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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



Vol. 12, No. 11, May 1979

FROM THE DIRECTOR'S DESK

Roman L. Hruska U. S. Meat Animal Research Center

On May 25, 1979 ceremonies will be held to rename the Center and to "dedicate to animal research" the agricultural engineering building and meat science and technology laboratory. Governor Thone, former Senator Hruska, and Assistant Secretary Cutler will participate in the program. Senator Hruska was instrumental in obtaining 35,000 acres of a former naval ammunition depot for research on beef cattle, sheep and swine. He also took the lead in obtaining federal funds for construction of facilities completed at Clay Center in 1970 and 1977, as well as for initial staffing.

The center is continuing to grow and develop. Currently 32 scientists are conducting research in a multidiscipline and comprehensive program with beef cattle, sheep, and swine. When fully completed it is anticipated that the Center will employ 100 scientists. It is the purpose of the Center to develop new technology for use by the meat animal industry.

The fine cooperative efforts between the Research Center and the University of Nebraska both at Lincoln and the South Central Station, are certainly appreciated. Dr. Bob Koch of the IANR is conducting research at the Center, and Dr. Gordon Dickerson of the Research Center staff is conducting research and teaching on the campus. Co-operative research efforts are being initiated with the South Central Station group. Most of the employees at the Research Center are University of Nebraska employees and their efforts enable the Center to function and carry out its mission.

Robert R. Oltjen

South Central Station

The South Central Station is unique among outstate stations in that it is located alongside of the Roman L. Hruska U. S. Meat Animal Research Center. Although somewhat different in function and clientele a synergic relationship has developed between the two organizations.

There are many very positive aspects of this unique relationship. Facilities made available to the South Central Station under cooperative agreement have been invaluable in carrying out crop and irrigation research projects for the south central Nebraska area. South Central staff, in close contact with Cooperative Extension agents, community organizations, and individuals in a 19-county area assist the Meat Animal Research Center with the ever important public relation function. South Central Station and Meat Animal Research Center staff work closely on solving crop production problems. The South Central district livestock specialists work closely with Meat Animal Research Center scientists helping relate research findings to livestock producers of the district.

We are looking forward to even more cooperative work during the next 10 years as both units continue to develop. A unique relationship -- good for the people of Nebraska.

Charles L. Stonecipher

GRANTS AND CONTRACTS

Amend, James F. - Vet. Science - Horsemen's Benevolent and Protective Assn Inc., Nebr.-So. Dak. Div.	\$ 500
Burnside, Orvin - Agronomy - Rohm and Haas Co.	1,300
Burnside, Orvin - Agronomy - Monsanto	1,000
Burnside, Orvin - Agronomy - Mobil Chemical Co.	1,000
Campbell - John - NRC Pesticide Impact Assessment Program	12,000
Ducey, James - Student; Dr. Ron Case, Advisor - Nat. Science Foundation	10,900
Flowerday, A. D. - Agronomy - Olin Corporation	11,000
Gilley, James - Ag Engineering - Lindsay Mfg. via UN Foundation	14,956
Kleis, R. W. - Int. Programs - U.S. Agency for Intern'l Development	22,721
Klopfenstein, Terry - Ani. Science - Farmland Industries	4,000
McCarty, M. K. - Agronomy - Univ. of Kansas Center for Research, Inc.	3,636
Moomaw, Russell - Agronomy (NE Sta.) - Monsanto Co.	750
Penas, Edwin J. - Agronomy - (SE Ext. & Res. Ctr.) - Dow Chemical	1,500
Roeth, Fred - Agronomy (SE Sta.) - Monsanto Co. and Dow Chemical Co.	1,250
Wicks, Gail - Agronomy (NP Sta.) - Monsanto Co. and Rohm and Haas Co.	1,250
Wilson, Robert, Jr. - Agronomy (PH Sta.) - Fisons Corporation	600
Woodward, John - Ag Exp. Station - USDA,SEA,CR	24,703

GENERAL NOTES

1. FIELD DAYS for which schedules have come to our attention are:
 - May 30.....Panhandle Range & Livestock (10 AM-3 PM) - Mitchell Ag Lab
 - June 26.....High Plains Ag Lab Field Day (9-12 AM) - Sidney
 - June 27.....Northwest Ag Lab Field Day (6:30-9:00 PM) - Alliance
 - July 24.....North Platte Station Field Day
 - July 26.....Tractor Power & Safety Day - Field Lab
 - August 2.....Panhandle Station Field Day
 - August 16....South Central Station Field Day
 - August 28....Northeast Station Field Day
2. Drs. Arnold and Omtvedt have participated in national society studies of research programs, needs and priorities sponsored in their fields by the Institute of Food Technologists and the Animal Sciences Societies (An. Sci., Dairy and Poultry) respectively. These efforts have resulted in excellent current publications describing the situations.
3. Please be reminded again not to hold grantors checks but send them through promptly with related documentation for crediting to the appropriate account.
4. Recent grant submittals and results to date are:
 - Competitive Grants, USDA,SEA,CR: nine proposals submitted and four tentatively approved in group I; four submitted in group II with no feedback yet.
 - Special Grants, USDA,SEA,CR: seventeen preproposals submitted and seven selected for full proposals and to date two have tentative approval.
 - Wheat Development Board: eleven proposals submitted and six have been approved.
 - Corn Development Board: twenty seven brief proposals submitted and to date three are approved.
 - Soybean Development Board: twenty proposals submitted and ten have been approved.
5. The Lower Platte South NRD is in the process of completing the bank stabilization of Dead Mans Run from 33rd to 48th streets.
6. A real estate trade has secured for the East Campus the parcel at 40th and Huntington which had been recently cleared for an apartment building and would have encroached into the research plots area of the campus. We continue efforts to secure the few properties between Dead Mans Run and Huntington which the Univ. doesn't own.
7. Some definitions of scientific paper terminology:
 - The most reliable values are those of Jones (he was a student of mine).
 - Correct within an order of magnitude (most probably wrong).
 - Of great theoretical importance (interesting to me).
 - Thanks are due to Smith and Brown for valuable contributions (Smith did the work and Brown explained what it meant).

R. W. Kleis

NEBRASKA AGRICULTURAL EXPERIMENT STATION PUBLICATIONS - April 1979

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

5675. Population Breeding in Sorghum--Phase II. W. M. Ross. Proceedings of the 33rd Annual Corn & Sorghum Research Conference of the American Seed Trade Association.
5676. Characterization of Biological Types of Cattle - Cycle II: III. Carcass Composition, Quality and Palatability. R. M. Koch, M. E. Dikeman, D. M. Allen, R. Jerry Lipsey and J. D. Crouse. Journal of Animal Science.
5677. Presence of a Major (storage?) Protein in Dormant Spores of the Fungus *Botryodiplodia theobromae*. J. L. Van Etten, S. N. Freer and B. K. McCune. Nature.
5678. Effects of Subterranean Aphids, *Geoica uticularia* (Passerini), on Forage Yield and Quality of Sand Lovegrass, *Eragrostic trichodes* (Nutt.) Wood. K. P. Vogel and S. D. Kindler. Journal of Range Management.
5679. Care Labeling Changes: A Consumer Educators Responsibility. Joan Laughlin. Journal of Home Economics.
5680. Enzymatic Hydrolysis of Whey Protein. I. A. Angelo, K. M. Shahani and A. Kilara. Journal of Dairy Science.
5681. Effect of Irradiation Temperature and Drying on Survival of Highly Radiation-Resistant Bacteria in Complex Menstrua. M. A. Bruns and R. B. Maxcy. Journal of Food Science.
5682. Pulmonary Emphysema in Newly Weaned Calves. Clair M. Hibbs. 11th Annual Conference of the American Association of Bovine Practitioners.
5683. Electron Microscopy of the Nebraska Root-Galling Nematode, *Nacobbus Batatififormis*, and Syncytia in Sugarbeet (*Beta vulgaris*) Roots. M. L. Schuster, L. W. Estes and S. A. Tolin. Journal of Nematology.
5684. Evaluation of Progress for Adaptive Mass Selection in Incompletely Adapted Maize (*Zea mays* L.) Populations. R. F. Mumm, W. A. Compton and B. Mathema. Crop Science.
5685. Effects of Ametryn on the Nitrogen Metabolism of Wheat. Kathleen Churchill and Lowell Klepper. Pesticide Biochemistry and Physiology.
5686. Additions of Lysine, Tryptophan, Methionine and Isoleucine to All-Corn Diets for Finishing Swine. A. J. Lewis. Nutrition Reports International.
5687. Ultraviolet Absorption Spectra and Difference Spectra of Barley Stripe Mosaic and Tobacco Mosaic Viruses in Buffer and Sodium Dodecyl Sulfate. Myron K. Brakke. Virology.
5688. Consideration of Irrigation Systems in the Solar Photovoltaic Energy Program. Marvin Twersky and Paul E. Fischbach. ASAE Transactions.

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

- 79-1169. Effect of *Lactobacillus Acidophilus* Milk on Pantothenic Acid Availability to Humans. J. Mathison, C. Kies, H. M. Fox and K. Shahani. Nebraska Academy of Sciences.
- 79-1170. Copper and Zinc Utilization by Human Adults Fed Wheat, Rice, and Corn Bran Supplemented Diets. Bernadette Fung Lo, C. Kies and H. M. Fox. Nebraska Academy of Science.
- 79-1171. Effects of Wheat, Corn, and Rice Brans on Dietary Fat Utilization and Serum Lipid Levels of Human Adults. S. Balters, C. Kies and H. M. Fox. Nebraska Academy of Sciences.
- 79-1172. Iron, Copper, Zinc and Magnesium Loss in Human Menstrual Blood. J. Umoren, C. Kies and H. M. Fox. Nebraska Academy of Sciences.
- 79-1173. Ascorbic Acid - Iron Nutritional Status Relationships of Adolescent Boys and Girls. D. Bylund and C. Kies. Nebraska Academy of Sciences.
- 79-1174. Dietary Fiber and the Utilization of Pantothenic Acid by Pubescent Human Subjects. S. Trimbo, J. Kathman, C. Kies and H. M. Fox. Nebraska Academy of Sciences.
- 79-1175. Effect of Dietary Concentrate Level on N Balance, Urine Ca Excretion and Blood Composition of Sheep. G. Huntington, R. Britton and R. Prior. Journal of Animal Science.
- 79-1176. High Protein Levels and Rapid Adaptation to High Concentrate Rations. W. Wade Steen, S. D. Farlin and R. A. Britton. Journal of Animal Science.
- 79-1177. Ultrastructural Variations and Phagocytosis of Spermatozoa in the Epithelium of the Monkey Vas Deferens. Angel S. Ramos, Jr. Society for the Study of Reproduction, University of Laval, Quebec City, Canada.
- 79-1178. Ultrastructural Cytodifferentiation of Rat Sertoli Cells. A. S. Ramos, Jr. American Society of Andrology.
- 79-1179. Some Post-Freeze Effects on Stalk Breakage of Grain Sorghum. Max D. Clegg. Grain Sorghum Research & Utilization Conference.
- 79-1180. Differential Reaction of *Phaseolus vulgaris* Germplasm, Tolerant to Halo Blight Race 2, to a New Virulent Strain. D. P. Coyne, M. L. Schuster and Carol Erwin. Hort. Science - Annual Meeting, American Society of Horticultural Science.
- 69-1181. Inheritance of Ovule Number/Pod, Seed Number/Pod, Seed Weight, and Association with Several Traits in Dry Bean (*Phaseolus vulgaris* L.) Crosses. Faisal A. Al-Mukhtar and Dermot P. Coyne. Hort. Science - Annual Meeting, American Society of Horticultural Science.

BULLETINS PRINTED

- SB 543. Better Forecasts Can Reduce Risks for Placement & Futures Market Decisions. Wen-Shan Lee and James B. Hassler.
- SB 519. Vegetable Gardening in Nebraska. R. E. Neild and Dale T. Lindgren.