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82nd Annual Report of the Nebraska Agricultural Experiment Station

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82nd annual report of the Nebraska Agricultural Experiment Station
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Issued December 1968, 1500

Foreword

The 82nd Annual Report of the Nebraska Agricultural Experiment Station contains a list of all active projects during July 1, 1967 to June 30, 1968, a list of Station publications, staff members, and a financial report. Information derived from the various research projects is published in bulletins, circulars, scientific and trade journals, in the *Nebraska Experiment Station Quarterly* and as mimeographed departmental reports. Station bulletins, circulars and the *Quarterly* may be obtained free from any county agricultural agent or by writing to the Director of the Experiment Station, University of Nebraska College of Agriculture and Home Economics, Lincoln, Nebraska 68503. Reprints of most journal articles may be obtained by writing directly to the authors.

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*Director and Associate Dean*

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Richard Herman, Omaha
Robert Raun, Norman
Edward Schwartzkopf, Lincoln
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Joseph Soshnik, Corporation Secretary

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M. M. Plum, Ph.D., Professor, Dairy Breeding
A. B. Schultz, Ph.D., Associate Professor, Reproduction Physiology
P. E. Vipperman, Ph.D., Assistant Professor, Swine Nutrition
J. K. Ward, Ph.D., Associate Professor, Beef Nutrition
W. R. Woods, Ph.D., Professor, Beef Nutrition
D. R. Zimmerman, Ph.D., Associate Professor, Reproduction Physiology

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Richard Dam, Ph.D., Assistant Professor, Nutritional Biochemistry
R. M. Hill, Ph.D., Associate Professor, Protein Biochemistry
H. W. Knoche, Ph.D., Associate Professor, Biochemical Endocrinology
D. R. Lineback, Ph.D., Assistant Professor, Enzymes
R. L. Ogden, Ph.D., Assistant Professor, Alfalfa Processing

Economics (Agricultural)

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Dale Anderson, Ph.D., Assistant Professor, Marketing
Maurice Baker, Ph.D., Associate Professor, Land Economics
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Michael Turner, Ph.D., Associate Professor, Marketing
Richard Walsh, Ph.D., Professor, Marketing

**Editorial**

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T. B. Bare, M.Sc., Instructor, Radio and Television
J. P. Holman, M.Sc., Associate Professor, Experiment Station Editor
Janet Huss, B.Sc., Instructor, Home Economics Radio and Television
G. I. Johnson, B.A., Assistant Professor, Press
John H. McLaughlin, B.Sc., Assistant Professor, Radio and Television

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M. G. McCreight, M.Sc., Associate Professor, Agricultural Extension
R. L. Peterson, Ed.D., Assistant Professor, Agricultural Education

**Engineering (Agricultural)**

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J. A. DeShazer, Ph.D., Associate Professor, Livestock Facilities
D. M. Edwards, Ph.D., Associate Professor, Natural Resources
L. F. Larsen, M.Sc., Professor, Tractor Testing
J. C. Lorimer, B.Sc., Instructor, Soil and Water Conservation
M. L. Mumgaard, B.Sc., Assistant Professor, Tractor Testing
S. O. Nelson, M.Sc., Associate Professor, Production Processing
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H. D. Wittmuss, Ph.D., Associate Professor, Natural Resources

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C. R. Manglitz, Ph.D., Associate Professor, Forage Insect Investigations
J. D. Munson, M.Sc., Instructor, Corn Insects and Their Control
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J. M. Schalk, M.Sc., Instructor, Forage Crop Insects
Robert Staples, Ph.D., Associate Professor, Insect and Plant Disease Relationships

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J. R. Vakil, Ph.D., Assistant Professor, Chemistry
R. C. Arnold, Ph.D., Assistant Professor, Flavor Chemistry

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E. J. Kinbacher, Ph.D., Associate Professor, Physiology
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R. E. Neild, M.Sc., Assistant Professor, Horticulture
D. S. Nuland, M.Sc., Instructor, Horticulture
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N. J. Rosenberg, Ph.D., Professor, Climatology
S. S. Salac, Ph.D., Assistant Professor, Ornamental Horticulture
C. Y. Sullivan, Ph.D., Associate Professor, Physiology
R. D. Uhlinger, Ph.D., Associate Professor, Horticulture
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M. K. Byakke, Ph.D., Professor, Virus Diseases
R. W. Goss, Ph.D., Professor, Fungus Diseases (Emeritus)
W. G. Langenberg, Ph.D., Assistant Professor, Virus Diseases
Glenn Peterson, Ph.D., Associate Professor, Tree Diseases
D. R. Pring, Ph.D., Postdoctoral Fellow, Virus Diseases
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J. L. Van Etten, Ph.D., Assistant Professor, Plant Physiology
A. K. Vidaver, Ph.D., Assistant Professor, Bacterial Diseases

Poultry Sciences
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T. W. Sullivan, Ph.D., Professor, Poultry Nutrition
H. L. Wiegars, M.Sc., Associate Professor, Poultry and Wildlife Management

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O. D. Grace, M.Sc., D.V.M., Professor, Diagnostic Laboratory
J. W. Knoch, B.Sc., Assistant Instructor, SPF Swine
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R. M. Nakamura, D.V.M., Ph.D., Associate Professor, Respiratory Diseases
K. C. Olson, B.Sc., Instructor, SPF Swine
L. C. Payne, D.V.M., Ph.D., Professor, Physiology
M. B. Rhode, M.Sc., Instructor, Enzymology of Parasites
N. R. Underdahl, B.A., M.S., Professor, Swine Diseases
A. B. Welch, M.Sc., Assistant Instructor, Viral Diseases Swine

Library
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Statistics
R. F. Mumm, Ph.D., Assistant Professor, Statistical Consultant

School of Home Economics
Family Economics and Management
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Dorothy Larrey, Ph.D., Professor, Family Economics and Management
Florence Walker, Ph.D., Associate Professor, Family Economics and Management

Food and Nutrition
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Constance Kies, Ph.D., Associate Professor, Food and Nutrition
Marie Knickrehm, Ph.D., Professor, Institutional Administration
Pauline Paul, Ph.D., Professor, Food and Nutrition

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Shirley Kreutz, Ed.D., Associate Professor, Home Economics Education

Human Development and the Family
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Violet Kalyan-Mash, Ph.D., Assistant Professor, Human Development and the Family
Jacqueline Voss, Ed.D., Assistant Professor, Human Development and the Family

Textiles, Clothing and Design
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Patricia Sailor, Ph.D., Associate Professor, Textiles, Clothing and Design
Regional Stations

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Paul Ehlers, B.Sc., Superintendent of Station

Fort Robinson Beef Cattle Research Station, Crawford, Nebraska
R. D. Humphrey, M.Sc., Superintendent of Station
S. C. Eittreim, D.V.M., Research Associate
D. L. Hall, B.Sc., Research Technician
William Murray, B.Sc., Animal Husbandman

Northeast Station, Concord, Nebraska
Cal Ward, M.Sc., Superintendent of Station
H. J. Zimmerman, M.Sc., Associate Extension Agriculturist and Assistant Superintendent
U. U. Alexander, M.Sc., Assistant Professor, Agronomy
R. D. Fritsch, M.Sc., Assistant Professor, Agronomy
D. J. Kubik, B.Sc., Associate Extension Agriculturist, Dairy
E. J. Schwartz, B.Sc., Assistant Professor, Agronomy
W. L. Toman, B.Sc., Assistant Professor, Animal Science

Scotts Bluff Experiment Station, Mitchell, Nebraska
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F. N. Anderson, M.Sc., Instructor, Agronomy
L. A. Daigger, M.Sc., Associate Professor, Area Specialist, Soils
C. R. Fenster, B.Sc., Associate Professor, Crop Management
A. F. Hagen, M.Sc., Assistant Professor, Entomology
W. F. Peterson, M.Sc., Research Associate, Agronomy

University of Nebraska Field Laboratory, Mead, Nebraska
W. W. Sahs, M.Sc., Superintendent of Field Laboratory
F. C. Hasterr, B.Sc., Operations Manager

North Platte Experiment Station, North Platte, Nebraska
L. F. Sheffield, M.Sc., Superintendent of Station
M. G. Rumery, B.Sc., Associate Professor and Assistant Superintendent
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D. M. Danielson, Ph.D., Assistant Professor, Animal Science
P. H. Grabowski, B.Sc., Assistant Professor, Agronomy, Outstate Testing
P. T. Nordquist, M.Sc., Instructor, Agronomy
D. E. Smika, M.Sc., Research Soil Science
John Vallentine, Ph.D., Associate Professor, Range Management
G. A. Wicks, M.Sc., Assistant Professor, Weed Control

U.S. Meat Animal Research Center, Clay Center, Nebraska
K. E. Gregory, Ph.D., Director of Center
Walt Rowden, M.Sc., Assistant to the Director for Operations
Gene Vanderburg, B.Sc., Administrative Officer
Lamoine Brownlee, M.Sc., Farm and Maintenance Operations Manager
G. E. Dickerson, Ph.D., Research Geneticist
Hudson Glimp, Ph.D., Research Chemist
Elmer Krehbiel, Ph.D., Research Geneticist
Raymond Sampson, B.S., Animal Husbandman
Charles DeGeer, M.Sc., Animal Husbandman
Richard Pittman, B.S., Animal Husbandman

1 College Staff
2 Station Staff
3 Extension Staff
4 Leave of Absence
5 Cooperative, USDA
6 Deceased

*Includes only staff holding Experiment Station appointment on July 1, 1968.

Nebraska Agricultural Experiment Station

Research Projects

Research projects are listed in order by subject matter departments. An asterisk (*) indicates that the project was discontinued in fiscal 1967-68.

Administration

1-1 General administration of federal grant funds research. E. F. Frolik and H. W. Ottoson.

1-2 The planning and coordination of cooperative regional research. H. W. Ottoson.

1-3 Administration of federal grant marketing research funds. H. W. Ottoson.

Agricultural Economics

10-1 Farm business and enterprise analysis. A. W. Epp.

10-12 An economic analysis of the farm real estate market in Nebraska. J. D. Greer.

10-17 Use of ground water in excess of recharge-economic consequences and possible methods of control. L. K. Fischer.

10-34 Economics of beef production in range area of Nebraska. A. W. Epp.

*10-37 Taxes paid for the support of selected state and local services and a comparison of these taxes with income and with quality of services in the Great Plains states. E. B. Schmidt.


10-41 Effects of technological changes on inter-area competition for the livestock-feed-wheat sectors of the midwest. J. B. Hassler.

10-43 Adjustment opportunities for wheat farms. G. T. Vollmar.


10-45 Economic factors affecting sugar marketing. C. J. Miller.


Impact of changing international trade in grain. C. J. Miller.

Least cost formulation of recommended livestock and poultry rations. J. G. Kendrick.

Cooperative enterprise in the U.S. economy: economic impacts and potential role. R. G. Walsh.

Feed-livestock sector: data relevance and information service programs. J. B. Hassler and J. W. Trierweiler.


Potential changes in the retail structure of farm input markets associated with the development of farm service centers. R. G. Walsh, D. L. Helgeson and P. E. Nelson, Jr.

Geographic differentials in railroad rates and services: implications for Nebraska agriculture. D. G. Anderson.

Agricultural Engineering


Use of radio-frequency energy for insect control and conditioning of farm products. S. O. Nelson.

Planning farmstead buildings and their auxiliary equipment. O. E. Cross.

The integration of machine operations and cultural practices in irrigated agriculture. B. R. Somerhalder and S. A. Weeks.

Engineering phases of land treatment related to soil storage and use-efficiency of rainfall. H. D. Wittmuss.

Engineering and agronomic studies associated with land shaping under dryland conditions in western Nebraska. H. D. Wittmuss and P. L. Ehlers.

The mechanics and measurement of soil tillage. G. W. Steinbruegge.

Effect of dynamic loading on tractor performance. J. J. Sulek.

Thermogenic properties and nutrient retention of grain at different moisture levels during storage. O. E. Cross.

Operations research on mechanized systems for cutting, curing and handling hay. G. M. Petersen.


Effect of pollution on the quality of surface and ground water resources. D. M. Edwards.

Improved silo capacities. G. M. Petersen and R. W. Kleis.

Operator comfort, health and safety in mobile agricultural operations. C. W. Steinbruegge.

Engineering analysis and development of systems for processing and handling meats and meat products. T. L. Thompson and R. W. Mandigo.

Environmental design criteria for livestock housing. J. A. Deshazer.

Agronomy

12-1 Determination and application of principles of corn improvement. J. H. Lonnquist.
12-2 Improvement and evaluation of oats and barley. D. P. McGill.
12-5 Developing and applying principles of alfalfa improvement. W. R. Kehr.
12-6 Cultural, ecological and physiological studies with various agronomic crops. W. L. Colville.
12-7 Chemical and cultural control of weeds. O. C. Burnside.
12-8 Improvement of forage grass by breeding and the propagation and evaluation of new strains and experimental varieties of grasses. L. C. Newell.
12-9 A study of the adaptation, improvement and culture of grain and forage sorghums. P. T. Nordquist.
12-11 Mineralogical, physical and chemical characterization of Nebraska soils in relation to their genesis, classification and mapping. J. V. Drew.
12-12 Selection, breeding and testing of soybeans for productivity, high oil and protein content for industrial and farm utilization. J. H. Williams.
12-13 Microbiological studies of stubble mulching in Great Plains. T. M. McCalla.
12-17 Use of fertilizers for legume production and maintenance of soil productivity in Nebraska. R. C. Sorensen and G. A. Peterson.
12-23 Soil management practices under non-irrigated and irrigated systems of farming in Nebraska. R. A. Olson and F. N. Anderson.
12-26 Development and utilization of improved pasture techniques for the evaluation of forage grasses. E. C. Conard.
12-28 Development of crops for industrial or other special uses. J. H. Williams.
12-30 Isolation, culture and improvement of superior soil structure stabilizing microorganisms. T. M. McCalla.
12-34 Cytogenetic studies on wheat. Rosalind Morris.
12-38 Fate of applied nitrogen in relation to type of carrier and time and method of application. R. A. Olson.
12-44 Climatological phenomena and their effects on agronomic crops. W. L. Colville.
12-45 Chemical, morphological and nutritional changes occurring in Great Plains grasses and their relationship to management practices. D. F. Burzlaff.
12-46 Equip, staff and operate a laboratory to study wheat quality problems and evaluate the quality characteristics of new experimental wheat strains. P. J. Mattern.
12-49 Quantitative inheritance studies utilizing statistical genetic techniques on corn. C. O. Gardner.
12-50 Chemical genetics on the metabolism of coumarin and related compounds in sweetclover. F. A. Haskins.
12-52 Sulfur deficiency and its control in relation to soil properties, cultural practices and crop requirements. R. A. Olson.
12-55  Breed, test and evaluate quality of wheat varieties for Nebraska. V. A. Johnson.
12-57  Studies of morphological, anatomical and physiological characteristics that determine yield and agronomic performance in wheat. V. A. Johnson.
12-64  Life history studies of important pasture and rangeland weeds. M. K. McCarty.
12-65  Influence of bench leveling on the physical and chemical properties of soil and on plant growth. A. P. Mazurak.
12-66  The feasibility, economic potential and production of hybrid wheat varieties. J. W. Schmidt.
12-69  Physiological processes in relation to growth and development of sorghum. J. D. Eastin.
12-70  Seed production of breeding lines of insect pollinated legumes. W. R. Kehr.
12-72  The introduction, multiplication, preservation and evaluation of new plants for industrial and agricultural utilization. J. H. Williams.
12-101  Outstate testing—crop variety tests. A. F. Dreier.
12-201  Foundation seed. L. Brownlee.

Animal Science
13-1  System of breeding for the genetic improvement of economic traits of swine. L. E. Lucas.
13-3  Beef carcass evaluation. V. H. Arthaud.
13-4  Breeding tests of population genetic theory. C. T. Blunn.
13-5  Dietary factors affecting the utilization of protein and energy sources by swine during the pre-weaning growth period. E. R. Peo.
13-6  Factors influencing the utilization of protein and energy sources by beef cattle. W. R. Woods.
13-7  The feeding value of complete ensiled rations. D. C. Clanton.
13-9  Genetics and environmental factors affecting the efficient production of beef. L. J. Sumption.
13-11  The effects of summer wool covering on weight gain and fleece weight of Corriedale and Hampshire lambs. M. A. Alexander.
13-12  The development and improvement of laboratory methods for determining forage quality. T. Klopfenstein.
13-13  The nature of genetics viability for quantitative traits in diverse population of cattle. R. M. Koch.
13-16  Development and use of Holstein-Friesian cattle with high efficiency for milk and butterfat production. M. Plum.
The relationship between changes in certain blood characters and physiological function. A. B. Schultze.

Influence of hormone administration on reproductive performance in the laboratory rat. A. B. Schultze.

Efficiency of feed utilization by dairy cattle. F. G. Owen.

Dairy herd management. R. D. Appleman.

**Veterinary Science**

Examination and diagnosis of diseased animals. O. D. Grace.

Diseases of young pigs. N. R. Underdahl.

Bionomics and etiology of the parasites of Nebraska livestock. D. L. Ferguson.


Disease study and control in specific pathogen free herds. M. J. Twiehaus.


Epizootiology of specific pathogen free (SPF) pigs on controlled farms. M. J. Twiehaus.

Gamma globulin absorption in the newborn. L. C. Payne.

Miniature swine for biomedical research. K. C. Olson.

Studies on the immunological properties of parasite enzymes in domestic animals. C. L. Marsh.

Diseases of the central nervous system of domestic animals. C. A. Mebus.

**Biochemistry and Nutrition**

Naturally occurring enzyme inhibitors and their nutritional significance with particular reference to raw soybeans. R. L. Borchers.

Vitamin and estrogen constituents of alfalfa. R. L. Ogden.

Biochemical aspects of carbohydrates and nitrogen metabolism in the rumen. R. L. Borchers.

Analytical advisory and service laboratory and extension activities. R. M. Hill.

Physico-chemical properties at the molecular level of surfaces of biologically important proteins. R. M. Hill.

Enzymes of nucleic acid metabolism in animal and plant tissues. Patricia Weymouth.

Enzymatic and chemical modification of starches for industrial and pharmaceutical uses. D. R. Lineback.


Improving market acceptability, stability and utilization of poultry products. R. Dam.

Biochemistry of plant diseases and disease resistance. J. M. Daly.

**Food Science and Technology**

Evaluating the efficiency of circulation cleaning procedures with welded milk lines. R. B. Maxcy.

Dairy plant management. T. A. Evans.

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24-5 An experimental evaluation of approaches to preparing high school students for agricultural occupations other than farming. J. T. Horner.
24-6 Establishment and development of a research and coordination unit in the area of occupational needs research and coordination in Nebraska. J. T. Horner.
24-7 The anatomy of decision making as it relates to occupational and educational choices of rural youth. J. T. Horner.
24-9 The identification of common behavioral factors as bases for pre-entry preparation of workers for gainful employment (sub-contracts from Colorado State University). J. T. Horner.
24-10 Evaluation of the honors program in the College of Agriculture—a four-year course. V. G. Williams and R. D. Dillon.
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**40-2** Tillage practice in the central Great Plains in relation to erosion and weed control, soil moisture, and crop response to fertilizers. C. R. Fenster.

**40-3** Ecological studies of crop production in western Nebraska. P. L. Ehlers.

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Nutritional status of various population groups. H. M. Fox and C. Kies.


Home Economics Education

A teaching-learning design for specific areas of home economics in secondary school and extension programs in rural Nebraska. S. Kreutz.

Human Development and the Family

Family structure and conjugal authority. J. N. Edwards.

Factors affecting age at marriage in rural Nebraska. R. Gingles.

Study of perception, creativity and other factors as they relate to design. A. Newton.

Experiment Station Publications


Nebraska Experiment Station Quarterly, Summer, 1967 (28 pages). 14,500 copies.

Nebraska Experiment Station Quarterly, Fall, 1967 (20 pages). 14,500 copies.

Nebraska Experiment Station Quarterly, Winter, 1968 (24 pages). 15,000 copies.

Nebraska Experiment Station Quarterly, Spring, 1968 (28 pages). 15,000 copies.

Bulletins

Farm Partnerships for Nebraska (15 pages). Steven McWhorter. 3,000 copies.

Farm Real Estate Market in Nebraska (23 pages). Bruce B. Johnson, Larry Leistritz and James D. Greer. 5,000 copies.

Cattle Feeding Costs in Nebraska by System of Feeding and Size of Operation (45 pages). Ralph D. Johnson and Alfred R. Eckert. 5,000 copies.

Dawson Alfalfa—A New Variety Resistant to Aphids and Bacterial Wilt (23 pages). W. R. Kehr, G. R. Manglitz and R. L. Ogden. 5,000 copies.

Agroclimatic Calendar for Nebraska (36 pages). R. E. Neild. 5,000 copies.
Research Bulletins


226. Differential Plant Injury and Yield Responses of Tomato Varieties to 2,4-D (21 pages). D. P. Coyne and O. C. Burnside. 3,000 copies.


Reprints (Research Bulletins)


Tractor Test Reports

Summary of Results of Nebraska Tractor Tests for 1967. 15,000 copies.

Reprints of individual tractor tests: 941, 500 copies; 958, 500 copies; 959, 500 copies; 960, 500 copies; 961, 500 copies; 962, 1,000 copies; 970, 500 copies; 971, 500 copies; 972, 500 copies; 973, 500 copies.

Outstate Testing Circulars


Nebraska Experiment Station Quarterly Articles

From Farm to Consumer—For Protection, Quality—Clean. R. B. Maxcy. Vol XIV (2) 2.


A “Wee Bit” Lazy? Duane E. Loewenstein, Susan S. Lewis and Ronald L. Johnson. Vol XIV (2) 6-7.


A College Degree in Agriculture Pays . . . and Pays. Franklin E. Eldridge. Vol XIV (3) 2 and 5.


Fall Fertilizing Can Save Time and Money. Leon Chesnin. Vol XIV (3) 10-11.


Departmental Reports

Department of Food and Nutrition

Report Number 1, A Study of the Frequency of Acceptance of Menu Items by Residence Hall Students of the University of Nebraska. Marie E. Knickrehm, Carol Cotner and James Kendrick.

Department of Horticulture and Forestry


Report Number 58, A Preliminary Study of Maturity Change in Dry Beans in Western Nebraska. R. E. Neild.


Report Number 64, Dry Bean Production Produce in Scotts Bluff County, Nebraska in 1967. David S. Nuland.


Department of Information

Report Number 2, Pesticide Chemical Use in Nebraska. Alan Booth, Jerry Donahue, Billy Webb, Lawrence Looby and John D. Furrer.
University of Nebraska Northeast Station

Miscellaneous Publications
17. Precipitation Forecasts for Nebraska. R. E. Neild.

North Central Regional Publications
173. Market Grades and Standards for Carnations, Chrysanthemums and Roses. Published at University of Illinois College of Agriculture.
175. European Corn Borer, Ostrinia nubilalis (Hbn.) Populations in Field Corn, Zea mays (L.) In the North Central United States. Published at the University of Nebraska College of Agriculture and Home Economics. Also published as University of Nebraska Research Bulletin 225.
178. Beef, Pork and Feed Grains in the Cornbelt: Supply Response and Resource Adjustments. Published at the University of Missouri College of Agriculture.
179. Evaluation of a Firm Model in Estimating Aggregate Supply Response. Published at the University of Missouri College of Agriculture.
182. Efficient Organization of the Farm Industry in the North Central Region of the United States in 1959 and 1980. Published at Iowa State University.
183. Insect Resistance in Cucurbita. Published at Kansas State University.
185. The Cost of Producing Turkeys: A Comparison Among States. Published at the University of Wisconsin.
186. Diffusion Research Needs. Published at University of Missouri Agricultural Experiment Station.

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Key to Abbreviations

SB—Station Bulletin
RB—Research Bulletin
DR—Departmental Report
OTC—Outstate Testing Circular
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Schwab, Lois J., J2382
Schwartz, E. J., OTC128, OTC129
Schieles, F. J., J2355a
Scifm, C. J., Q4, J2031, J2183a, J2184a, J219a, J2190, J2199a, J2194a, J2195a, J2196a, J2197a, J2198a, J2199a, J2226, J2250, J2259, J2269, J2367, J2370
Shahani, K. M., J2301a, J2303a, J2304a, J2313, J2373
Slayter, A. L., J2365a
Smika, D. E., J2220
Smith, J. E., J2168
Somberakler, B. R., J2313, J2320
Sparks, A. N., R8225
Staples, Robert, J2186, J2256, J2272, J2296, J2311
Steinbruegge, G. W., J2374
Stenberg, David, J2349a
Stetson, LaVerne E., J1905, J2212, J2232
Streeter, C. L., RB227, J2397
Suck, J. J., J2185, J2260
Sullivan, C. Y., DR67
Sullivan, T. W., J2067, J2117, J2150, J2151, J2343a, J2344a, J2352a, J2353a, J2381, J2384
Sumner, Donald R., J2162, J2163, J2174
Sumption, L. V., J235a
Svajgr, A. J., J2169a, J2176a, J2340a
Swanson, Norris P., J2164a, J2187, J2243, J2285, J2362a, J2398a
Takahashi, Charlene Koelling, J2248
Tempero, Nancy, J2286
Terman, G. L., J2289
Teubner, F. G., J2267
Thornton, J. W., J2375
Thompson, T. L., J2244, J2384
Tolman, Walter, J2349a
Usser, Robert, N., R332
Vakil, R. J., J2301a, J2304a, J2373
Van Etten, James L., J2173, J2316
Van Zandt, Sally, J2291
Varner, Larry, J2179a
Vidaver, Anne K., Q3, J2333
Vlehnemeyer, Glenn, J2256
Vipperman, P. E., Jr., J2166a, J2341a, J2363a
Warnes, D. D., J2379
Welt, Billy, DR2
Weekman, G. T., J2313
Weing, John L., J2392
Whited, D. A., J2306, J2386
Whitmore, J. H., J2217, J2150, J2151
Wicks, G. A., J2205a, J2215a, J2230, J2231, J2234a, J2252a, J2253a, J2257a, J2258, J2261a, J2262a, J2263a, J2264a, J2265a, J2302a
Wiegers, Howard L., J2345a
Wise, M. V., J2152
Williams, J. H., J2153, J2181, J2218a
Williams, J. J., J2188a
Willis, William G., J2358
Wittbank, J. M., J2375
Wittmann, H. D., Q4, J2312, J2320, J2399
Woods, W. R., J2178a, J2179a, J2346a, J2180a, J2347a, J2348a, J2349a, J2355a
Wors, D. W., J2313
Wysong, David S., J2270, J2295, J2297, J2358
Young, J. O., DR6, DR62, DR63, DR67, MP18, J2267
Zimmerman, Dwane R., J2176a, J2364a, J2365a
GENERAL CURRENT FUNDS
Funds Available:
- Received from United States Government
  - Hatch Fund ........................................... $ 659,698.00
  - Budgeted by the University ........................................... 2,741,278.63
  Total ........................................................................ $3,400,976.63
Expenditures:
- Salaries, Wages and Staff Benefits ........................................... $2,708,774.63
- Operating Expenses ......................................................... 509,034.31
- Equipment and Improvements ................................................. 183,167.69
  Total ........................................................................ $3,400,976.63

RESTRICTED CURRENT FUNDS
Income:
- Gifts, Grants and Contracts
  - From United States Government Agencies ....................... $1,154,466.68
  - From State of Nebraska Agencies ................................... 101,795.18
  - From Industry .......................................................... 196,860.25
  - From Foundations and Health Organizations ................. 125,090.95
  - From Other Sources ................................................... 17,381.77
  Total ........................................................................ $1,595,744.88
Expenditures:
- Salaries, Wages and Staff Benefits ........................................... $1,001,260.38
- Operating Expenses ......................................................... 463,756.52
- Equipment and Improvements ................................................. 136,727.99
  Total ........................................................................ $1,595,744.88

CASH AUXILIARY FUND:
Income:
- Sales and Services ................................................................. $2,287,904.43
Expenditures:
- Salaries, Wages and Staff Benefits ........................................... $507,399.42
- Operating Expenses ......................................................... 1,678,782.94
- Equipment and Improvements ................................................. 101,752.07
  Total ........................................................................ $2,287,904.43

NOTE: This does not include capital expenditures of Station Funds expended as Plant Funds (“P” Accounts).