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91st ANNUAL REPORT



JULY 1, 1976 TO
JUNE 30, 1977

The Nebraska Agricultural Experiment Station

The Agricultural Experiment Station
University of Nebraska-Lincoln
Institute of Agriculture and Natural Resources
H. W. Ottosen, Director

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Issued December 1977, 1000

FOREWORD

The 91st Annual Report of the Nebraska Agricultural Experiment Station contains a list of all active projects during July 1, 1976 to June 30, 1977, 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 Farm, Ranch and Home Quarterly* and as 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-Lincoln, Institute of Agriculture and Natural Resources, Lincoln, Nebraska, 68583. Reprints of most journal articles may be obtained by writing directly to the authors.

Howard W. Ottoson, Dean and Director
Agricultural Experiment Station

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Kermit R. Hansen, Omaha
Robert R. Koefoot, Grand Island
James H. Moylan, Omaha
Robert J. Prokop, Omaha
Robert Raun, Minden
Edward Schwartzkopf, Lincoln
Kermit Wagner, Schuyler

University Administration

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Roy A. Young, Chancellor of the University of Nebraska-Lincoln
Martin A. Massengale, Ph.D., Vice Chancellor, Institute of Agriculture and
Natural Resources
Francis L. Schmehl, Ph.D., Research Administrator

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Warren W. Saks, Ph.D., Assistant Director and Supervisor, University Field Laboratory
John C. Woodward, Ph.D., Assistant Director and Associate Dean, College of Home Economics

THE TECHNICAL STAFF

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Agricultural Economics

G. J. Vollmar^{1,2,3} Ph.D., Professor and Chairman of Department
D. G. Anderson^{1,2} Ph.D., Professor-Marketing
J. D. Aiken^{2,3} J.D., Assistant Professor-Water Law
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L. L. Bitney^{2,3} Ph.D., Professor-Farm Management
L. K. Fischer^{1,2} Ph.D., Professor-Resource Economics
P. H. Gessaman^{2,3} Ph.D., Associate Professor-Rural Resource Development
R. J. Hanson^{1,2} Ph.D., Assistant Professor-Farm Management & Agricultural Finance
J. B. Hassler^{1,2} Ph.D., Professor-Marketing and Price Analysis
G. A. Helmers^{1,2} Ph.D., Professor-Production Economics
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O. W. Holmes^{2,5} M.S., Associate Professor-Resource Economics
B. B. Johnson^{1,2} Ph.D., Assistant Professor-Resource Economics
R. D. Johnson^{2,5} M.S., Associate Professor-Marketing

^{1/}Teaching

^{2/}Station Staff

^{3/}Extension Staff

^{4/}Leave of Absence

^{5/}Cooperative, USDA

J. G. Kendrick^{1,2} Ph.D., Professor-Marketing
W. F. Lagrone^{2,5} M.S., Professor-Production Economics
D. A. Linsenmeyer^{1,2} Ph.D., Assistant Professor-Marketing
L. H. Lutgen^{2,3} Ph.D., Assistant Professor-Marketing
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R. J. Supalla^{1,2} Ph.D., Associate Professor-Resource Economics
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A. C. Wellman^{2,3} Ph.D., Associate Professor-Marketing

Agricultural Education

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R. D. Dillon^{1,2} Ed.D., Professor-Curriculum Programs & Advanced Studies
J. T. Horner^{1,2,3} Ed.D., Professor-Methods of Instruction & Advanced Studies

Agricultural Engineering

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L. L. Bashford^{1,2} Ph.D., Associate Professor-Equipment Engineering
B. L. Blad² Ph.D., Associate Professor-Agricultural Meteorology
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P. E. Fischbach^{2,3} M.S., Professor-Irrigation Engineering
C. B. Gilbertson^{2,5} M.S., Assistant Professor-Livestock Waste Management
J. R. Gilley^{1,2} Ph.D., Associate Professor-Irrigation Engineering
M. A. Hanna^{1,2} Ph.D., Assistant Professor-Food Engineering
L. I. Leviticus² Ph.D., Professor-Tractor Testing
M. L. Mumgaard² B.S., Assistant Professor-Tractor Testing
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H. D. Wittmuss^{1,2} Ph.D., Associate Professor-Natural Resources

Agronomy

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 O. C. Burnside^{1,2} Ph.D., Professor-Weed Science
 L. Chesnin^{1,2} Ph.D., Associate Professor-Soil Chemistry
 R. B. Clark^{2,5} Ph.D., Professor-Sorghum Physiology
 M. D. Clegg^{1,2} Ph.D., Associate Professor-Crop Physiology
 W. A. Compton^{1,2} Ph.D., Professor-Corn Breeding
 E. C. Conard^{1,2} Ph.D., Associate Professor-Pasture Management
 J. W. Doran^{2,5} Ph.D., Assistant Professor-Soil Biochemistry
 A. F. Dreier^{2,3} M.S., Professor-Crop Variety Evaluation
 J. D. Eastin^{1,2} Ph.D., Professor-Crop Physiology
 J. R. Ellis^{2,5} Ph.D., Assistant Professor-Soil Microbiology
 A. D. Flowerday^{1,2} Ph.D., Professor-Crop Production
 C. O. Gardner^{1,2} Ph.D., Professor-Statistics, Genetics
 H. J. Gorz^{2,5} Ph.D., Professor-Forage Genetics
 L. C. Haderlie² Ph.D., Assistant Professor-Weed Physiology
 D. G. Hanway² Ph.D., Professor-Soils
 P. W. Harlan^{2,3} Ph.D., Assistant Professor-Land Use
 V. A. Johnson^{2,5} Ph.D., Professor-Winter Wheat Breeding
 W. R. Kehr^{2,5} Ph.D., Professor-Alfalfa Breeding
 L. A. Klepper² Ph.D., Associate Professor-Crop Physiology
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 A. C. Leopold² Ph.D., Professor-Plant Physiology
 D. T. Lewis^{1,2} Ph.D., Associate Professor-Soil Survey
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 L. N. Mielke^{2,5} Ph.D., Assistant Professor-Soil Physics
 R. N. Mills² M.S., Associate Professor-Foundation Seed
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 L. E. Moser^{1,2} Ph.D., Professor-Forage Physiology & Vice Chairman for Instruction
 R. A. Olson^{1,2} M.S., Professor-Soil Fertility

L. J. Perry^{1,2} Ph.D., Associate Professor-Range Management
 G. A. Peterson^{1,2} Ph.D., Professor-Soil Fertility
 W. M. Ross^{2,5} Ph.D., Professor-Sorghum Breeding
 D. H. Sander^{2,3} Ph.D., Professor-Soil Fertility
 J. S. Schepers^{2,5} Ph.D., Assistant Professor-Soil Chemistry
 J. W. Schmidt^{1,2} Ph.D., Professor-Small Grain Breeding
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 R. A. Wiese^{2,3} Ph.D., Professor-Soil Fertility
 W. W. Wilhelm^{2,5} Ph.D., Assistant Professor-Crop Physiology
 K. D. Wilhelm² Ph.D., Assistant Professor-Soybean Breeding
 J. H. Williams^{1,2} Ph.D., Professor-Soybean Breeding

Animal Science

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 V. H. Arthaud^{1,2} M.S., Professor-Beef Production
 C. T. Blunn^{1,2} Ph.D., Professor-Breeding and Genetics (Emeritus)
 R. A. Britton^{1,2} Ph.D., Assistant Professor-Ruminant Biochemist
 P. H. Cole^{2,3} M.S., Professor-Dairy Production
 P. J. Cunningham^{1,2} Ph.D., Associate Professor-Swine Breeding
 F. E. Eldridge^{1,2} Ph.D., Professor-Dairy Breeding
 E. F. Ellington^{1,2} Ph.D., Professor-Beef Physiology
 S. D. Farlin^{1,2} Ph.D., Associate Professor-Beef Nutrition
 P. Q. Guyer^{2,3} Ph.D., Professor-Beef Nutrition
 P. L. Kelly^{1,2} Ph.D., Professor-Dairy (Emeritus)
 T. J. Klopfenstein^{1,2} Ph.D., Professor-Ruminant Nutrition
 L. L. Larson^{1,2} Ph.D., Assistant Professor-Dairy Physiology
 R. W. Mandigo^{1,2,3} Ph.D., Professor-Meats
 B. D. Moser^{1,2} Ph.D., Associate Professor-Swine Nutrition
 M. K. Nielsen^{1,2} Ph.D., Assistant Professor-Beef Breeding
 D. G. Olson^{1,2} Ph.D., Assistant Professor-Meats
 F. G. Owen^{1,2,3} Ph.D., Professor-Dairy Nutrition
 E. R. Peo, Jr.^{1,2} Ph.D., Professor-Swine Nutrition
 M. J. Prokop^{1,2} Ph.D., Assistant Professor-Ruminant Nutrition
 A. B. Schultze^{1,2} Ph.D., Associate Professor-Dairy Physiology (Emeritus)
 J. K. Ward^{1,2} Ph.D., Professor-Beef Nutrition
 D. R. Zimmerman^{1,2} Ph.D., Professor-Swine Physiology

Biochemistry Laboratory

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R. Dam^{1,2} Ph.D., Assistant Professor-Nutritional Biochemistry
R. M. Hill^{1,2} Ph.D., Associate Professor-Protein Biochemistry
R. V. Klucas^{1,2} Ph.D., Associate Professor-Nitrogen Fixation
R. L. Ogden² B.S., Assistant Professor-Alfalfa Processing
F. W. Wagner^{1,2} Ph.D., Associate Professor-Enzymes

Entomology

E. A. Dickason^{1,2,3} Ph.D., Professor and Chairman of Department
H. J. Ball^{1,2} Ph.D., Professor-Insect Physiology
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T. J. Helms^{1,2} Ph.D., Associate Professor-Insect Morphology and Pathology
R. E. Hill^{1,2} Ph.D., Professor (Emeritus)
T. O. Holtzer² Ph.D., Assistant Professor-Crop Insects
S. D. Kindler^{2,5} Ph.D., Associate Professor-Forage Crops Insects
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K. P. Pruess^{1,2} Ph.D., Professor-Biology and Ecology of Crop Insects
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T. A. Evans^{1,2,3} M.S., Professor-Food Marketing Specialist
T. E. Hartung^{1,2} Ph.D., Professor-Food Quality and Composition
R. B. Maxcy^{1,2} Ph.D., Professor-Food Microbiology
L. D. Satterlee^{1,2} Ph.D., Professor-Food Protein Chemistry
K. M. Shahani^{1,2} Ph.D., Professor-Food Chemistry

Forestry

M. D. Ferrill^{1,2,3} Ph.D., Chairman of Forestry and State Forester
W. T. Bagley^{1,2} M.S., Associate Professor-Forestry
J. R. Brandle² Ph.D., Associate Professor-Forestry
R. A. Read^{2,5} M.F., Associate Professor-Forestry
D. F. VanHaverbeke^{2,5} Ph.D., Associate Professor-Forestry

Horticulture

R. D. Uhlinger^{1,2,3} Ph.D., Professor and Chairman of Department
D. P. Coyne^{1,2} Ph.D., Professor-Horticulture
E. J. Kinbacher^{1,2} Ph.D., Professor-Physiology
R. E. Neild^{1,2,3} Ph.D., Associate Professor-Horticulture
R. B. O'Keefe^{1,2,3} Ph.D., Professor-Horticulture
S. S. Salac^{1,2,3} Ph.D., Assistant Professor-Ornamental Horticulture
M. L. Schuster² Ph.D., Professor-Horticulture
R. C. Shearman^{2,3} Ph.D., Assistant Professor-Turf
R. K. Sutton^{1,2} MLA, Assistant Professor-Landscape Horticulture
J. O. Young⁴ Ph.D., Professor-Horticulture

Library

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A. McIntosh, A.D., M.S.L.S., Agriculture Campus Librarian
A. L. Smith, A.B., B.S.L.S., Agriculture Campus Librarian
E. Thomas, Dipl. Bibl., Agriculture Campus Librarian

Plant Pathology

M. G. Boosalis^{1,2,3} Ph.D., Professor and Chairman of Department
E. M. Ball² Ph.D., Associate Professor-Virus Diseases
M. K. Brakke^{2,5} Ph.D., Professor-Virus Diseases
L. D. Dunkle^{1,2} Ph.D., Associate Professor-Microbial Physiology
W. G. Langenberg^{2,5} Ph.D., Associate Professor-Virus Diseases
G. W. Peterson^{2,5} Ph.D., Professor-Tree Diseases
J. W. Riffle^{2,5} Ph.D., Associate Professor-Tree Diseases
J. R. Steadman^{1,2} Ph.D., Associate Professor-Epidemiology of Vegetable Diseases
J. L. Van Etten^{1,2} Ph.D., Professor-Microbial Physiology
A. K. Vidaver^{1,2} Ph.D., Associate Professor-Bacterial Diseases
L. C. Lane^{1,2} Ph.D., Assistant Professor-Virus Diseases

Poultry and Wildlife Sciences

G. W. Froning^{1,2,3} Ph.D., Professor and Chairman of Department
R. M. Case^{1,2} Ph.D., Associate Professor-Wildlife Management
D. H. Free^{1,2,3} B.S., Assistant Professor-Poultry Improvement
E. W. Gleaves^{2,3} Ph.D., Professor-Poultry Nutrition
F. B. Mather^{1,2,3} Ph.D., Associate Professor-Poultry Physiology
T. W. Sullivan^{1,2,3} Ph.D., Professor-Poultry Nutrition

Biometrics & Information Systems Center

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S. R. Lowry^{1,2} Ph.D., Assistant Professor-Statistical Consultant
R. F. Mumm^{1,2} Ph.D., Professor-Statistical Consultant
A. M. Parkhurst^{1,2} M.S., Assistant Professor-Statistical Consultant

Veterinary Science

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L. D. McGill² D.V.M., Ph.D., Assistant Professor-Diagnostic Laboratory
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M. B. Rhodes² M.S., Associate Professor-Enzymology of Parasites
T. E. Socha² B.S., M.S., Instructor-SPF Field Coordinator
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N. R. Underdahl² B.S., M.S., Professor-Swine Diseases
W. L. Wilke^{1,2} D.V.M., Ph.D., Assistant Professor-Physiology

Regional Stations

Northeast Station, Concord

C. J. Ward^{2,3} Ph.D., Professor and District Director
R. D. Fritschen^{2,3} M.S., Professor-Animal Science
V. E. Krause^{2,3} Ph.D., Assistant Professor-Animal Science
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S. H. Pohl^{2,3} M.S., Instructor-Agricultural Engineering
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J. F. Witkowski^{2,3} Ph.D., Assistant Professor-Entomology

North Platte Station, North Platte

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D. M. Danielson² Ph.D., Professor-Animal Science (Swine)
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 J. T. Nichols^{2,3} Ph.D., Professor-Agronomy (Range Management)
 P. T. Nordquist² Ph.D., Assistant Professor-Agronomy (Sorghum Breeding)
 D. G. Watts^{2,3} Ph.D., Associate Professor-Agricultural Engineering
 G. A. Wicks^{2,3} M.S., Associate Professor-Agronomy (Weed Science)

Panhandle Station, Scottsbluff

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 L. W. Andersen^{2,3} Ph.D., Associate Professor and Associate Director
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 L. A. Daigger^{2,3} M.S., Professor-Agronomy
 D. A. Darling^{2,3} D.V.M., B.S., Associate Professor-Veterinary Science
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 A. F. Hagen^{2,3} M.S., Assistant Professor-Entomology
 E. D. Kerr^{2,3} Ph.D., Associate Professor-Agronomy
 L. A. Nelson^{1,2} Ph.D., Associate Professor-Agronomy
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 R.E.J. Retzlaff^{2,3} Ph.D., Assistant Professor-Agricultural Economics
 I. G. Rush^{2,3} Ph.D., Assistant Professor-Animal Science
 J. L. Stubbendieck^{2,3} Ph.D., Assistant Professor-Agronomy
 W. L. Trimmer^{2,3} M.S., Instructor-Agricultural Engineering
 A. Weiss² Ph.D., Assistant Professor-Agricultural Meteorology
 R. G. Wilson^{2,3} Ph.D., Assistant Professor-Agronomy

South Central Station, Clay Center

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 D. E. Eisenhauer^{2,3} M.S., Assistant Professor-Agricultural Engineering
 K. D. Frank^{2,3} Ph.D., Associate Professor-Agronomy
 L. L. Peters^{2,3} Ph.D., Associate Professor-Entomology
 F. W. Roeth^{2,3} Ph.D., Associate Professor-Agronomy
 L. L. Svec^{2,3} Ph.D., Associate Professor-Agronomy

U. S. Meat Animal Research Center, Clay Center

L. V. Cundiff^{2,5} Ph.D., Research Geneticist - Acting Director
Y. R. Chen^{2,5} Ph.D., Agricultural Engineer
R. K. Christenson² Ph.D., Research Physiologist
J. D. Crouse^{2,5} Ph.D., Research Food Technologist
G. E. Dickerson^{2,5} Ph.D., Research Geneticist
R. D. Eichner^{2,5} Ph.D., Research Chemist
J. J. Ford^{2,5} Ph.D., Research Physiologist
R. L. Givens^{2,5} M.S., Agricultural Engineer
K. E. Gregory⁴ Ph.D., Research Geneticist
V. L. Harrison^{2,5} Ph.D., Agricultural Economist
A. G. Hashimoto^{2,5} Ph.D., Agricultural Engineer
R. M. Koch² Ph.D., Research Geneticist
D. B. Laster^{2,5} Ph.D., Research Physiologist
J. A. Nienaber^{2,5} M.S., Agricultural Engineer
D. R. Notter² Ph.D., Research Geneticist
R. L. Prior^{2,5} Ph.D., Research Chemist
R. A. Scott^{2,5} Ph.D., Research Animal Scientist
G. M. Smith^{2,5} Ph.D., Research Geneticist
H. S. Teague^{2,5} Ph.D., Animal Nutritionist
L. D. Young^{2,5} Ph.D., Research Geneticist

College of Home Economics

Education and Family Resources

G. Newkirk^{1,2,3} Ed.D., Professor and Chairman of Department
S. M. Kreutz^{1,2} Ed.D., Associate Professor-Development of Teaching Skills
F. Walker^{1,2} Ph.D., Associate Professor-Home Management Family Economics

Food and Nutrition

H. M. Fox^{1,2,3} Ph.D., Professor and Chairman of Department
F. Caporaso^{1,2} Ph.D., Assistant Professor-Food Science
C. Kies^{1,2} Ph.D., Professor-Nutrition
M. E. Knickrehm^{1,2} Ph.D., Professor-Food Service Management
T. A. Shaffer^{2,3} M.S., Assistant Professor-Food Science

Human Development and the Family

H. Sulek^{1,2,3} M.A., Associate Professor and Interim Chairman of Department
B. Chesser^{1,2} Ph.D., Associate Professor-Rural Family Crisis
J. Defrain^{1,2} Ph.D., Assistant Professor-Rural Family Crisis
V. Kalyan-Masih^{1,2} Ph.D., Associate Professor-Cognitive Development (Piaget)
L. O. Schwab^{1,2} Ed.D., Professor-Rehabilitation of Handicapped Women

Textiles, Clothing and Design

A. E. Newton^{1,2,3} Ph.D., Professor and Chairman of Department
J. Laughlin^{1,2} Ph.D., Associate Professor-Textiles, Clothing and Design

NEBRASKA AGRICULTURAL EXPERIMENT STATION RESEARCH PROJECTS

Research projects are listed by departments. An asterisk (*) indicates that the project was discontinued in fiscal 1976-1977.

Administration

1-001 General administration of federal grant funds research. H. W. Ottoson.
1-004 Regional research coordination, North Central Region. H. W. Ottoson.
2-1 Title V - Identification of alternatives for local land use decisions. M. P. Carlson, R. H. Stoddard, P. H. Gessaman.

Agricultural Communications

18-001 Dissemination of research information. R. J. Graham, J. P. Holman.

Agricultural Economics

10-001 Farm enterprise analysis. L. Bitney.
10-034 Economics of resource use in the Sandhills area of Nebraska. A. W. Epp.
*10-043 Economic effects of alternative farm enterprises in wheat producing areas of Nebraska. G. A. Helmers, W. F. Lagrone.
10-048 Establishment, growth and stability of Nebraska farm and ranch firms. G. A. Helmers, J. B. Hassler.
*10-051 Computer formulated livestock and poultry rations. J. G. Kendrick, F. G. Owen.
*10-053 Feed-livestock sector: Data relevance and information service programs. J. B. Hassler, N. A. Aulaqui, F. Schwarz.

- 10-057 Alternative institutional arrangements in area management of ground water. L. K. Fischer.
- 10-058R The economics of institutional arrangements for viable rural communities in the Great Plains. M. E. Baker, P. H. Gessaman.
- 10-060 Impact of changes in world food supply-demand conditions upon selected agricultural factor markets. D. G. Anderson.
- *10-061 Systems analysis of the economics of grain marketing. M. S. Turner.
- *10-062 Impact of changing transportation systems on local grain and farm supply firms. D. G. Anderson.
- *10-063 Least-cost systems for harvesting, conditioning and storing high-moisture feed grains in Nebraska. P. W. Lytle, M. S. Turner.
- 10-064 Impact of public policies on Nebraska's agricultural and rural development. J. G. Kendrick, L. Bitney, E. E. Peterson.
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- 15-020 Biological nitrogen fixation. R. V. Klucas.
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- 20-010 Improvement of potatoes. R. B. O'Keefe.
- 20-014 Evaluation of varieties and cultural practices in vegetables. R. B. O'Keefe, D. P. Coyne.
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- 21-005 Fundamental studies on root diseases of plants. M. G. Boosalis.
- 21-006 Diseases of forest and shade trees. G. W. Peterson, M. G. Boosalis.
- 21-010 Plant Pathology outstate testing. D. W. Wysong, L. T. Palmer, M. G. Boosalis.
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Poultry and Wildlife Sciences

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- 46-003 Improvement of beef cattle through breeding methods. L. V. Cundiff, G. E. Dickerson, R. M. Koch.
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- 179. Nebraska Grain Sorghum Performance Tests 1976 (39 pages). A. F. Dreier, P. T. Nordquist, L. V. Svec, P. H. Grabouski and L. A. Nelson. 4,400 copies.

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- NCR 234. Biology of Fat in Meat Animals. Published at the University of Wisconsin-Madison.
- NCR 237. Can We Do Something About The Weather? Published at Kansas State University.
- NCR 246. Crossbreeding Evaluation of Finnsheep and Some U. S. Breeds for Market Lamb Production. Published at the University of Nebraska-Lincoln.

Nebraska Farm, Ranch and Home Quarterly Articles

- Eye in the Sky. Blaine L. Blad and Norman J. Rosenberg. Vol. 23 (2) 3-4.
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PUBLICATIONS OF THE STAFF

Key to Abbreviations

SB---Station Bulletin
 RB---Research Bulletin
 DR---Departmental Report
 OTC---Outstate Testing Circular
 Q2---Summer Quarterly 1976

Q3---Fall Quarterly 1976
 Q4---Winter Quarterly 1977
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 J---Journal Series
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**THE UNIVERSITY OF NEBRASKA
AGRICULTURAL EXPERIMENT STATION**

**REPORT OF INCOME AND EXPENDITURES¹
For the Year Ended June 30, 1977**

GENERAL CURRENT FUNDS

Funds Available ²	
Received from United State Government	
Hatch Fund	\$1,217,625.00
Budgeted by the University	6,786,755.72
Total	\$8,004,380.72
Expenditures:	
Salaries, Wages, & Staff Benefits . . .	\$6,458,579.01
Operating Expenses	1,122,215.37
Equipment and Improvements	423,586.34
Total	\$8,004,380.72

RESTRICTED CURRENT FUNDS

Income:	
From United State Government	
Agencies	\$2,978,313.12
From State of Nebraska Agencies . . .	161,721.12
From Industry	522,599.67
From Foundations & Health	
Organizations	18,871.05
From Other Sources	33,346.52
Total	\$3,714,851.48
Expenditures:	
Salaries, Wages & Staff Benefits . . .	\$2,372,948.08
Operating Expenses	1,019,836.21
Equipment and Improvements	322,067.19
Total	\$3,714,851.48

CASH REVOLVING FUNDS

Income:

Sales and Services \$2,852,990.33

Expenditures:

Salaries, Wages & Staff Benefits . . \$ 672,983.21

Operating Expenses 1,876,778.27

Equipment and Improvements . . . 303,228.85

Total \$2,852,990.33

AGENCY REVOLVING FUND³

Income:

Sales and Services \$2,559,268.25

Expenditures:

Salaries, Wages & Staff Benefits . . \$1,041,527.26

Operating Expenses 1,383,689.98

Equipment and Improvements . . . 134,051.01

Total \$2,559,268.25

^{1/}These figures do not include capital construction expenditures totaling-- \$739,432.84

^{2/}Includes University Research Council funds from state appropriations---- 8,037.87

^{3/}Includes Meat Animal Research Center, Foundation Seed, Tractor Testing, and the Basic Seed Potato Program.