. E. Schuman. Soil Science Society of America Proceedings.
3786. Modeling Economic Thresholds for Green Cloverworm on Soybean. Kenneth P. Pruess. Proceedings, North Central Branch, E.S.A.

3787. Cross Matings Between Therioaphis maculata (Buckton) and T. trifolii (Monell) (Homoptera:Aphididae) and Their Implications on the Taxonomic Status of the Insects. George R. Manglitz and Louise M. Russell. Proceedings, Entomological Society Wash.
3788. The Functional Properties of the Great Northern Bean (Phaseolus vulgaris) Protein Isolate. L. D. Satterlee, M. Bembers and J. G. Kendrick. Journal of Food Science.
3789. Extraction and Nutritive Quality of Wheat Protein Concentrate. J. H. Woerman and L. D. Satterlee. Journal of Food Science.
3790. Possibilities for Controlling Insects with Microwaves and Lower Frequency RF Energy. Stuart O. Nelson and LaVerne E. Stetson. IEEE Transactions on Microwave Theory and Techniques.
3791. Resistance of Red Clover to the Clover Leaf Weevil. H. J. Gorz, G. R. Manglitz and F. A. Haskins. Crop Science.
3792. Biochemical Properties of Alfalfa Protein Concentrate. B. L. Free and L. D. Satterlee. Journal of Food Science.
3793. Utilization of Wheat Protein Concentrate from Wheat Milling By-Products. J. H. Woerman, L. D. Satterlee and P. J. Mattern. Journal of Food Science.
3794. Roughages in Swine Gestation Diets. David M. Danielson and John J. Noonan. Journal of Animal Science.
3795. Inhibition of Aflatoxin Production by Cinnamon. L. B. Bullerman. Journal of Food Science.

Journal Abstracts (contact authors for more information)

- 74-308. Relationship of Performance and Carcass Characteristics in Swine. William T. Ahlschwede. Journal of Animal Science.
- 74-309. Effect of Glucocorticoids on Metabolism of Low Quality Proteins by Rats. T. S. Stahly, E. R. Peo, Jr., B. D. Moser and P. J. Cunningham. Journal of Animal Science.
- 74-310. Blood and Paunch Meal in Ruminant Rations. M. J. Prokop, T. J. Klopfenstein and T. Messersmith. Journal of Animal Science.
- 74-311. Effect of Glucocorticoids on Metabolism of Low Quality Proteins by Swine. T. S. Stahly, E. R. Peo, Jr., B. D. Moser and P. J. Cunningham. Journal of Animal Science.
- 74-312. Availability of Tryptophan in Some Feedstuffs for Swine. Pedro H. Rivera L., E. R. Peo, Jr., T. Stahly, B. D. Moser and P. J. Cunningham. Journal of Animal Science.
- 74-313. Chemicals with Pressure Treated Cobs. T. J. Klopfenstein, R. P. Graham, H. G. Walker, Jr. and G. O. Kohler. Journal of Animal Science.
- 74-314. Chemicals for Treating Crop Residues. Whitney Rounds and Terry Klopfenstein. Journal of Animal Science.

- 74-315. Dried Paunch Feed as a Roughage Source in Beef Finishing Rations. T. L. Messersmith, W. R. Fulton and T. J. Klopfenstein. Journal of Animal Science.
- 74-316. NPN Utilization with Fresh and Ensiled Corn Plant. Kern Hendrix and Terry Klopfenstein. Journal of Animal Science.
- 74-317. Urinary Creatinine/Nitrogen and Blood Urea Nitrogen as Nutritional Indicators. Steve Tolstedt and Stanley D. Farlin. Journal of Animal Science.
- 74-318. Effect of Dexamethasone on Intramuscular Fat Content. Bill D. Dicke, Stanley D. Farlin and V. H. Arthaud. Journal of Animal Science.
- 74-319. The Influence of Exposure to the Boar and Movement on Pubertal Development in the Gilt. Dwane R. Zimmerman, Roy Carlson and Beryle Lantz. Journal of Animal Science.
- 74-320. The Effects of Furfural Levels or Ethanol Extraction on the Nutritive Value of Hydrolyzed Sawdust. Robert Britton. Journal of Animal Science.
- 74-321. Nitrogen Supplementation of Gestating Beef Cows. Dennis Lamm, Gary C. White and John K. Ward. Journal of Animal Science.
- 74-322. Progesterone Effect on Estradiol Induced Plasma LH Release in Ovariectomized Gilts. William Beryle Lantz and Dwane R. Zimmerman. Journal of Animal Science.
- 74-323. Effect of Conveyor Speed on Mechanical Tenderization of Beef Inside Rounds. W. C. Schwartz and R. W. Mandigo. Journal of Animal Science.
- 74-324. The Influence of Mixing Time on Chemical and Physical Properties of Flaked, Formed and Sectioned Meat. Roger Belohlavy and Roger W. Mandigo. Journal of Animal Science.
- 74-325. The Effect of Mechanical Tenderization on Fresh and Tempered Boneless Pork Loins. W. J. Goldner, R. W. Mandigo and W. C. Schwartz. Journal of Animal Science.
- 74-326. Effect of Tripolyphosphate and Salt on Flaked, Cured Pork. K. L. Neer and R. W. Mandigo. Journal of Animal Science.
- 74-327. Factors Affecting Chemical Properties of Heme and Lipid Components in Mechanically Deboned Turkey Meat. D. M. Janky and G. W. Froning. Poultry Science.
- 74-328. The Effect of Dietary Constituents and Canning Water Nitrite on the Color of Cooked Fowl Meat. Faye C. Johnson and G. W. Froning. Poultry Science.
- 74-329. The Effects of Various Levels of Dietary Calcium and Egg Production Upon the Regulation of Feed Consumption in Laying Hens. Earl W. Gleaves and Richard E. Ivy. Poultry Science.
- 74-330. Evaluation of Freeze Dried and Dehydrated Alfalfa For Egg Yolk Pigmentation in Layer Diets. T. W. Sullivan, G. W. Froning, D. H. Kahler, A. L. Livingston and G. O. Kohler. Poultry Science.

- 74-331. Comparative Evaluation of Freeze Dried and Dehydrated Alfalfa in Turkey Starter Diets. D. P. Holder, T. W. Sullivan, A. L. Livingston and G. O. Kohler. Poultry Science.
- 74-332. Protein Supplemental Methionine and Inorganic Sulfate Levels for Starting Turkeys. H. J. Kuhl, Jr. and T. W. Sullivan. Poultry Science.
- 74-333. Bioassay of Phosphated Egg Shell and Fertilizer Phosphates in Turkey Starter Diets. T. W. Sullivan, F. J. Struwe and H. J. Kuhl, Jr. Poultry Science.
- 74-334. Availability and Toxicity of Fertilizer Phosphates in the Rat. R. E. Ivy and T. W. Sullivan - W. J. Goldner, C. R. Grass and E. R. Peo, Jr. Poultry Science.
- 74-335. The Influence of Ovulation, Time of Day, and Supplemental Calcium Upon Feed and Calcium Intake Patterns. Richard E. Ivy and Earl W. Gleaves. Poultry Science.
- 74-336. Uterine Blood Flow and Glucose Uptake in Pregnant Ewes. R. K. Christenson and R. L. Prior. American Society of Animal Science.
- 74-337. Estrus, LH, Ovulation and Fertility in Heifers. R. K. Christenson, S. E. Echterkamp and D. B. Laster. American Society of Animal Science.
- 74-338. Cultural Studies with Sprinkler Irrigated Potatoes. R. B. O'Keefe. American Potato Journal.
- 74-339. Effect of Maleic Hydrazide (MH-30) Sprout Inhibitor on Potato Quality. R. B. O'Keefe. American Potato Journal.
- 74-340. Heritability and Repeatability for Quality Factors in Potatoes. R. B. O'Keefe. American Potato Journal.

BULLETINS PRINTED

- RB 261. Economies of Size, Volume and Diversification in Retail Grain and Farm Supply Businesses. D. G. Anderson and D. L. Helgeson.
- SB 519. Vegetable Gardening in Nebraska. R. E. Neild.
- CC 255. Energy Uses in Nebraska Agriculture. D. E. Lane, P. E. Fischbach and N. C. Teter.