

Active Projects

NORTH DAKOTA STATE UNIVERSITY
Agricultural Experiment Station

January 1, 1974

Project	Title	Investigator(s)
Biochemistry		
1207	Detection of Barley Stripe Mosaic Virus in Diseased Plants.	H. J. Klosterman
1212	Comparative Study of Plant Carbonic Anhydrase.	George Graf
1213	Peptide Hydrolases in Pesticide Metabolism by Plants.	George Graf
1214	Role of Hydroxylation in 2,4-D Inactivation.	J. R. Fleeker
1215	Enzymic Biosynthesis of Gramine in <i>Hordeum vulgare</i> .	A. G. Fischer
1216	DNA Methylation in Triticum Durum.	A. E. Oleson
1217	Environmental Implications of Pesticide Usage.	H. J. Klosterman
(NC-96)		D. W. Bristol
1218	Uric Acid and Hydrogen Peroxide Formation in Bovine Thyroid.	A. G. Fischer
3201	Cooperative Investigations in Agricultural Biochemistry.	H. J. Klosterman
Agricultural Economics		
1331	State and Local Taxes and Their Effects on Agriculture.	T. K. Ostenson
(RD-1)		
1335	Economics of Farm and Ranch Growth.	J. E. Johnson
(GP-12)		
1336	Credit Problems of North Dakota Agriculture.	F. R. Taylor
1337	Dairy Market Efficiency.	G. W. Erlandson
1338	Cooperative Enterprise in the United States Economy.	D. W. Cobia
1344	Economics of Crop Production Technology.	R. G. Johnson
1345	Effect of the 1967 Wholesome Meat Law Upon North Dakota's Meat Industry.	E. V. Dunn
1346	Market Structure Analysis of Farm Input Retailing Industries.	G. W. Erlandson
(WM-61)		D. E. Anderson
		D. W. Cobia
		D. W. Cobia
1347	North Dakota Agribusiness Marketing Information.	T. K. Ostenson
1348	The Relation of Population to Social Change in the North Central Region, 1960-70.	
(NC-97)		
1349	Computer Programming Models for Farm Management Decision-Making.	F. L. Leistritz
1350	Livestock and Produce Marketing.	E. V. Dunn
1351	Economics of Farm Size.	R. G. Johnson
1352	Economics of Livestock Production Technology.	F. L. Leistritz
		L. W. Schaffner
1353	The Economics of Institutional Arrangements for Viable Rural Communities in the	D. L. Helgeson
(NC-102)	Great Plains	T. K. Ostenson
(RD-1)		W. C. Nelson
1354	Systems Analysis of the Economics of Grain Marketing.	D. E. Anderson
(NC-104)		
3303	Collection and Dissemination of Agricultural Data.	F. R. Taylor
3306	Service Activities and Pilot Studies.	F. R. Taylor
3311	Economic Impacts of Water Resources Development.	T. A. Hertsgaard
3313	Recreation Development.	J. E. Johnson
3314	Market Development for Hard Red Spring and Durum Wheat.	D. E. Anderson
3316	Effects of Irrigation Development on Income Generation.	T. A. Hertsgaard
3318	Agricultural Aerial Applicator Costs and Management Practices.	D. W. Cobia
3319	Service Activities Relating to Ownership, Markets, and Use of Farmland.	J. E. Johnson
3325	A Comprehensive Evaluation of the Effects of Added Rainfall During the Growing	J. E. Johnson
	Season in North Dakota (ARE).	
3326	Economic Feasibility of Establishing Pasta Processing Plants in North Dakota.	D. E. Anderson
		R. G. Fraase
3327	Comparison of Grazing Costs on National and Privately Owned Grasslands.	F. L. Leistritz
		J. E. Johnson

3328	Economic and Social Impact of Recreational Development of Lake Metigoshe.	D. L. Helgeson Mary Bromel
3329	Economic Analysis of Alternative Land Use Patterns in Western North Dakota - Little Missouri Grasslands Study.	D. K. Cassel F. L. Leistritz R. G. Fraase
3330	Marketing of Irrigation Production.	D. E. Anderson R. G. Johnson W. C. Nelson
3331	Water Quality and Land Use in the Sheyenne River Basin.	Mary Bromel W. T. Barker F. L. Leistritz
3332	Impacts of Coal Development Alternatives.	D. L. Helgeson
3333	Growth and Decline of Small Cities in North Dakota.	T. A. Hertsgaard
3334	Alternative Uses of Wetlands.	J. E. Johnson
3336	Resource Inventory and Monitoring System in North Dakota.	

Agricultural Engineering

1419	Evaluation of Extensive Irrigation.	E. C. Stegman
1421	Effect of Air Flow and Temperature in Mechanical Dryers on Wheat Quality.	C. W. Moilanen W. J. Promersberger
1422 (NC-93)	Animal Waste Management with Pollution Control.	G. L. Pratt Mary Bromel
1423	Irrigation Scheduling of Mechanized Sprinkler Systems.	M. L. Buchanan E. C. Stegman H. M. Olson
1424 (RD-1)	Treatment Methods for Removing Organic Coloring and Minerals from Rural Water Supplies.	R. L. Witz Coila Janecek
1425	Physical Properties of Sunflower Seeds.	R. T. Schuler
1426	Feedyard Runoff.	R. W. Schottman G. L. Pratt R. T. Schuler
1427	Grain Harvesting Losses.	H. L. Kucera S. L. Vogel R. L. Witz
1428	Ventilation for Confined Cattle.	R. L. Witz
1429 (RD-1)	Evaluation of North Dakota's First Rural Water System.	R. L. Witz W. C. Nelson Coila Janecek
1430 (NC-118)	Utilization and Disposal of Municipal, Industrial, and Agricultural Processing Wastes on Land.	G. L. Pratt B. R. Funke E. B. Norum
3402	Service Activities.	W. J. Promersberger
3405	Preliminary and Special Investigation.	W. J. Promersberger
3411	Ditch Linings and Underground Pipe for Irrigation Systems.	E. C. Stegman H. M. Olson

Entomology

1507	Factors Influencing Distribution and Abundance of Grasshoppers.	G. B. Mulkern
1518	Factors Influencing Aphid and Leafhopper Transmission of Plant Diseases to Cereal Grains.	J. T. Schulz
1519	Biology, Ecology and Control of Sunflower Insects.	J. T. Schulz
1521	Biology and Control of Sugarbeet Root Maggot.	J. A. Callenbach R. D. Frye A. W. Anderson
1522	Insect Control Through Interference with Normal Processes of Physiology, Reproduction and Behavior.	M. S. Quraishi L. J. Schermeister
3501	Administration, Service and Preliminary Investigations.	J. A. Callenbach
3502	North Dakota Insect Survey and Insect Collection.	R. L. Post

Agronomy

1601	Hard Red Spring Wheat Improvement.	R. C. Frohberg R. H. Busch
1606	Corn Improvement.	H. Z. Cross
1608	Breeding and Genetics of Spring Barley.	G. A. Peterson A. E. Foster
1610	Sudan Grass for North Dakota.	P. C. Sandal

1611	Genetics and Associations of Inherited Characters in Wheat.	R. H. Busch
1613	Breeding and Genetics of Flax.	R. C. Frohberg
1614	Durum Improvement.	J. J. Hammond
1617	Weed Control Practices and Related Basic Problems.	J. S. Quick
1619	Drought Injury and Resistance in Plants.	J. D. Nalewaja
1620	Male Sterility, Fertility Restoration and Hybrid Vigor in Hard Red Spring and Durum Wheat.	D. W. Meyer
1621	Intergeneric and Interspecific Crosses of Barley and Rye.	K. A. Lucken
1623	Grasses and Legumes for North Dakota.	S. S. Maan
1624	Soybean Improvement.	A. B. Schooler
1625	Hard Red Winter Wheat Improvement.	J. F. Carter
1626	Biochemical Criteria for Plant Breeding.	D. W. Meyer
1627	Transfer of Cytoplasmic Variability and Disease Resistance to Wheat from Related Species.	D. A. Whited
1628	Integrating Crop Culture, Chemicals, and Life Cycles to Control Persistent Weeds.	J. R. Erickson
(NC-121)		E. L. Deckard
3601	Testing New and Standard Open Pedigree Corn Hybrids.	S. S. Maan
3602	Breeding Improved Varieties of Oats from North Dakota.	C. G. Messersmith
3605	Hybrid Corn Performance Trials in North Dakota.	J. D. Nalewaja
3606	Increase and Distribution of Improved Inbreds of Corn.	H. Z. Cross
3607	General Service.	H. Z. Cross
3610	Miscellaneous and New Crops for North Dakota.	J. R. Erickson
3611	Cereal Crops Variety Testing.	D. C. Ebeltoft
3612	Coordination of Agronomic Research Projects.	G. S. Smith
3613	Production and Supervised Distribution of Breeders and Foundation Seed.	H. Z. Cross
3616	Linseed Oil as an Adjuvant to Herbicides.	H. Z. Cross
3617	Commercial Production of Male Sterile and Hybrid Wheat Seed.	J. F. Carter
3618	Simulated Hail Damage on Barley.	C. M. Swallers
3619	Weed Control in Sugarbeets and Related Basic Problems.	J. F. Carter
3620	Sawfly Resistant Wheats.	C. M. Swallers
		J. F. Carter
		D. C. Ebeltoft
		J. D. Nalewaja
		K. A. Lucken
		J. F. Miller
		E. L. Deckard
		G. A. Peterson
		A. G. Dexter
		G. S. Smith
		L. R. Joppa
		R. C. Frohberg
Animal Science		
1729	Factors Affecting Volatile Fatty Acid Production in the Rumen.	D. O. Erickson
1736	Nutrient Requirements for Confined Ewes.	M. R. Light
1737	Rations for Ruminants.	J. E. Tilton
1740	Improvement of Beef Cattle Through Breeding Methods.	W. E. Dinusson
(NC-1 Rev.)		D. O. Erickson
1741	Cattle Types and Methods of Marketing.	M. L. Buchanan
1743	Amino Acid Composition of Muscles from Nutritionally-Limited Swine.	R. B. Danielson
1745	Embryonic Mortality in Swine.	V. K. Johnson
1747	Interrelationship of Mercury Concentration in Beef, Milk, Soils, Plants, and Water.	M. L. Buchanan
1748	Area Centers for Beef Development and Producer Education.	R. L. Harrold
1749	Growth Rate and Market Characteristics in Turkeys as Related to Early Nutrition.	M. J. Marchello
1750	Adrenal Cortical Levels in Rats and Sheep.	C. N. Haugse
		J. E. Tilton
		J. N. Johnson
		M. L. Buchanan
		J. L. Sell
		H. W. Omodt
		D. W. Bristol
		P. T. Berg
		M. L. Buchanan
		M. A. Kirkeide
		R. L. Johnson
		J. L. Sell
		J. E. Tilton
		M. R. Light
		M. L. Buchanan

1751	Ergot in Livestock and Poultry Rations.	W. E. Dinusson J. L. Sell D. O. Erickson
1752 (NC-114)	Forage Production and Utilization Systems as a Base for Livestock Production.	D. O. Erickson D. W. Meyer C. N. Haugse
1753	Feed Value and Composition of North Dakota Feed Grains.	R. L. Harrold D. O. Erickson C. N. Haugse
1754	Progressive Pneumonia in Farm Sheep Flocks.	M. R. Light J. E. Tilton R. J. Amundson
1755	Influence of DDT on Hepatic Microsomal Enzyme Activities and on Urinary Excretion of Ascorbic Acid.	J. L. Sell R. L. Puyear K. L. Davison
1756 (NC-111)	Increased Efficiency of Lamb Production Through Improved Breeding, Nutrition and Management Systems.	M. R. Light D. O. Erickson J. E. Tilton
1757	Nutrition of Pigs.	R. L. Harrold J. N. Johnson W. E. Dinusson
1758	Sow Nutrition and Management.	J. N. Johnson R. C. Zimprich R. L. Harrold C. N. Haugse
1759	Effect of Dietary Fats on Egg Production and on Quantity of Manure Produced.	J. L. Sell R. L. Johnson M. L. Buchanan
3703	General Service.	M. R. Light
3707	Productivity of Selected Breeds of Sheep.	T. C. Faller C. G. M. Edgerly
3708	Accuracy of Metering and Sampling Devices and Methods of Determining Milk Production.	
3710	Preliminary Investigations (Dairy).	M. L. Buchanan C. G. M. Edgerly
3714	Improving Reproduction in Beef Cattle.	J. E. Tilton M. L. Buchanan
3715	Growth in Suffolk Sheep.	M. R. Light T. C. Faller C. N. Haugse
3718	Whey in Rations.	W. E. Dinusson R. B. Danielson
Bacteriology		
1806	Effects of Selected Insecticides on Agriculturally Important Microbiological Activities.	B. R. Funke J. T. Schulz
1807	Effects of 1-Amino-D-Proline on Some Ezyme Systems.	B. P. Sleeper
1809	The Etiology of Necroses in Poultry.	Mary Bromel J. L. Sell
1810	Bacterial Viruses in Farm Animal Waste Lagoons.	D. L. Berryhill
3801	Starch and Cellulose Breakdown by Soil Actinomycetes.	B. P. Sleeper
3802	Serologic Aspects on the Nature of Rust Resistance in Wheat.	J. A. Doubly N. D. Williams G. D. Statler
3804	General Service and Preliminary Investigations.	K. J. McMahon
3805	Japanese Beetle Control with <i>Bacillus popilliae</i> .	K. J. McMahon
Botany		
1906	Pasture Management for Spring Grazing in Western North Dakota.	W. C. Whitman R. J. Douglas
1908 (GP-9)	Rangeland Improvement in North Dakota.	Harold Goetz W. C. Whitman
1909	Range Forage Production in Relation to the Environment.	W. C. Whitman Harold Goetz
1910	Physiology of Soybean Seeds.	D. S. Galitz D. A. Whited
1911	Photosynthesis and Nitrogen Metabolism as Related to Internal Water Balance of Wheat and Other Selected Plants.	M. E. Duysen D. S. Galitz

1912	Induction of Cell Division and Nuclear Replication in Plants by 2,4-D.	M. E. Duysen
3902	Preliminary Investigations (Pasture and Ranges).	W. C. Whitman
3903	Floristic Composition of Wet Lowland Prairie Sites.	W. T. Barker
		Harold Goetz
3904	An Approach to Range Land Use Planning in Nine Counties of Western North Dakota - Little Missouri Grasslands Study.	Harold Goetz
		W. C. Whitman
5901	Growth and Production of Deer Browse Species in the Badlands of Western North Dakota.	Harold Goetz
		W. C. Whitman
Cereal Chemistry and Technology		
2001	Wheat Protein Fractions and Baking Quality.	C. E. McDonald
2002	Quality Investigations of Hard Red Spring Wheat Varieties	L. D. Sibbitt
2004	Durum Wheat Quality Evaluation for Consumer Acceptance.	D. E. Walsh
2005	Testing and Improvement of North Dakota Barley Varieties for Industrial Acceptance.	O. J. Banasik
2006	The Role of Lipids on Durum Wheat Quality.	C. E. McDonald
2007	Barley and Malt Quality as Influenced by Biochemical Constituents.	O. J. Banasik
2008	Cereal Polysaccharides. Effect of Chemical Composition and Structure on Milling, Baking and Processing.	B. L. D'Appolonia
2009	Market Quality in Wheat.	D. E. Walsh
(NCM-41)		B. L. D'Appolonia
4001	Quality Testing of Wheat Varieties.	L. D. Sibbitt
Horticulture and Forestry		
2201	Breeding Potatoes.	R. H. Johansen
2207	Evaluation and Culture of Hardy Ornamentals.	D. E. Herman
(RD-1)		
2213	Effect of Production Practices on the Quality of Potatoes.	D. C. Nelson
2215	Factors Affecting the Role of Microorganisms in the Biological Control of Insect Pests.	R. D. Frye
		E. W. Scholz
2216	Vegetable Breeding and Genetics.	N. S. Holland
2218	Factors Affecting Post-Harvest Marketing Quality of Processed Potatoes.	E. P. Lana
(NCM-45)		R. L. Shaw
		D. C. Nelson
2219	Influence of Stocks on Growth and Fruiting of Apple Trees.	N. S. Holland
2220	Vegetable Production Under Irrigation in North Dakota.	E. W. Scholz
4203	Fruits Breeding Culture and Varieties.	N. S. Holland
4204	General Service and Preliminary Investigations.	E. P. Lana
4206	Mulches and Row Covers for Vegetable Crops.	E. W. Scholz
6201	Shelter Belts in North Dakota.	E. P. Lana
2303	Etiology and Control of Black Point Disease of Durum Wheat.	G. D. Statler
2304	Etiology and Control of Seed, Seedling and Root Diseases of Barley	V. D. Pederson
2305	Biology and Control of Bacterial and Fungal Diseases of Potato.	J. E. Huguelet
2307	Virus Diseases of Potato.	J. E. Huguelet
2308	Biology and Control of Foliar Diseases of Wheat.	R. M. Hosford, Jr.
2309	The Genetics of Wheat and Wheat Leaf Rust Interactions.	G. D. Statler
2310	Biology and Control of Ergot in Cereals and Grasses.	L. J. Littlefield
2311	Morphology of Tolerance and Slow Rusting in Wheat.	L. J. Littlefield
4308	Plant Disease of North Dakota Crops.	R. L. Kiesling
4309	Importance of Barley Foliar Diseases in North Dakota.	V. D. Pederson
4312	Cytology of Flax Rust.	L. J. Littlefield
4314	ARS, USDA Coordination.	R. L. Kiesling
4315	Disease Resistance in Confectionery Sunflowers.	D. E. Zimmer
		G. N. Fick
Soils		
2514	Biological Availability of Nitrogen in Soil Organic Matter.	J. T. Moraghan
2517	Soil Physiochemical Properties as Affected by Tillage.	Armand Bauer
2519	Effect of Nitrogen and Phosphorus Fertilizer on Performance of Corn.	J. T. Moraghan
2520	The Climatic Resource of the North Central Region.	J. M. Ramirez
(NC-94)		
2521	Factors Affecting the Accumulation of Nitrates in Soil, Water and Plants.	W. C. Dahnke
(NE-39)		D. D. Patterson
		D. K. Cassel
2522	Effect of Management on Sugar Beet Production.	J. T. Moraghan
		P. J. Tiedeman

2523	The Dynamics and Energetics of the Soil-Plant-Atmosphere Continuum (SPAC).	J. M. Ramirez
(NE-48)		
2524	Atmospheric Influences on Ecosystems and Satellite Sensing.	J. M. Ramirez
(NE-69)		
2525	Nutrient Enrichment of Waters by Soils and Sediments.	D. K. Cassel
(NC-98)		W. C. Dahnke
2526	Fertilizer Nitrogen Rate - Spring Wheat Variety Interaction in Relation to Soil Environment.	Armand Bauer
		O. J. Banasik
2527	Effects of Top Soil Depth on Wheat Response to Phosphate Fertilizer.	J. C. Zubriski
		W. C. Dahnke
2528	Detailed Soil Surveys for Potentially Irrigable Land.	H. W. Omodt
(RD-2)		M. D. Sweeney
		C. J. Heidt
2529	Effect of Nitrogen and Irrigation on Sugar Beets on Well-Drained Sandy Soils.	Armand Bauer
		D. K. Cassel
		J. M. Ramirez
2530	Soil Test Values and Potato Response to Fertilizer.	W. C. Dahnke
		D. C. Nelson
		L. J. Swenson
2531	Effects of Fertilizer and Plant Populations Upon Yield and Quality of Sunflowers.	J. C. Zubriski
		W. C. Dahnke
2532	Soil Landscape Characteristics Affecting Land Use Planning and Rural Development.	H. W. Omodt
(NC-109)		D. D. Patterson
(RD-1)		
2533	Effect of Irrigation and Fertilizer Nitrogen on Soybeans on Well-Drained Loamy Soils.	D. K. Cassel
		Armand Bauer
		D. A. Whited
2534	Soil, Landscape and Ground-Water Relationships in a Prairie Pothole.	B. K. Worcester
		L. J. Brun
		D. K. Cassel
4503	General Service	E. B. Norum
4505	Soil Correlation.	H. W. Omodt
4507	Soil Survey and Interpretation.	H. W. Omodt
		D. D. Patterson
		F. W. Schroer
4508	Fertilizer Soil Testing.	W. C. Dahnke
		L. J. Swenson
4510	Zinc Deficiency in Zinc-Sensitive Crops.	Armand Bauer
4513	Application of Phosphorus for Small Grains in North Dakota Soils.	W. C. Dahnke
		E. B. Norum
		L. J. Swenson
4516	Drought and Wet Spells in North Dakota.	J. M. Ramirez
		D. K. Cassel
4517	Soil and Climatic Characteristics and Their Influence on Present and Future Land use in Western North Dakota - Little Missouri Grasslands Study.	E. B. Norum
		H. W. Omodt
		J. M. Ramirez
		D. D. Patterson
4518	Soil Cropping and Climate Effect on Control of Saline Seep Development in Western North Dakota.	L. J. Brun
		B. K. Worcester
Veterinary Science		
2609R	Prevention and Control of Enteric Diseases of Swine.	I. A. Schipper
(NC-62)		A. D. Alstad
2610	Bovine Respiratory Diseases.	I. A. Schipper
(NC-107)		C. L. Kelling
4602	Preliminary Investigations.	M. F. Andrews
		G. E. Staples
		H. H. Casper
		I. A. Schipper
4604	Veterinary Diagnostic Service.	M. F. Andrews
		I. E. Berg
		A. D. Alstad
		Raul Weiss
4605	State Animal Health Service.	G. E. Staples
4606	Diseases of Neonatal Calves.	G. E. Staples
4609	Infectious Bovine Rhinotracheitis (IBR) in the Pregnant Bovine.	I. A. Schipper
		C. L. Kelling