



59th
REPORT



wyoming agricultural experiment station
laramie 1948-49 wyoming

Fifty-Ninth Annual Report

of the

WYOMING AGRICULTURAL
EXPERIMENT STATION
1948-49

By JOHN A. HILL, *Director*
and
GERALD JENNY, *Editor*



UNIVERSITY OF WYOMING
LARAMIE

CONTENTS

	Page
Dryland Pastures	3
Range Management	5
Small Grains	7
Corn	9
Potatoes	10
Bean Production and Diseases	13
Weed Control	14
Poisonous Plants	15
Soils	17
Agricultural Economics	18
Beef Cattle	21
Sheep and Wool	21
Poultry	24
Animal Diseases and Parasites	25
Insect Pests	26
Honey Bees	27
Foods and Nutrition	30
Branch Experiment Stations	
Afton	32
Archer	34
Gillette	36
Powell	37
Torrington	37
Weather Report for 1948	40
Changes in Personnel	45
Publications	45
Financial Report	47
Station Staff	48

FINANCIAL REPORT

University of Wyoming Agricultural Experiment Station July 1, 1948, to June 30, 1949

FEDERAL FUNDS

Receipts

From the Treasury of the United States, as per appropriations for the fiscal year ending June 30, 1949, under Acts of Congress approved March 2, 1887 (Hatch fund), March 16, 1906 (Adams fund), February 24, 1925 (Purnell fund), June 29, 1935 (Bankhead-Jones fund), and August 14, 1946 (Research and Marketing fund, Section 9b1 and 9b2).

Hatch fund	\$15,000.00
Adams fund	15,000.00
Purnell fund	60,000.00
Bankhead-Jones fund	7,829.36
Research and Marketing fund*	16,945.06+

*An additional sum of \$8,500 (plus \$2,849.74 carry-over) was received under Section 9b3, Title 1, of the Research and Marketing Act. Of the appropriation, \$8,068.83 was expended during the current year. This is a special fund, earmarked for certain research projects carried on in cooperation with other state experiment stations outside of Wyoming.

+ Plus carry-over of \$10,412.55.

Expenditures

	Hatch Fund	Adams Fund	Purnell Fund	Bankhead- Jones Fund	Research and Marketing Fund
Personal Services	\$12,683.57	\$13,166.69	\$56,235.32	\$6,920.00	\$11,264.21
Travel	300.00	480.35	2,179.99	343.89	1,009.38
Transportation of things			7.22		32.58
Printing and binding (of publications)	1,947.93		400.00		
Other printing and binding	68.50				
Other contractual services					478.20
Supplies and materials		661.26	710.26		
Other supplies and materials		186.52		286.06	460.43
Equipment		505.18	467.21	279.41	4,712.10
Total expended	\$15,000.00	\$15,000.00	\$60,000.00	\$7,829.36	\$17,956.90

NON-FEDERAL FUNDS

Funds available for agricultural investigations

State appropriations or allotments	\$128,870.98
Main station	81,016.95
Substations	281.80
Special endowments, fellowships, and grants	111,329.10
Sales	54,655.10*
Balance brought forward from previous year	\$376,153.93
Total	

*Balance brought forward from previous year reduced by \$1,520 for receipts credited under Special Grants in error during fiscal year ending June 30, 1948.

Classification of expenditures for agricultural investigations

Personal services	\$128,105.39
Travel	9,922.46
Communication service—Transportation of things	4,483.40
Rents and utility services	7,081.55
Printing and binding	2,421.69
Other contractual services	9,525.32
Supplies and materials	70,359.89
Equipment	51,297.72
Lands and structures	20,884.55
Total	\$304,081.97
Unexpended balance	72,071.96
Grand total	\$376,153.93

UNIVERSITY OF WYOMING Agricultural Experiment Station

BOARD OF TRUSTEES

Officers

Milward L. Simpson..... President John A. Reed..... Treasurer
Tracy S. McCracken..... Vice President Fay E. Smith..... Comptroller and Secretary

Appointed

Members

Term Expires

1939.....	MILWARD L. SIMPSON—Cody.....	1951
1947.....	H. D. DelMONTE—Lander.....	1953
1947.....	MRS. LORNA PATERSON—Shell.....	1953
1943.....	EARLE G. BURWELL—Casper.....	1953
1943.....	TRACY S. McCRACKEN—Cheyenne.....	1955
1946.....	CLIFFORD P. HANSEN—Jackson.....	1955
1945.....	JOSEPH R. SULLIVAN—Laramie.....	1951
1945.....	H. D. WATENPAUGH—Sheridan.....	1951
1949.....	JOHN A. REED—Kemmerer.....	1955
A. G. CRANE, Governor of Wyoming.....		Ex Officio
EDNA B. STOLT, State Superintendent of Public Instruction.....		Ex Officio
GEORGE DUKE HUMPHREY, Ph. D., President of the University.....		Ex Officio

STATION STAFF*

Administration

J. A. HILL, B.S., LL.D., Dean of College of Agriculture; Director of Station.
HAROLD W. BENN, M.S., Administrative Assistant to Dean and Director.
W. L. QUAYLE, B.S., Director Experiment Farms.
GERALD JENNY, M.S., Station Editor.
JOSEPHINE McCUE, B.A., Station Clerk.

Agronomy and Agricultural Economics

A. F. VASS, Ph.D., Agronomist.
G. H. STARR, Ph.D., Agronomist; Plant Pathologist.
T. J. DUNNEWALD, M.S., Assoc., Soil Investigations.
W. A. RIEDL, Ph.D., Agronomist.
ROBERT LANG, M.S., Assoc. Agronomist.
ALAN A. BEETLE, Ph.D., Assoc. Agronomist.
JOHN A. HOPKIN, B.S., Asst. Agricultural Economist.
E. DEAN VAUGHAN, M.S., Asst. Agricultural Economist.
GEORGE BRIDGMON, M.S., Asst. Plant Pathologist (on leave).
D. E. JEWELL, B.S., Asst. Agricultural Engineer.
IRA M. STEVENS, B.S., Asst. Agricultural Economist.
DALE BOHMONT, B.S., Asst. Agronomist.
JO. K. BARNES, B.S., Assoc. Agronomist.
CLARENCE M. RINCKER, M.S., Asst. in Agronomy.
W. McN. MILLER, M.S., Asst. Agricultural Engineer.
†BYRON TOMLINSON, B.S., Asst. Irrigation Engineer.

Animal Production

NEAL HILSTON, Ph.D., Animal Husbandman, Beef Cattle.
H. S. WILLARD, Ph.D., Animal Husbandman, Dairy Cattle.
J. A. GORMAN, M.S., Asst. Animal Husbandman, Horses.
E. KENNETH FAULKNER, M.S., Asst. Animal Husbandman, Beef Cattle.
DONALD C. BROWN, B.S., Asst. Animal Husbandman, Poultry, Dairy Cattle.
GEORGE T. DAVIS, M.S., Assoc. Animal Husbandman, Poultry.

Apiculture and Entomology

ROBERT E. PFADT, Ph.D., Assoc. Research Entomologist.
DONALD G. DENNING, Ph.D., Asst. Research Entomologist.

†A. P. STURTEVANT, Ph.D., Senior Apiculturist in Charge of U.S. Bee Culture Field Laboratory.
†C. E. BURNSIDE, Ph.D., Apiculturist.
†L. L. REVELL, A.B., Junior Apiculturist.
†J. D. HITCHCOCK, M.A., Junior Apiculturist.

Chemistry

O. A. BEATH, M.A., Research Chemist.
CARL S. GILBERT, M.A., Research Chemist.
H. F. EPPSON, M.S., Assoc. Research Chemist.
IRENE ROSENFELD, Ph.D., Assoc. Pharmacologist (on leave).
JOHN W. HAMILTON, Ph.D., Asst. Research Chemist.
ANTOINETTE CLOHESSY, M.S., Service Chemist.

Home Economics

ELIZABETH J. McKITTRICK, M.S., Home Economist.
EMMA J. THIESSEN, M.A., Assoc. Home Economist.

Library

MARY E. MARKS, Ph.B., Librarian.

Veterinary Science and Bacteriology

R. W. LINDENSTRUTH, D.V.M., Asst. Veterinarian.
J. B. ASHCRAFT, D.V.M., Asst. Veterinarian.

Weather

H. F. EPPSON, M.S., Head of Weather Station.
FRANK E. HEPNER, M.S., Weather Station (limited service).

Wool

J. A. HILL, B.S., LL.D., Wool Specialist.
ROBERT H. BURNS, Ph.D., Wool Specialist (on leave).
ALEXANDER JOHNSTON, M.S., Wool Specialist.
LAWRENCE C. PARKER, M.S., Research Asst.
JAY N. MYERS, M.S., Asst. in Wool.

Zoology

JOHN W. SCOTT, Ph.D., Zoologist and Parasitologist (limited service).
RALPH HONESS, M.A., Asst. Research Zoologist.

*As of June 30, 1949.

†In cooperation with U. S. Department of Agriculture.

