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UNIVERSITY OF NEBRASKA COLLEGE OF AGRICULTURE AND HOME ECONOMICS THE AGRICULTURAL EXPERIMENT STATION

E. F. FROLIK, DEAN H. W. OTTOSON, DIRECTOR

Agricultural Experiment Station



Vol. 1, No. 11, May 1969

FROM THE DIRECTORS OFFICE

The dedication of new facilities building at USMARC on June 3 is a high point among one of several events during this spring and summer which emphasize the prominent and developing role of Nebraska in livestock research. Thus, in March we dedicated the new Marvel L. Baker Hall on the East Campus; on May 1 the new Veterinary Science Research building was dedicated at the North Platte Station; on July 1 we will dedicate a new swine research facility at the Northeast Station.

Other developments have been underway in the meantime; new research programs in swine genetics and reproductive physiology have been started in the Department of Animal Science; work has been stepped up greatly on calf scours and other diseases in the Department of Veterinary Science, and a new program on range cattle diseases is well off the ground at North Platte. A program of facility development for livestock research is continuing at the Field Laboratory. Livestock research programs at the Scotts Bluff Station and the North Platte Station have been adjusted significantly. The dedication at USMARC dramatizes the fact the historic tradition of State-Federal cooperation in livestock research in the Nebraska Station is to be materially strengthened; national attention will be focused on Nebraska as focal point of livestock research. Our important livestock industry has contributed much to this development, and will in turn benefit greatly from it.

We recognize that facilities and support do not automatically produce research results; however, our start is impressive. We have every confidence that forthcoming scientific achievement will justify these inputs.

SCOTTS BLUFF STATION

Sugarbeets seeded in late March according to the plow-plant system emerged April 10 and survived 21-degree temperatures April 27. Rough, cloddy condition of the soil served as wind break and saved many of the small plants. Plow-plant, bedding, and till-plant tillage systems are being compared for corn production in an effort to reduce production costs. Red Lane and John C. Ferguson, Agricultural Engineer from North Carolina State College, planted a few corn plots in sod to test the merits of this system under irrigation. Hollis Shull is measuring the exact use of water by alfalfa plants every hour of the day with his lysimeters.

Jason Webster and Bill Mundt wet their feet recently in some of the first irrigation water pumped at the Northwest Agricultural Laboratory. The first sugarbeets ever planted at the Northwest Agricultural Laboratory emerged April 20, survived cold weather in late April, and were ready to thin the middle of May. Frank Anderson and Dr. Eric Kerr will study sugarbeet fertility and disease problems under gravity and solid set sprinkler irrigation systems. Dave Nuland and Jerry Miyoshi's carrots will not suffer from anything which man can control. Ralph Reed's pine trees from many locations across the U.S. like the environmentat the Northwest Agricultural Laboratory.

Charlie Fenster's wheat grows vigorously at the High Plains Agricultural Laboratory despite drought, worms and weeds. Art Hagen is testing new insecticides to control the pale western cutworm. Louie Daigger's fertilizer test will show how fertility influences yield and protein of wheat. Dryland crop rotations of wheat, oats, sorghum millet and fallow, and field beans and millet are being started to learn how to use

moisture more efficiently in dryland cropping systems. Plots to determine runoff and erosion under different tillage systems on a 4% slope on a Keith soil will be established at the High Plains Agricultural Laboratory in cooperation with R. H. Mickelson, Agricultural Engineer with ARS at Akron, Colorado.

Lionel Harris

PERSONNEL ACTIONS

Axthelm, L. S. - Instructor in Agricultural Engineering, Scotts Bluff Station - Resignation

Hibbs, C. M. - Assoc. Professor of Veterinary Science, North Platte Station

Lawson, D. E. - Instructor in Entomology - Resignation

Timmons, Jack - Instructor in Agricultural Economics - Resignation

NEW GRANTS, CONTRACTS AND COOPERATIVE AGREEMENTS

Baker, M. E.	Agricultural Economics - N. Dakota, S. Dakota, Wyoming	
•	Colorado, Kansas, Texas, and New Mexico Agriculture	
Bunnasida O C	periment Stations	\$ 5,100.00
Burnside, O. C.	- Agronomy - Monsanto Company	500.00
Fenster, C. R.	- Scotts Bluff Station - Monsanto Company	500.00
Fenster, C. R.	- Scotts Bluff Station - Dow Chemical Company	2,700.00
Fenster, C. R.	- Scotts Bluff Station - Chevron Chemical Company	1,500.00
Fritschen, R. D.	- Northeast Station - Northeast Nebraska Exp. Farm	17,264.70
	Association	
Froning, G. W.	- Poultry Science - National Turkey Federation	1,000.00
Marsh, C. L.	- Veterinary Science - National Science Foundation	14,700.00
Moline, W. J.	- Agronomy - Miscellaneous Donors	800.00
Munson, J. D.	- Entomology - Union Carbide Corporation	500.00
Munson, J. D.	- Entomology - Stauffer Chemical Company	1,000.00
Munson, J. D.	- Entomology - Mobil Chemical Company	500.00
Raun, E.S.	- Entomology - Chevron Chemical Company	3,500.00
	- Plant Pathology - U. S. Public Health Service	9,354.00
Wicks, G. A.		500.00
nache, d. A.	- North Platte Station - Geigy Agricultural Chemical	700.00
Wieks C A	Company	3 500 00
Wicks, G. A.	- North Platte Station - Chevron Chemical Company	1,500.00
Wicks, G. A.	- North Platte Station - Monsanto Company	500.00
Wittmuss, H. D.	- Agricultural Engineering - Fleischer Manufacturing Inc.,	2,000.00
Woods, W. R.	- Animal Science - Corn Products Company	5,000.00

GENERAL NOTES

- 1. The new child development laboratory under construction immediately north of the Student Activities Building has been designated by the Board of Regents as the "Ruth Staples Laboratory".
- 2. Special events for the next month include:

June 3 - U. S. Meat Animal Research Center dedication - Clay Center

June 8 - Earl Maxwell Arboretum dedication - East Campus

June 17 - Panhandle Advisory Committee meeting - Sidney

- June 20 Panhandle Field Day High Plains Agricultural Laboratory
 July 1 New swine research complex open house Northeast Station
- 3. Congratulations to four newly elected members of the Graduate Faculty:
 William A. Compton, Associate Professor of Agronomy
 Roger W. Mandigo, Assistant Professor of Animal Science
 Thomas L. Thompson, Associate Professor of Agricultural Engineering
 Howard D. Wittmuss, Associate Professor of Agricultural Engineering
- 4. Complaint blank describe complaint in detail in the (Please write legibly)

AGRICULTURAL EXPERIMENT STATION PUBLICATIONS - MAY 1969

Journal Articles

- 2582. Occurrence and Hosts of Aphelinus <u>semiflavus Howard</u> (Hymenoptera: Eulophidae) in Nebraska. George R. Manglitz and James M. Schalk. Kansas Entomological Society.
- 2583 Tester Performance Level for the Evaluation of Lines for Hybrid Performance. J. H. Lonnquist and M. F. Lindsey. Crop Science.
- Histology of Two Eugregarina, <u>Gregarina</u> sp. and <u>Actinocephalus</u> sp., Associated with <u>Phyllophaga anxia</u> (Coleoptera: Scarabaeidae). R. C. Berberet and T. J. Helms. Journal of Invertebrate Pathology.
- 2585a. Sodium Hydroxide Treatment of Corn Cobs. Walter C. Koers, T. J. Klopfenstein and Walter Woods. Journal of Animal Science.
- 2586a. Liquid Supplements for Beef Cattle. Walter Woods, T. J. Klopfenstein and J. C. Cranfill. Journal of Animal Science.
- 2587a. Influence of Steam Pressure Cooking Conditions on In Vitro Digestibility of Corn. K. K. Bolsen and Walter Woods. Journal of Animal Science.
- 2588a. Nitrogen Source with Sodium Hydroxide Treated Wheat Straw. Sumer Hasimoglu, T. J. Klopfenstein and T. H. Doane. Journal of Animal Science.
- 2589a. Urea or Ammonium Salts of Volatile Fatty Acids as Nitrogen Sources for Beef Cattle. Larry Varner and Walter Woods. Journal of Animal Science.
- 2590a. Effect of Dietary Increments of Calcium and Phosphorus on G-F Swine. E. R. Peo, Jr., G. W. Libal, G. F. Wehrbein, P. J. Cunningham, and P. E. Vipperman, Jr. Journal of Animal Science.
- 2591a. Dried Whole Egg as a Source of Supplemental Protein for Baby Pigs. E. R. Peo, Jr., D. M. Evertson, G. F. Wehrbein, P. E. Vipperman, Jr. and P. J. Cunningham. Journal of Animal Science.
- 2592a. Prediction of Swine Carcass Characteristics from Ultrasonic, Weight and Age Measurements. P. J. Cunningham, L. E. Lucas, and K. R. Lindvall. Journal of Animal Science.
- 2593a. Further Studies on Neurohypophyseal Hormone Regulation of Anterior Pituitary Function. J. J. Reeves and E. F. Ellington. Journal of Animal Science.
- 2594a. NPN Supplementation of Low Protein Diets for G-F Swine. R. L. Woerman, P. E. Vipperman, Jr., E. R. Peo, Jr., and P. J. Cunningham. Journal of Animal Science.
- 2595a. Emulsifying Characteristics of Pre- and Post-Rigor Turkey Muscle. Sankara Neelakanta, G. W. Froning, A. Helmke and T. E. Hartung. Poultry Science.
- 2596a. Poultry Meat Sources and Their Emulsifying Characteristics as Related to Processing Variables. G. W. Froning, J. Daddario, and T. E. Hartung. Poultry Science.

- 2597a. Effect of Housing and Management on Growing/Finishing Swine. Robert D. Fritschen, Leo E. Lucas, Ernest R. Peo, Jr. Journal of Animal Science.
- 2598a. Influence of Graded Levels of Dietary Protein and p-Ureidobenzene-Arsonic Acid on Performance of Turkeys, 0-4 and 12-24 weeks old. T. W. Suilivan, R. J. Mitchell and T. E. Bowen. Poultry Science.
- 2599a. Effect of Different Levels of Nifursol, A New Histomonsastat, on Body Weight Gain and Feed Efficiency of Turkeys. R. J. Mitchell, T. W. Sullivan and T. E. Bowen. Poultry Science.
- 2600a. Studies on the Biotin Requirement of Young Turkeys. T. W. Sullivan and P. D. Platter. Poultry Science.
- 260la. Course Objectives: How Can They Be Developed? F. Ben Mather. Poultry Science.
- 2602a. Poultry Science in High School Agriculture. T. E. Hartung. Poultry Science.
- 2603a. Influence of Protein, Volume and Energy Upon Feed Intake Regulation of Laying Hens. Satyavan Dewan and Earl W. Gleaves. Poultry Science.
- 2604a. Prophylactic Efficacy of Ipronidazole Against Histomoniasis in Young Turkeys. T. W. Sullivan, O. D. Grace, R. J. Mitchell and T. E. Bowen. Poultry Science.
- 2605a. Effect of Cupric Sulfate on the Prophylactic Efficacy of Two Arsonic Compounds and Nifursol against Histomoniasis in Turkeys. T. E. Bowen, T. W. Sullivan, O. D. Grace, and R. J. Mitchell. Poultry Science.
- 2606a. Influence of Lysine, Methionine, and Tryptophan Upon Feed Intake of Laying Hens. Earl W. Gleaves. Poultry Science.
- 2607a. Age at Puberty in Gils as Affected by Daily Heat Checks with a Boar. Dwane R. Zimmerman, Roy Carlson and Larry Nippert. Journal of Animal Science.
- 2608a. The Purification and Properties of a Glucoamylase (a-1, 4-Glucan Glycohydrolase) from <u>Aspergillus Phoenicis</u>. D. R. Lineback and W. E. Baumann. 158th National Meeting of the American Chemical Society.
- 2609. Moderate Tolerance of Bean Varieties to Brown Spot Bacterium (Pseudomonas syringae Van Hall). D. P. Coyne and M. L Schuster. Plant Disease Reporter.
- 2610. Family Environment of Preschool Children in the North Central Region. H. M. Fox, B. A. Fryer, G. H. Lamkin, V. M. Vivian, and E. S. Eppright. Journal of Clinical Nutrition.
- 2611a. Properties of a Lipase from the Uredospores of <u>Puccinia Graminis Tritici</u>.

 Teresa L. Horner and H. W. Knoche. 158th National meeting of the American Chemical Society.
- 2612. Objective Tenderness and Maturity Measurement of Beef Steers. Charles H. Adams and Vincent H. Arthaud. Journal of Animal Science.
- 2613a. Influence of Dam's Environment of Offspring Phenotype. Robert M. Koch. Journal of Animal Science.
- 2614. Hydrologic Effects of Soil Conservation Practices. W. J. Owen and H. D. Wittmuss. Transactions of ASAE.

[&]quot;a" denotes abstract