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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



Vo. 8, No. 9, March 1976

FROM THE ACTING DIRECTOR'S DESK

ENERGY RESEARCH: There is currently a tremendous volume of discussion, surveying, projecting, planning, conferences, workshops, inventories and bureaucratic maneuvering with respect to general energy programs. This applies similarly to the more specific area of energy usage in agriculture particularly on a national and regional basis. But in spite of procedural confusion two things seem clear: The problem is real and long-term and there will be major federal resources for energy research in the years ahead. The prominent federal agency will be ERDA (Energy Research and Development Agency).

In agricultural research units we will need to implement some new energy focusing and funded projects as such. But perhaps more important to the resolution of the short- and long-range energy questions we will need to inject the energy dimension and variable into nearly all our research activities. This is already happening to a gratifying degree.

There is a variety of data from several sources being cited on energy usage in the agriculture and food system. ERS has digested these and suggests the following as best current estimates.

Percent of Total U.S. Energy ConsumptionAgricultural (food) production2.9Food processing and manufacturing4.8Food distribution (wholesale and retail)1.3Food preparation - out-of-home2.8Food preparation - in-home4.3Total for food system16.1

<u>The CRIS</u> (Current Research Information System) retrieval service is available for your use and you as research project leaders are urged to make use of it. There is no justification for unknowingly duplicating or repeating other research. There may be justification for deliberately designed duplication. But, in any event it is important to be familiar with related work that others have done or are doing. It is difficult but important--particularly for those developing new or revised research projects. The CRIS includes information on all projects of the Agricultural Experiment Stations and the research services of the USDA. It includes project titles, objectives, personnel, resources, procedures (abbreviated), and annual progress reports as provided by each of you on forms AD416, AD417, AD419, and AD421.

Our office has CRIS retrieval request forms (AD427) which are quite simple to complete for requesting desired printouts. The information requested is identified by indicating "key words" Caution is urged to not be too general in designating key words under penalty of being smothered with printout paper and having desired information obscured by a large volume of irrelevant material. But please make use of this system to become informed about related work elsewhere.

<u>BIBLIOGRAPHICAL SEARCHES</u>: The University of Nebraska Libraries has recently contracted with the Lockheed Palo Alto Research Laboratory to make available on-line bibliographic searching for the students and faculty at UN-L. A portable computer terminal has been rented and is available for use four days a week on the City Campus and one day a week on the East Campus. Over twenty data bases are available for searching. The major use on the East Campus will be r the National Agricultural Library tapes, Biological Abstracts, Chemical Abstracts and

ssertation Abstracts. The rates vary from \$8.25 to \$19.25 minimum charge for the first ten minutes on-line. Computer searching is available on the East Campus from 2:30 - 6:00 p.m., Wednesday and 7:30 a.m. - 2:00 p.m. Thursday. If you have any questions, please contact Wayne Collings, C. Y. Thompson Library - phone number 472-2802.

PERSONNEL ACTIONS

Darling, Dean - Assoc. Prof. of Veterinary Science (Panhandle Station) - appointment Douglass, Richard L. - Asst. Prof. of Ag. Education - Leaving Epp, A. W. - Prof. Emeritus, Ag. Economics - retirement Hill, Roscoe E. - Prof. Emeritus, Entomology - retirement

Lutgen, Lynn - Asst. Prof. of Ag. Economics - appointment Nill, Joanne S. - Instructor of Ag. Communications - appointment Pearson, Marcia - Instructor of Ag. Communications - Leaving Saeger, William H. - Instructor, Conservation & Survey Division - appointment

Siffring, Donali - Assoc. Prof. of Extension - 4-H & Youth Specialist(N.P. Sta.)-appointment Svec, Leroy V. - Assoc. Prof. of Agronomy (South Central Station) - appointment Wiese, Maurice - Assoc. Prof. of Plant Pathology - courtesy

GRANTS AND CONTRACTS

Campbell, John B Entomology (North Platte Station) - American Cyanamid Co. Daigger, Louis A Agronomy (Panhandle Station) - Nebr. Dept. of Agric.	\$ 500 870
Dillon, Roy D Ag. Education - Nebr. State Board for Voc. Education Fischbach, Paul E Ag. Engineering - Miscellaneous Donors	36,000 2,000
Fischbach, faul E. * Ag. Engineering - Miscellaneous Donois	2,000
Grabouski, Phil - Agronomy (North Platte Station) - ColoNebr. Compost Corp.	1,500
Klopfenstein, Terry - Animal Science - Distillers Feed Research Council	4,000
Klopfenstein, Terry - Animal Science - Miscellaneous Donors	800
Moser, Bobby D Animal Science - Fats & Proteins Research Foundation, Inc.	12,000
Sander, D. H Agronomy - Phillips Petroleum Co.	4,000
Shahani, Khem M Food Sci. & Tech J. Gordon Roberts Investments, Inc.	6,000
Vollmar, Glen et al - Ag. Economics - CSRS-USDA Title V	30,879
Watts, Darrell G Ag. Engineering (North Platte Station) Miscellaneous Donors	
Wilson, Robert G., Jr Agronomy (Panhandle Station) PPG Industries, Inc.	

GENERAL NOTES

- Vice Chancellor Martin Massengale will be on duty with the IANR, UN-L, starting Monday, March 22. There will be a reception for Dr. and Mrs. (Ruth) Massengale from 3-5:30 p.m., <u>April 22</u> in the Omaha Room of the <u>Nebraska Center</u>. All faculty <u>and spouses</u> are invited. Please consider this your invitation, guard the schedule and tell your spouse before you forget.
- 2. Please be reminded that <u>only</u> the new "Data and Budget" forms (DAS 2000-1) are to be used now for grants and contracts. This is a three-page form but the upper 3/4 of page 3 need not be completed except when federal funds are involved.
- 3. Dick Lorah (216 Ag. Hall) asks whether you or any of your cooperators are interested in receiving any of the following newsletters produced by the USDA Extension Service, Community Development Section:

Community Resource Dev. Newsletter	Recreation Program Notes
Housing Program Notes	Industrial Development Notes
Health Program Notes	Transportation Program Notes
Manpower Development Program Notes	Water - Sewer Program Notes

- 4. Schnieder Sez: Read and follow directions on the pesticide labels. Some Nebraskans have been cited by EPA because they did not wear personal protective equipment as listed on the label. If you're using anhydrous ammonia this year, make sure you use a good pair of protective goggles. For extra precaution, also keep a container of water handy.
- 5. The 1976 Nebraska Tractor Test Summary book is now available. Single copies are free from the Department of Ag. Communications.
- 6. "We tend to see things not as they are but as we are."

NEBRASKA AGRICULTURAL EXPERIMENT STATION PUBLICATIONS - February 1976

Journal Articles (contact authors for more information)

- 5046. Stomatal Frequency and Heat and Drought Stress in Soybeans. J. R. Martineau, J. H. Williams and J. E. Specht. Soybean Genetics Newsletter.
- 5047. Role of Microbial Enzymes in Flavor Development in Foods. K. M. Shahani, R. G. Arnold, A. Kilara and B. K. Dwivedi. Bioengineering & Biotechnology.
- 5048. Effects of ⁶⁰Co Radiation on Herbicides in Aqueous Solution. D. L. Bucholtz and T. L. Lavy. Journal of Environmental Quality.
- 5049. Prospects for Control of Phytopatholgenic Bacteria by Bacteriophages and Bacteriocins. Anne K. Vidaver. Review of Phytopathology.
- 5050. Windbreaks in Agriculture: Impacts and Implications. Norman J. Rosenberg. Proc. of the 2nd US National Conference on Wind Engineering Research, Ft. Collins, Colorado, 22-25 June 1975.
- 5051. Influence of Dietary Protein and Energy on Reproductive Performance and N Metabolism in Finn-cross Ewes. R. K. Christenson and R. L. Prior. Journal of Animal Science.
- 5052. Transmissible Gastroenteritis (TGE), The Carrier Pig. Norman R. Underdahl, Charles A. Mebus and Alfonso Torres-Medina. Proceedings to 1976 Congress International Pig Veterinary Society.
- 5053. Diagnosis of <u>Mycoplasma Hyopneumoniae</u> Infection in Swine by Fulfilling Koch's Postulates. Alex Hogg, E. L. Stair and N. R. Underdahl. Proceedings to 1976 Congress International Pig Veterinary Society.
- 5054. Influence of Human Chorionic Gonadotropin on Pregnancy Rates in Lactating Dairy and Beef Cows. W. Hansel, R. W. Spalding, L. L. Larson, D. B. Laster, J. F. Wagner and R. K. Braun. Journal of Dairy Science.
- 5055. Tractor Instrumentation for Measuring Fuel and Energy Requirements. Rod G. Koertner, Leonard L. Bashford and Delbert E. Lane. Transactions of the American Society of Agricultural Engineers.
- 5056. Time and Rate of Fertilizer Application for Seeded Warm-Season and Bluegrass (<u>Poa Pratensis</u>, L.) Pastures. I. Yield and Botanical Composition. G. W. Rehm, R. C. Sorensen and W. J. Moline. Agronomy Journal.
- 5057. SYMVU. Thomas L. Thompson and Alfred L. Stark. Agricultural Engineering Computer News.
- 5058. Vocational Teachers Team Up to Provide Career Exploration. Drs. James T. -Horner and Richard L. Douglass. Agricultural Education.
- 5059. Insulin and Glucose Effects on Glucose Metabolism in Pregnant and Nonpregnant Sheep. R. L. Prior and R. K. Christenson. American Journal of Physiology.

Journal Abstracts (contact authors for more information)

- 76-525. Predicting Cutability in Bull and Steer Carcasses. K. R. Helm, M. K. Nielsen and V. H. Arthaud. Journal of Animal Science.
- 76-526. Factors Affecting Growth of Hampshire Lambs. D. J. Walstrom, M. K. Nielsen and T. H. Doane. Journal of Animal Science.
- 76-527. Selection of Ovulation Rate: Correlated Response in Carcass Traits. M. E. England, P. J. Cunningham, Dwane R. Zimmerman and R. W. Mandigo. Journal of Animal Science.
- 76-528. Corn (Zea mays Linne 'NC-33-Wilson-1016') Wireworm; Melanotus communisdistrichi Complex. K. S. Pike and Z. B. Mayo.
- 76-529. Alfalfa Weevil and Variegated Cutworm on Alfalfa in Nebraska, 1975. Leroy L. Peters. Insecticide and Acaricide Tests.
- 76-530. Effect of Tolerant and Susceptible Dry Bean Germplasm on Seed Transmission of <u>Xanthomonas phaseoli</u>. Dermot P. Coyne and M. L. Schuster. Bean Improvement Cooperative.
- 76-531. Further Information on the Differential Reaction of Soliage and Pods of Beans to <u>Xanthomonas phaseoli</u> and Implications in Breeding. Dermot P. Coyne and M. L. Schuster. Bean Improvement Cooperative.
- 76-532. Slow Ammonia Release Urea. Michael Prokop, Terry Klopfenstein and N. N. Umunna. American Society of Animal Science.
- 76-533. A Method for Selfing <u>Phaseolus coscineus</u> (LAM.). A. M. Ibrahim and D. P. Coyne. Bean Improvement Cooperative.
- 76-534. Breeding for White Mold Disease Resistance and Avoidance Due to Ideotype in Beans. Dermot P. Coyne and J. R. Steadman. Bean Improvement Cooperative.
- 76-535. Corn (Zea mays Linne.) Western Corn Rootworm (Diabrotica virgifera LeConte) and Northern Corn Rootworm (D. longicornis (Say)). Z. B. Mayo, L. L. Peters, J. B. Campbell, A. F. Hagen and J. F. Witkowski.
- 76-536. Effect of Ecofallow on Grain Sorghum and Corn Diseases. B. Doupnik, Jr., M. G. Boosalis and G. Wicks. Interregional Corn Improvement Conference.
- 76-537. The Feeding Value of Waxy Corn in Ruminant Rations. Scott E. Brady and Stanley D. Farlin. American Society of Animal Science.
- 76-538. Interspecific Hybridization Between <u>Phaseolus vulgaris</u> and <u>Phaseolus coccineus</u>. A. M. Ibrahim and D. P. Coyne. Bean Improvement Cooperative.

BULLETINS PRINTED

- OTC 169. Nebraska Spring Small Grain Variety Tests 1975. A. F. Dreier, J. W. Schmidt, L. A. Nelson and R. S. Moomaw.
- OTC 172. Nebraska Grain Sorghum Performance Tests 1975. A. F. Dreier, P. T. Nordquist, P. H. Grabouski, R. S. Moomaw and L. A. Nelson.