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UNIVERSITY OF NEBRASKA-LINCOLN
 COLLEGE OF AGRICULTURE
 THE AGRICULTURAL EXPERIMENT STATION
 E. F. FROLIK, DEAN
 H. W. OTTOSON, DIRECTOR

Agricultural Experiment Station



Vol. 5, No. 9, March 1973

FROM THE DIRECTOR'S DESK

The Hatch fund cut recommended by the President is a little worse than we estimated in our letter of February. The reason—a new allocation formula applied to us and the other states based on the new agriculture census gives us a bigger share of increases, when there are any, and decreases, as in this year. Here are the effects of the new formula:

Hatch formula: -\$186,639 instead of -\$165,503
 Hatch Regional: -\$ 73,572 instead of -\$ 57,300

So, the story is \$37,000 worse than we indicated in February.

Howard W. Ottoson

Nebraska Agricultural Experiment Station Broad Category Program Profile

| Category | Fy 1971 SMY | Category | FY 1971 SMY |
|-----------------------------------|----------------|-----------------------------------|----------------|
| Soil & Land Use | 4.2 | Beef | 11.2 |
| Water & Watersheds | 3.9 | Dairy | 4.0 |
| Environ. Qual. | 1.9 | Poultry | 4.4 |
| Weather | 0.7 | Sheep | 1.7 |
| SUBTOTAL NATURAL RESOURCES | 10.7 | Swine | 10.6 |
| FORESTRY | 0.5 | Other Animals | 1.9 |
| Corn | 8.2 | SUBTOTAL ANIMALS | 33.8 |
| Gr. Sorghum | 6.3 | Food & Nutri. | 2.3 |
| Wheat | 6.7 | Food Safety | 3.5 |
| Sm. Grains | 1.5 | Rural Devel. | 8.1 |
| Soybeans | 4.3 | SUBTOTAL PEOPLE, ETC. | 13.9 |
| Sugar | 0.6 | Farm Adj. | 5.1 |
| Forage | 9.1 | Foreign Agr. | 0.7 |
| Vegetables | 7.4 | Mktg. & Comp | 2.1 |
| Plants | 2.2 | SUBTOTAL COMP. TRADE, ETC. | 7.9 |
| SUBTOTAL CROPS | 46.3 | GENERAL | 6.1 |
| | | OVERALL STATION TOTAL | 119.2 |

Categories listed include components of engineering, biochemistry, statistics, food science, etc. Home Economics (except F&N) is primarily in "Rural Development."

PERSONNEL ACTIONS

- Burbank, John A. - Assoc. St. Leader of Programs and Reports (appointment)
- Daly, Ronald T. - Prof. of Human Development and the Family (appointment)
- Evans, T. Allen - Assoc. Prof. of FS&T - Acting Chairman (appointment)
- Fisher, Wayne F. - Asst. Prof. of Agr'l Eng'g (NE Sta.) (resignation)
- Lutz, Arlen E. - Assoc. Prof. of Agr'l Ed. (resignation and retirement)

CONGRATULATIONS - PROMOTIONS

To Professor:

| | | |
|-----------------|---------------|------------------|
| Larry Cundiff | Earl Gleaves | George Manglitz |
| Louis Daigger | Clair Hibbs | Glenn Peterson |
| Charles Fenster | Herman Knoche | Donald Sander |
| Dale Flowerday | Dan Lutz | Rollin Schnieder |
| | | Thomas Thompson |

To Associate Professor:

| | | |
|------------------|---------------------|-----------------|
| John Campbell | Thomas Frey | Russell Moomaw |
| Max Clegg | Robert Hatch | George Rehm |
| Peter Cunningham | Violet Kalyan-Masih | Fred Wagner |
| Benjamin Doupnik | Eric Kerr | Allen Wellman |
| Duane Foote | Willem Langenberg | Ray White |
| | | Jacqueline Voss |

To Assistant Professor

| | |
|--------------|------------------|
| Larry Barber | Mary Christensen |
|--------------|------------------|

GRANTS AND CONTRACTS

| | |
|--|----------|
| Bagley, Walter T. - Hort. and Forestry - McIntire-Stennis Coop. Forestry Res. | \$39,582 |
| Bullerman, L. B. - Food Sci. and Tech. - DHEW NIH | 16,224 |
| Burnside, Orvin C. - Agronomy - Farmland Industries, Inc. | 3,800 |
| Burnside, Orvin C. - Agronomy - National Flaxseed Processors Asso. | 500 |
| Cunningham, Peter J. - Animal Science - USDA ARS | 4,000 |
| Danielson, D. M. - Animal Science (NP Sta.) - Shell Development Co. | 6,000 |
| Klopfenstein, Terry - Animal Science - Grass Valley Farms | 1,000 |
| Klopfenstein, Terry - Animal Science - Miscellaneous Donors | 4,600 |
| Klopfenstein, Terry - Animal Science - Feed Commodities, Inc. | 2,500 |
| Olson, R. A.; Peterson, G. A. and D. H. Sander - Agronomy - Phillips Petroleum Co. | 3,600 |
| Shahani, Khem M. - Food Sci. and Tech. - Dairy Research Inc. | 12,000 |
| Sullivan, Thomas W. - Poultry Science - Borden Chemicals | 4,000 |
| Uhlinger, Roger D. - Hort. and Forestry (NP Sta.) - Neb. Assoc. Of Nurserymen | 500 |
| White, R. G. - Veterinary Science (NP Sta.) - Neb. Livestock Foundation | 4,000 |
| White, R. G. and Danielson, M. D. - Vet. Sci. & Ani. Sci. (NP Sta.) - Merck & Co. | 5,112 |

GENERAL NOTES

1. Congratulations to the following staff members recently elected to the Graduate faculty of the University of Nebraska.

| | |
|--|--|
| Walter T. Bagley - Horticulture and Forestry | Wally J. Moline - Agronomy |
| Max D. Clegg - Agronomy | Howard S. Teague - Animal Science (MARC) |
| Larry L. Larson - Animal Science | Roger D. Uhlinger - H&F (NP Sta.) |
| Danny B. Laster - Animal Science (MARC) | Gail A. Wicks - Agronomy (NP Sta.) |

2. Out of state travel requests should include in the "Purpose" section a brief statement of your purpose of attending whatever event is identified. If presentation of a paper is involved please identify the paper by title. Also please recall that we need the actual dates of the meeting indicated.
3. Please be reminded to watch for appropriate and timely news releases associated with your research and contact Mr. J. P. Holman concerning them.
4. Congratulations to Dr. Lowell Klepper (Agronomy) and Loyd Mielke (Agron. and Agr'l Eng'g for different and exciting research developments which appear to have public service patent potential.

R. W. Kleis

NEBRASKA AGRICULTURAL EXPERIMENT STATION PUBLICATIONS - February 1973

3552. Establishment of Alfalfa in Irrigated Corn. P. T. Nordquist and G. A. Wicks. *Agronomy Journal*.
3553. Characteristics of Deoxyribonucleic Acid Polymerase Isolated from Spores of Rhizopus stolonifer. Cheng-Shung Gong, Larry D. Dunkle and James L. Van Etten. *Biochimica et Biophysica Acta*.
3554. Satellite Imagery for Assessing Range Fire Damage in the Sandhills of Nebraska. Paul M. Seevers, Peter N. Jensen and James V. Drew. *Journal of Range Management*.
3555. Physiological Aspects and Microscopical Observations of Rhizopus stolonifer Spore Germination. J. L. Van Etten, Grant St. Julian and Lee A. Bulla. *Bacteriology*.
3556. Seedling Growth of Sorghum Bicolor (L.) Moench in Clay-Sand Mixtures at Various Compactions and Water Contents. Delroy L. Hemsath and Andrew P. Mazurak. *Soil Science Society of America Proceedings*.
3557. Root Distribution and Propagation of Common Milkweed. L. L. Evetts and O. C. Burnside. *Weed Research Journal*.
3558. Dielectric Properties of Materials for Microwave Processing--Tabulated. W. R. Tinga and S. O. Nelson. *Journal of Microwave Power*.
3559. Relationships of the Milking System to the Adequacy of Milking. R. D. Appleman and C. F. Micke. *Journal of Dairy Science*.
3560. Reducing Herbicide Injury to Sorghum with Crop Protectants. R. F. Spotanski and O. C. Burnside. *Weed Science Journal*.
3561. Effects of Mowing on Three Species of Wild Flowers. S. S. Salac, J. F. Hesse and J. O. Young. *Journal of the American Society for Horticultural Science*.
3562. Plant Protein Fortification of Snack Foods. L. D. Satterlee, J. G. Kendrick and Kathy J. Liska. *Snack Food*.
3563. Mass Spectrum of an Ornithine-containing Lipid from Thiobacillus Thiooxidans. Herman W. Knoche and Jessup M. Shively. *Lipids*.
3564. A Toxin from Fusarium Moniliforme Producing Effects on Plants and Animals. R. J. Cole, J. W. Kirksey, H. G. Cutler, B. L. Doupnik and J. C. Peckham. *Science*.
3565. Effect of Genetic Sampling Technique on Variation Within Populations Derived by Crossing, Selfing or Random Mating Other Populations. J. J. Hammond and C. O. Gardner. *Crop Science*.
3566. Operational Characteristics of Meat Animals -- Part III Broilers. N. C. Teter, J. A. DeShazer and T. L. Thompson. *Transactions of American Society of Agricultural Engineers*.
3567. Characterization of a Segmented Double-Helical RNA from Bacteriophage 6. J. S. Semancik, A. K. Vidaver and J. L. Van Etten. *Journal of Molecular Biology*.
3568. Herbicides: Mode of Action. I. Photosynthetic Inhibitors. Lowell Klepper. *Science*.

3569. Herbicides: Mode of Action. II. Conversion of Herbicides into Photosynthetic Inhibitors. Lowell Klepper. Science.
3570. Endoplasmic Reticulum-derived Pinwheels in Wheat Infected with Wheat Spindle Streak Mosaic Virus. Willem G. Langenberg and Hellen F. Schroeder. Virology.
3571. Registration of Trio Oats. F. A. Coffman, E. G. Heyne and John W. Schmidt. Crop Science.
3572. Photosynthesis and Resistance to Water Loss as Related to Maturity Stage in Grain Sorghum [*Sorghum bicolor* (L.) Moench]. Joe H. Hultquist. Proceedings of Grain Sorghum Research and Utilization Conference.
3573. Use of Behavioral Objectives to Teach Soil Morphology, Classification, and Survey. David T. Lewis. Journal of Agronomic Education.
3574. A Ten-Year Study of Potential Western Corn Rootworm Resistance to Diazinon and Phorate in Nebraska. Harold J. Ball. Journal of Economic Entomology.
3575. Registration of Belinda Winter Wheat Germplasm. J. W. Schmidt, V. A. Johnson, P. J. Mattern. Crop Science.
3576. Registration of Centurk Wheat. J. W. Schmidt, V. A. Johnson, P. J. Mattern, A. F. Dreier. Crop Science.
3577. Relationship of Bromegrass Seed Midge Infestation and the Length of Palea of Smooth Bromegrass. E. L. Neiman and G. R. Manglitz. Journal of Economic Entomology.
3578. Conservation Tillage -- Management Principles Plant Diseases. Michael G. Boosalis and Gilbert E. Cook. Soil and Water Conservation.
3579. Physical and Pricing Efficiency Gains from Selling Fed Cattle in the United States by Teletype. Ralph D. Johnson. Australian Journal of Agricultural Economics.

ABSTRACTS

- 73-158. Nitrogen Assimilation in Nitrogen-fixing Soybean Nodules. S. D. Dunn and R. V. Klucas. Abstracts of the Annual Meeting of the American Society of Microbiologists
- 73-159. Acid Treated Corn for Finishing Cattle. Walter Tolman and Paul Q. Guyer. Journal of Animal Science.
- 73-160. Glutamate Dehydrogenases. Marvin B. Rhodes and Donald L. Ferguson. Proceedings of the Nebraska Academy of Sciences, Inc.
- 73-161. Remotely Sensed Thermal Imagery for Estimating Evapotranspiration Rates in the Platte River Valley. Blaine L. Blad and Norman J. Rosenberg. The Nebraska Academy of Science.
- 73-162. Systematized Monitoring of CO₂ Concentration and Gradients in an Agricultural Region and Implication with Respect to Air Pollution. Shashi B. Verma and Norman J. Rosenberg. WMO/WHO Technical Conference on Observation and Measurement of Atmospheric Pollution, Helsinki, Finland, 30 July-4 Aug., 1973.

BULLETINS PRINTED

- OTC 152. Nebraska Corn Performance Tests, 1972. A. F. Dreier, R. S. Moomaw, P. H. Grabouski and G. M. Dornhoff.