New Mexico

State Department of Agriculture

Biennial Report

1956-57 1957-58

NEW MEXICO COLLEGE OF
AGRICULTURE AND MECHANIC ARTS

State College, New Mexico

New Mexico

State Department of Agriculture

Biennial Report

1956-57 1957-58

NEW MEXICO COLLEGE OF
AGRICULTURE AND MECHANIC ARTS

State College, New Mexico

TABLE OF CONTENTS

NEW MEXICO STATE DEPARTMENT OF AGRICULTURE

Office of the Director

December 1, 1958

His Excellency, Edwin L. Mechem
Governor of New Mexico
Santa Fe, New Mexico

Dear Governor Mechem:

I have the pleasure of submitting herewith the first biennial report of the State Department of Agriculture of the New Mexico College of Agriculture and Mechanic Arts, for the fiscal years 1956-57 and 1957-58.

This report contains a brief record of the activities and functions performed by the Department. There is also included a financial statement of receipts and expenditures.

Respectfully submitted,

Dallas Rierson

DALLAS RIERSON
Director

DR:vmt

STAFF ROSTER

as of June 30, 1958

STATE DEPARTMENT OF AGRICULTURE

New Mexico College of Agriculture and Mechanic Arts
State College, New Mexico

BOARD OF REGENTS OF THE COLLEGE

Honorable Edwin L. Mechem, Governor of New Mexico, Ex-Officio	Santa Fe
Honorable Georgia L. Lusk, State Superintendent of Public Instruction Ex-Officio	Santa Fe
Jesse U. Richardson, President of the Board	Las Cruces
Horace Hubert, Secretary of the Board	Carlsbad
Delmar Roberts, Member	Anthony
Mrs. Earl Corn, Member	Dexter
George F. Ellis, Member	Bell Ranch

ADMINISTRATIVE STAFF

R. B. Corbett	President, New Mexico College of Agriculture and Mechanic Arts
Dallas Rierson	Director, State Department of Agriculture, Chief, Division of Plant Industry
R. W. Ludwick	Assistant Director, State Dept. of Agriculture, Chief, Division of Non-Food Inspection
Charlie B. Whigham	Chief, Division of Food Inspection
Lewis T. Elliott	State Chemist
Elizabeth McSwain	State Seed Analyst
Gerald L. Nielsen	Survey Entomologist
W. A. Wunsch	Supervisor, Fruit and Vegetable Standardization
O. Howard Stanley	Grading and Marketing Specialist
Charles W. Beer	State Dairy Commissioner
Donald D. Lucht	Inspector, Division of Plant Industry
J. P. Goode	Deputy Inspector, Division of Plant Industry
Kenneth C. Joyce	Deputy Inspector, Division of Plant Industry
Elmer S. Butler	Inspector, Egg Inspection Section
John O. Rusk	Deputy Inspector, Egg Inspection Section
Fred D. Wells	Deputy Inspector, Egg Inspection Section
Eddie D. West	Deputy Inspector, Egg Inspection Section
Jack H. Greathouse	Inspector, Division of Non-Food Inspection
William H. Gossett	Deputy Inspector, Division of Non-Food Inspection
James H. Muntz	Assistant State Chemist
Mrs. Patricia Guerin	Secretary, Division of Plant Industry
Mrs. Darlene Jones	Secretary, Egg Inspection Section
Mrs. Frieda Kittleson	Secretary, Division of Non-Food Inspection
Mrs. C. Louise Smith	Secretary, Fruit & Vegetable Standardization
Miss Ruth Taft	Laboratory Assistant, State Chemist Laboratory
Mrs. Virginia Thurman	Bookkeeper, Secretary, Director's Office

STATE DEPARTMENT OF AGRICULTURE

FINANCIAL STATEMENT

1956-57 and 1957-58

Receipts		
Balance forwarded, July 1, 1956		$ 69,530.34
State appropriations		60,445.00
Fees, licenses and permits		136,952.97
Total funds available, 1956-57		$266,928.31
Expenditures		
Salaries	$110,164.65	
Travel	25,048.68	
Communications	3,246.53	
Office expense	5,063.31	
Printing and binding	1,952.16	
Tax tags and permits	18,604.37	
Office equipment and repairs	2,276.11	
Retirement and insurance	4,818.37	
Rental	1,895.00	
Contractual work	565.42	
Lab equipment and supplies	10,037.27	
Total expenditures	$183,671.87	
Unexpended balance, June 30, 1957		$ 83,256.44
Receipts		
Balance forwarded, July 1, 1957		$ 83,256.44
State appropriations		66,831.00
Federal grants		6,100.01
Fees, licenses and permits		131,149.62
Total funds available, 1957-58		$287,337.07
Expenditures		
Salaries	$132,208.13	
Travel	32,284.46	
Communications	3,145.22	
Office expense	4,972.85	
Printing and binding	2,072.45	
Tax tags and permits	11,063.15	
Office equipment and repair	2,497.32	
Retirement and insurance	7,174.99	
Rental	1,895.00	
Contractual work	954.70	
Lab equipment and supplies	19,790.57	
Total expenditures	$218,058.84	
Unexpended balance, June 30, 1958		$ 69,278.23

ADMINISTRATIVE DIVISION

Director, Dallas Rierson

This biennial report is prepared for the information of the Governor, the Legislature, and the people of New Mexico. It is a report of the functions of the State Department of Agriculture of the New Mexico College of Agriculture and Mechanic Arts for the period of July 1, 1956, through June 30, 1958. The report reflects the demand for services and regulatory activities which the expanded agricultural and industrial economy of New Mexico places on this department. Changes in agricultural products, methods, and newly-developed processing, marketing and distribution techniques have added to the complexity of the work of the department. Those engaged in agriculture and related industries realize that expanded population and mechanization of agriculture and industry, which have made operating units fewer in number and larger in size, are effecting a revolution in agricultural life in our state and nation.

The Board of Regents of the New Mexico College of Agriculture and Mechanic Arts is the administrative branch of the state government responsible for the administration of laws and regulations which daily affect the lives of every citizen of New Mexico. These laws and regulations, which relate to production, preparation, processing, sale and use of agricultural commodities are designed to assist producers, processors, and consumers. The department has maintained a close working relationship with other state agricultural agencies, and this relationship extends to other state departments of agriculture as well as the U. S. Department of Agriculture.

It is hoped that this resume of activities for the past two years will be of assistance to those who have a sincere interest in this most important industry in New Mexico.

DIVISION OF PLANT INDUSTRY

Chief of Division, Dallas Rierson

Inspector, Donald D. Lucht

The Division of Plant Industry administers several of the laws governing primarily disease and insect control of various commodities and activities within the state. Included in these Acts are the Nursery Inspection Act, the Bee Law, the Cotton Gin Law (a bonding and licensing law), the Insect Pest and Plant Disease Act, and cooperative work with the U. S. Department of Agriculture in insect and plant disease control programs. (The insect survey and various related subjects will be covered in more detail later in this report.) Many of these activities are so related that they are best handled as one program for economy and beneficial use of the state. Therefore, they are organized as one division for administrative purposes.

Chart I gives a statistical outline of the work carried on in the various fields during the past two years. As many states have quarantines against specific insects and plant diseases, the State Department of Agriculture has the responsibility of ascertaining, through surveys, whether certain insects and plant diseases exist in New Mexico, and if they do not, to certify that these commodities originated where the plant disease or insect is not known to exist. If insects and plant diseases are known to exist in New Mexico, the Department has the responsibility of supervising the treatment of products so that they may move into the state specified. This function takes a great deal of time of the division, but certainly it is a vital function in helping to market New Mexico's agricultural products. For example, each shipment of grain sorghums or broomcorn to Arizona or California must have a "Certificate of Origin." During the past biennium, 3,560 such certificates were issued by this division for commodities moving into these two states.

COTTON GIN LAW

The Cotton Gin Law was revised during the 1957 session of the State Legislature. Its primary requirements are that all gins must be licensed and bonded to operate in the state. This law protects the producer by requiring that he keep adequate records of the produce he brings to the ginner and that the ginner shall assume certain liabilities after the cotton has been delivered to him. It also specifies that each bale must be properly labeled as to name, number and address of the gin. A bond is required to assure that this is done or can be drawn on by the producer if the ginner does not carry out the requirements of the Act. Fifty-nine gins were licensed and bonded in New Mexico in the 1956-57 ginning season.

NEW MEXICO NURSERY ACT

The New Mexico Nursery Act provides for the annual inspection of nurseries and nursery stock grown, sold, or offered for sale in the state. It provides for the licensing of nurseries in the state and for licensing of nurseries in other states desiring to sell nursery stock in New Mexico. The law covers agents or representatives selling, offering for sale, or soliciting orders for nursery stock in the state. For the purpose of this Act, nursery stock ". . shall include all field-grown florist stock, fruit, shade or ornamental trees, shrubs, vines, cuttings, grafts, scions, buds, fruit pits and other seeds of fruits and ornamental trees or shrubs, herbacious plants, bulbs and roots and other products for propagation, except field vegetable and flower seeds, and shall include such ornamental trees, shrubs, plants, flowers, cuttings, bulbs or roots grown in greenhouses or under glass." The primary purpose of the Nursery Act is to prevent the introduction and spread of plant diseases and insects by nursery stock and to assure the consumer that he is buying "clean" nursery stock. In carrying out this Act, the State Department of Agriculture made 1,187 nursery inspections during the biennium, and 874 inspections of consignments shipped into the state. Port-of-entry inspections of nursery stock were also made, and licenses and permit certificates were issued.

NEW MEXICO BEE LAW

The New Mexico Bee Law was amended in the 1957 session of the State Legislature. This Act is designed to control contagious diseases of bees and to prevent the spread of disease in bees and the introduction of diseased bees from other states. The amendment of 1957 gave the owner an opportunity to clean up any disease found in his colonies. This legal change was brought about by the many new drugs that have shown promise in curing certain bee diseases. If the owner of a diseased colony wishes to isolate it and take proper care in seeing that it cannot infect other colonies of bees, he may try to cure this disease with approved drugs. Prior to this change in the law, all diseased bees had to be destroyed. Another change in the law did away with the tax stamp that had been required of each retail container of honey sold in the state. At present, the law requires a quarterly report to be made by all packagers of honey for retail sale in the state and a ¼-cent per pound tax to be paid on a quarterly basis. During the biennium, 11,447 colonies were inspected, and of these, 551 diseased colonies were found. Fifteen colonies were destroyed.

INSECT PEST AND PLANT DISEASE ACT

This act gives the Board of Regents of the New Mexico College of Agriculture and Mechanic Arts the authority to promulgate quarantines, rules, and regulations concerning shipment of products into the state or within the state that may harbor insects or plant diseases. Most of the work under the Insect Pest and Plant Disease Act has been concerned with five principal quarantines. Two of the quarantines affect the Khapra beetle—one relating to interstate shipments and the other to intrastate shipments of commodities that might be infested with the Khapra beetle. Another quarantine prevents the inroduction

of European corn borer into the state, and surveys were conducted to see that it had not already entered. The nut tree insect pest quarantine prevents the introduction of the pecan weevil and the pecan nut casebearer. Both insects are not known to exist in New Mexico, but are very serious in many of the pecan-growing areas of other states.

The State Department of Agriculture also enforced a quarantine preventing the shipment of sweet potatoes or sweet potato plants or associated products that might be infested with the sweet potato weevil. This insect has caused many thousands of dollars of damage in other sweet potato areas and is not known to exist in New Mexico. But the Department tries to prevent its introduction into the state.

A large amount of the Division's time was spent in helping to eradicate the Khapra beetle by inspections. To date, only six infestations have been found in the entire state, and these infested sites were successfully fumigated. At present, there are no known infestations of the Khapra beetle in the State.

In the past two years, 1,318 inspections of commercial establishments and 2,564 inspections of farms were made by the Division to find any infestations of the Khapra beetle. The all-out effort to eradicate this insect, a very serious pest of stored grain, was carried by both state and federal inspection agencies. During the biennium, two fumigations were performed, and associated buildings were also fumigated. Only one new infestation was found in the past two years.

U. S. DEPARTMENT OF AGRICULTURE COOPERATIVE PROGRAMS

The State Department of Agriculture cooperates very closely with the Plant Pest Control Division of the U. S. Department of Agriculture. As mentioned previously, some of the Khapra beetle work was carried out jointly by the state and the U.S.D.A. In addition to this, the Plant Pest Control Division of the U.S.D.A. works with the state on pink bollworm control in connection with the inspection work and the issuance of permits on cotton products to be shipped out of state.

Also during the 1956-58 biennium, work was planned cooperatively between the two agencies in connection with the peach mosiac program proposed in San Juan County. Later, farmers decided that the program was not feasible at present.

One of the larger programs carried out cooperatively is the grasshopper control program. This is a cooperative control program of the State Department of Agriculture, the U. S. Department of Agriculture, the farmers and ranchers, and the State Grasshopper Control Board, as provided in the last session of the Legislature. During the past biennium, 793,231 acres of land were sprayed for grasshopper control. In addition to the spraying program, many meetings were attended and discussions held on the feasibility of spraying in various areas and to inform the ranchers and farmers about infestations in the area.

The work is carried out in close cooperation with the county extension agents in various counties. During the 1957 session, a Grasshopper Control Act was passed providing for a State Grasshopper Control Board and for local grasshopper control committees where a cooperative program was desired. The program set up a basis for a control program in cooperation with the U.S.D.A. and the authorized control areas.

INSECT SURVEY

The insect survey program was started late in the last fiscal year of the biennium. This is a cooperative program whereby the U.S.D.A. furnishes certain funds to the state in carrying out the survey program in return for information furnished to the federal government for an economic survey report.

The main purpose of the insect survey program is (1) to provide each agricultural agency with a better over-all picture of insect conditions in the state, (2) to assist farmers and others in protecting their crops from insect attacks,

(3) to assure more prompt detection of newly introduced insect pests, (4) to lead to the development of a workable insect pest forecasting service, (5) to aid manufacturers and suppliers of insecticides and control equipment to determine areas of urgent need, and (6) in case of necessity, to provide a country-wide skeleton structure that may be expanded as needed to combat any attempts at biological warfare. Even though this program is new, it has begun to obtain information that has been badly needed in the state for many years. and this program will be a great benefit to all phases of the agricultural industry in New Mexico.

The information, collected weekly and supplied to the federal government, is also used in the extension entomologist's weekly **Insect Letter,** which is distributed throughout New Mexico, helping to keep the people informed as to the insect situation.

CHART I

ACTIVITIES OF THE DIVISION OF PLANT INDUSTRY

Activities	1956-57	1957-58	TOTALS
KHAPRA BEETLE			
Commercial inspections *	768	550	1,318
Speciments submitted	584	309	893
On-the-farm inspections *	1,597	967	2,564
Specimens submitted	393	123	516
INFESTATIONS FOUND	1		1
FUMIGATIONS PERFORMED *	1	1	2
Certificates issued	202	860	1,062
PINK BOLLWORM			
Field inspections	6	4	10
Gin trash inspections (bushels) *	353		353
Stalk and debris plow under (hours)	60		60
Quarantine certificates issued		91	91
BEE INSPECTION			
Number of colonies in the state	5,821	10,568	16,389
Number of colonies inspected	3,078	8,369	11,447
Number of colonies infested, AFB	65	76	141
Number of colonies infested, EFB	205	205	410
Number of colonies destroyed	15		15
Wholesale honey permits	16	16	32
NURSERY INSPECTION			
Nursery inspections made	341	846	1,187
Consignments inspected	54	820	874
Post entry inspections of nursery stock		2	2
Stop-movement orders issued	3	1	4
Inspections certificates issued	107	118	225
Dealers' licenses issued	224	230	454
Agents' licenses issued	8	10	18
Permit certificates issued	220	264	484
Individual inspections	4	12	16
Fumigations of nursery stock	3	2	5
PLANT QUARANTINE			
European corn borer certificates issued	1,521	2,039	3,560
Ozonium root rot certificates issued	100	116	216
Ginner's licenses issued	59	58	117
Port-of-entry inspections (man hours)		288	288
Grasshopper areas sprayed (acres) **	671,617	121,614	793,231

* —Federal-state cooperative work
**—Federal-state-rancher cooperative work

DIVISION OF FOOD INSPECTION

Chief of Division, C. B. Whigham

The Division of Food Inspection is comprised of three sections engaged in the inspection and grading of perishable agricultural products. The Division is charged with the enforcement of the New Mexico Dairy Law, the Fruit and Vegetable Standardization Act, and the New Mexico Egg Grading Act.

The primary functions of the Division are to insure that:

(1) Producers receive accurate tests of their products;

(2) Products are inspected and graded properly so that sales in interstate commerce can be made more easily;

(3) The consumer gets a product that is correctly labeled.

In the Division of Food Inspection, the grading and inspection programs are set by standards that are established by the U. S. Department of Agriculture, which are standards that are recoginzed throughout the United States.

EGG INSPECTION SECTION

Chief Inspector, C. B. Whigham

The Egg Inspection Section was created with the passage of the New Mexico Egg Grading Act in the 20th session of the State Legislature. The purpose of this Act is to promote the development of the egg industry in New Mexico, to encourage more egg consumption and, by adopting federal standards for individual shell eggs, to provide for the proper marking, branding, and advertising. The vendor is limited in the descriptions he may use in advertising and all such advertising is controlled to prevent any deception in the sale of eggs to the consumer. Only products that are of Grade A quality or better can be advertised with descriptive terms, and all advertising must carry the grade and size of the product. This is not only in effect at the retail level, but also in the sale of eggs to restaurants, whereby the label must designate the grade and quality of the product.

The egg industry provided that the financing be carried by the industry itself, i.e., by the sale of labels which would finance the operation of the Egg Inspection Section.

Many difficulties have arisen in enforcing the New Mexico Egg Grading Act, principally because of the perishableness of this product. Many strides have been made in improving the quality of the product being sold to the consumer, and considerable educational work has been carried on to assist the producer, the wholesaler and the retailer in the best methods of handling this perishable product through the channels of trade.

Prior to the passage of this Egg Grading Act, the State of New Mexico enjoyed the distinction of being a "dumping ground" for poor quality products; however, this situation has changed considerably in the past few years. Even though this is one of the most highly perishable products, the quality of eggs at the retail level is much better than ever before. The consumer in New Mexico can be more sure of getting the quality of the product shown by the label than in previous years.

The egg industry is being better served because of the elimination of many itinerant truckers that once moved in wholesale channels from store to store, most of whom represented their products as fresh farm eggs when they were found to be low-quality products.

The promotion of the egg industry has affected many areas by assisting producers in finding new market outlets for their products when they were unable to do so themselves. At present, there are few retail outlets that do not have a top-quality local product available to the consumer.

Many changes have been effected in the production and marketing of eggs. Areas of high production have relocated near the larger towns, where consumption is higher. More premium-quality eggs are sold to retailers than ever before. Most of the producers have large commercial units and market their own products. This give a larger gross return to the producer.

All states surrounding New Mexico now have egg grading laws. This should be of benefit to the state, since in prior years the primary troubles came from dealers who operated from states that did not have such a law.

The value of the grading program as far as coverage is concerned may be established by the following statistics:

	1956-57	1957-58
Number of stop-sale notices	621	459
Number of cartons stopped	71,256	48,070
Number of advertising violations	70	34
Number of grocery stores inspected	585	625
Number of inspections at retail outlets	7,347	9,123

It is noticeable that the number of violations has decreased each year, even though the number of official inspections has increased. This trend indicates that the policy of striving for cooperation has been fairly effective. It has been necessary to use prosecution from time to time, but only as a last means of correction. However, there has been a decreasing amount of prosecutions necessary during the past two years. The number of complaints filed during 1956-57 was ten, whereas the number of complaints filed during 1957-58 was six.

FEDERAL-STATE MARKETING PROGRAM

A program of marketing poultry and eggs was initiated in January, 1958, from funds provided under the Agricultural Marketing Act of 1946. The purpose of the program is to give assistance to poultrymen in quality improvement work and also to aid them with their grading and marketing work. This program is extended to cover work with produce dealers and retailers. The primary objective of this program is to improve or maintain the quality of these agricultural products from producer to consumer through all trade channels.

The poultry industry, like many other agricultural industries, has been in a period involving considerable change over the past few years. Small farm flocks at one time were numerous: the picture is now one of large commercial producers. The profit margins are smaller, thus requiring a greater volume of products with more efficient management and marketing arrangements. Many poultrymen of today have not had previous experience in the industry. Acreage allotments of some of the other cash crops have turned people toward the egg industry for additional sources of income. This marketing program will be of great benefit to these new poultrymen.

The question of quality is the first that arises when the buyer is contacted regarding the purchases. Shortly after this program was initiated, personnel engaged in this marketing program were asked to meet with a group of producers from the eastern part of the state and help them with some marketing problems. As a result of the Department's work with these producers in helping them to maintain the quality of their eggs on the farms and contacting interested buyers, the price of eggs was increased by as much as $4.50 per case almost immediately.

The response to the federal-state marketing program has been very good, and since the fruit and vegetable industry is increasing to such a great extent, the State Department of Agriculture has requested additional federal funds to

extend the marketing program to include these crops, with the primary emphasis on expanding market outlets for New Mexico's fruits and vegetables.

Since changes are so rapidly taking place in the field of marketing, this program is proving to be invaluable to agriculture in New Mexico.

NEW MEXICO FRUIT AND VEGETABLE STANDARDIZATION SERVICE

Supervisor, W. A. Wunsch

The New Mexico Fruit and Vegetable Standardization Service was established by the Legislature in 1941. The purpose of this service is to promote the development of the New Mexico fruit and vegetable industry in interstate and foreign markets; to establish standards and standard containers for fruits and vegetables; and to prevent fraud and deception in receiving, packing, marketing and selling (including accounting of sales) of fruits and vegetables.

Four main objectives in dealing with commercial fruits and vegetables were set up:

(1) The development of grades and standards, and assistance to producers and shippers in grading and making available inspections based on established grades and standards;

(2) The development of methods and plans for harvesting and preparing fruits and vegetables for marketing, including grading, packaging, information, equipment and uniform containers;

(3) The development of an adequate marketing service including information for producers and shippers of producing areas, seasonal buyers, and consumer demands, information for transportation companies, buyers of seasonal supplies and quantity of products available; and,

(4) To secure and make available general information requested by producers, shippers and buyers.

As producers, shippers, and dealers must be considered in connection with grades and standards, the Board of Regents of New Mexico College of Agriculture and Mechanic Arts adopted the U. S. Department of Agriculture grades and standards for New Mexico. The official grades and standards for fruits and vegetables thus became uniform with other states using the federal grades. The term "quality" is used to mean the permanent factors which are established in production, such as size, shape, and color of apples, condition and solidity of lettuce, and diseases that might affect the product in the trade channels. Conditions may affect the quality of the product after it has been produced. Such conditions would include bruises, mechanical injury, and sun scald. If the product lacks size or color, is immature or diseased or damaged in any way, the quality cannot be improved. However, by effective grading, only the select product may be used to make the No. 1 grade, thus creating a greater number of undergrades. If a product is dirty, the grade standard may be improved by brushing or washing. The producer and shipper must give consideration to these conditions that may change during packing and shipping.

Inspection at the shipping point is conducted under a cooperative agreement between the state and the Fruit and Vegetable Branch of the U. S. Department of Agriculture. The federal supervisor for Arizona also supervises the federal employees who are federally licensed and inspect crops in New Mexico. These inspectors are secured and stationed wherever needed during the shipping season. Federal-state certificates of quality are issued on all carlot shipments. The grading service, with certificates, is available to all those who wish to use the grading service. The prime benefit derived from the inspection service is that the producers or shippers may have some recourse whenever shipments are rejected

CHART I

FRUITS AND VEGETABLES INSPECTED

	1956 — 1957			1957 — 1958		
	Type Container	Number	Car Equivalent	Type Container	Number	Car Equivalent
Apples	40 # B.	35,000	50	40 # B.	21,000	30
Beans, pinto	100 # S.	54,000	90	100 # S.	168,600	281
Cantaloupes	Crates	15,000	50			
Carrots	50 # Cr. & S.	21,000	30	50 # S.	14,000	20
Lettuce, fall crop	Cartons	227,000	355	Cartons	327,040	511
Lettuce, spring crop	Cartons	324,888	507	Cartons	611,840	956
Onions, sweet Spanish	50 # S.	173,191	289	50 # S.	42,000	70
Onions, grano	50 # S.	336,600	561	50 # S.	248,000	310
Potatoes, Irish	100 # S.	21,600	54	100 # S.	62,000	156
Tomatoes	60 # B.	8,400	12	60 # B.	51,120	8

B. = Boxes S. = Sacks Cr. = Crates

CHART II

FRUIT AND VEGETABLE INCOME

(Estimated from Information Received in this Office from Handlers, Producers and Brokers)

Products	1956 — 1957 Volume		Income	1957 — 1958 Volume		Income
Apples	510,000	Boxes	$ 721,000.00	680,000	Boxes	$1,360,000.00
Beans, green	205,000	Pounds	123,000.00	840,000	Pounds	33,600.00
Beans, pinto	230,000	Sacks (100#)	1,830,000.00	200,000	Sacks (100#)	1,600,000.00
Cabbage	1,400	Tons	70,000.00	2,400	Tons	144,000.00
Cantaloupes	24,000	Crates	72,800.00	12,000	Crates	27,000.00
Carrots	415,000	Crates	1,037,750.00	511,200	Crates	1,661,400.00
Chile	1,900,000	Pounds	134,000.00	900,500	Pounds	224,500.00
Lettuce, spring	324,888	Cartons	604,544.00	611,840	Cartons	1,223,680.00
Lettuce, fall	227,000	Cartons	740,298.00	313,541	Cartons	505,704.00
Onions, grano	531,600	Sacks (50#)	1,404,400.00	512,000	Sacks (50#)	886,000.00
Onions, sweet Spanish	173,191	Sacks (50#)	519,573.00	412,500	Sacks (50#)	628,875.00
Peaches	150,000	Bushels	180,000.00	200,000	Bushels	300,000.00
Peanuts	5,610,000	Pounds	448,800.00	4,870,000	Pounds	328,690.00
Potatoes, Irish	220,000	Sacks (100#)	605,000.00	283,500	Sacks (100#)	567,480.00
Potatoes, Sweet	285,000	Crates (50#)	798,000.00	315,000	Crates (50#)	945,580.00
Tomatoes	9,180	Tons	321,300.00	14,820	Tons	508,700.00
Watermelons	1,000	Tons	40,000.00	900	Tons	27,000.00

at destination or whenever there has been a drop in markets or some other factor. It also gives the seller and buyer a common description of the product involved in the transaction. It promotes standardization and corrects errors at the shipping point. Inspection certificates may also provide evidence in settling a damage claim arising in transportation and in settling disputes under the Perishable Agricultural Commodities Act. The service endeavors to serve the producers and distributors on a practical basis. The producer is interested in harvesting a product that will meet the quality standards demanded by the buyers and for which he can secure the best price. The distributor needs a quality gauge as a yardstick to facilitate buying and selling, particularly at long distances. One of the greatest values of the service is the assistance which is given the grower, packer, or shipper in the preparation of the product for market. The buyer is kept aware of the scoring of the product which he is to sell, thus giving him the opportunity to strive for a better grade as the needs may be. In carrying out improvements of harvesting, grading, packaging and marketing methods, the Fruit and Vegetable Service has worked in cooperation with the Experiment Station, the Extension Service, and commercial growers. In January, 1957, the first Fruit and Vegetable Short Course held at State College dealt with various subjects concerning the fruit and vegetable industry in New Mexico. Various other programs have been initiated, such as the Annual State Orchard Tour that should be of benefit to the fruit and vegetable industry of New Mexico.

The Fruit and Vegetable Service assisted the growers in Espanola and Albuquerque areas to secure modern grading and packing machinery. Some promotional work concerning a uniform apple container has been done. This container carries the stamp "New Mexico Apples" which should be of some benefit in promoting this fruit grown in the State.

Modern methods and equipment have been shown interested producers from various areas concerning the fruit and vegetable industry. The Fruit and Vegetable Service has assisted growers in many areas in obtaining equipment, brokers and harvesting crews that were needed in harvesting their fruit and vegetable crops. Assistance was rendered to the vegetable growers in forming a State Vegetable Growers' Association, which was set up to help promote the vegetable industry in the state.

DAIRY WORK

State Dairy Commissioner, Charles Beer

The standard Babcock test is the method used to determine the butterfat percentage of most dairy products. All producer butterfat check-tests were run in the laboratories of the various milk plants which purchased the raw milk. During the year 1957, three assistant testors were employed part time to accomplish these check-tests more satisfactorily. These assistants are located out in the state and are in closer contact with the plants. However, they only work two or three days a month on dairy check-testing. Use of equipment and supplies of the various milk plants seems to work out very satisfactorily because it gives an opportunity for department inspectors to work with technicians and equipment and consequently correct any discrepancies which may occur. This method also promotes a more cooperative relationship between producer and processor.

The number of dairy plants in New Mexico remains relatively unchanged. Today the majority of dairy products are being manufactured from surplus Grade "A" cream .

The number of producers is decreasing, as it is getting to be more difficult for the small producer to make a profit. Even though the number of producers is smaller, the number of dairy cows in New Mexico does not show much of a decrease. Production per cow has increased. The change to farm bulk tanks is bringing about a great change in the dairy industry. There are fewer producers

with larger cow herds. This trend to bulk tanks is slowly forcing the small producer either to get out of the dairy business or to increase the size of his operation so that he can afford to stand the additional expense of equipping himself to meet the demands for farm bulk tank production. This method of handling fluid milk, which is already a common practice in the greater part of the United States, is gradually becoming the general practice throughout New Mexico.

CHART I — DAIRY TEST STATISTICS

Type of Test	1956-57	1957-58
Producer's milk check-tests:		
Fresh milk samples	699	758
Composite milk samples	4,291	1,392
Cryoscope tests on milk	288	277
Lactometer tests on milk	275	16
Ice Cream per cent fat tests	96	213
Butter per cent fat tests	0	9

CHART II — DAIRY PRODUCTS MANUFACTURED IN NEW MEXICO

Product	1956-57	1957-58
Butter	244,325 lbs.	136,124 lbs.
Ice cream	1,370,903 gal.	1,595,142 gal.
Condensed milk	48,053 gal.	
Cottage cheese	2,594,854 lbs.	2,584,934 lbs.
Frozen desserts	44,877 gal.	210,231 gal.
Ice milk	278,852 gal.	185,590 gal.
Sherbet	107,869 gal.	137,849 gal.
Fluid milk	14,058,858 gal.	18,741,239 gal.
Cream sold out of state	263,864 lbs.	43,617 lbs.

CHART III — DAIRY PRODUCTS MANUFACTURED OUTSIDE STATE, SHIPPED INTO THE STATE

Product	1956-57	1957-58
Butter	773,324 lbs.	1,695,424 lbs.
Ice cream	1,534,590 gal.	1,700,660 gal.
Cottage cheese	1,131,873 lbs.	1,145,062 lbs.
Frozen desserts	1,280 gal.	1,450 gal.
Iced milk	185,397 gal.	195,574 gal.
Sherbet	55,017 gal.	59,518 gal.
Fluid Milk	6,434,745 gal.	7,842,731 gal.
Cream for manufacturing purposes	1,833,709 lbs.	1,902,676 lbs.
Dry milk	1,426,609 lbs.	3,356,140 lbs.

CHART IV — MILK PRODUCERS DATA

Data	1956-57	1957-58
Producers selling to in-state plants	558	512
Producers selling to out-state plants	143	68
Milk producers using pipe line system and bulk tanks	236	593
Number of dairy cows producing for in-state plants	18,947	20,010
Milk produced for in-state plants	19,774,153 gal.	20,397,271 gal.
Milk produced for out-state plants	6,418,119 gal.	6,821,039 gal.
Milk produced out-state, purchased by in-state plants	1,192,682 gal.	1,287,081 gal.
Milk produced out-state, shipped in by out-state plants	124,530 gal.	130,056 gal.

DIVISION OF NON-FOOD INSPECTION

Chief of Division, R. W. Ludwick

Agriculture regulatory laws have as their basic purpose the prevention of fraud. They function on basic principles of right and justice, protection and service, and if the laws are properly administered, everyone affected is benefitted. Successful administration depends largely upon the cooperation of those whose interests they affect. The operation of control laws, therefore, should not only properly regulate or control, but should be educational as well.

This division is charged with the responsibility of enforcing laws relating to the manufacture, sale, distribution, registration, labeling, and use of commercial feeds, commercial fertilizers, agricultural and vegetable seeds, and economic poisons.

Samples are taken by inspectors stationed over the state. These samples are taken by prescribed procedure, sealed, and sent to the state chemist for examination and analysis. After samples are analyzed, the results are sent to the manufacturer, dealer, and consumer if sample is in his possession. Seed samples are sent to the state seed laboratory for examination and analysis.

The inspectors visit all feed manufacturers, dealers, drug stores, super markets, grocery stores, and ofttimes farms and ranches to examine the various commodities to determine the sufficiency of the labels and compliance with the provisions of the respective laws.

Most violations of law are handled by informing the responsible persons of the requirements of the law. Some circumstances warrant more formal action such as delivery of written warning notices, "stop sale order," and, where necessary to secure compliance, filing a criminal complaint.

ECONOMIC POISONS CONTROL OFFICE

The New Mexico Economic Poisons Act is a rather recent agricultural regulatory law enacted by the State Legislature. It was patterned very closely to the "Uniform Act," which was approved by the Association of American Pesticide Control Officials as a "model bill." It also follows the provisions of the Federal Insecticide, Fungicide, and Rodenticide Act. The federal act has jurisdiction over economic poisons which move across state borders. At present, 43 states have pesticide laws of some kind, many of which are similar to the Federal Insecticide, Fungicide, and Rodenticide Act.

The New Mexico Economic Poisons Law is designed to prevent the sale and distribution of improperly labeled pesticides. Many different types of products are subject to registration and label approval under the provisions of this Act. All insecticide, fungicide, herbicide, and rodenticide products must be registered before sale in New Mexico. Also disinfectants, germicides, repellents, and nematocides must be registered.

Products eligible for registration under the Act must bear a label stating the directions for use which, if complied with, are considered adequate. The label must contain, with few exceptions, a danger, warning or caution statement, designed to prevent injury to humans, animals, vegetation or other useful living things.

The label of the product must also contain a guaranteed analysis which shows either the name and percentage of each active ingredient together with the total percentage of the inert ingredients, or the name of each active ingredient and the total percentage of the inert ingredients. The ingredient statement for products containing highly toxic compounds must list the name and percentage of each active ingredient, also the skull and crossbones, the word "POISON" in red on a background of distinctly contrasting color, and a statement of an antidote for the economic poison. These materials may also be required to be colored or "discolored" to indicate their toxic nature.

The label also requires the name and address of the manufacturer or registrant, net weight or measure, and brand or trade-mark under which the product is sold.

These label requirements provide the purchaser or consumer with information as to the uses of and precautions to be taken in the use of all economic poisons sold in New Mexico.

While the New Mexico Economic Poisons Law was designed primarily to protect the purchaser or consumer of pesticides, it also indirectly benefits the dealers in these products and the general public, even though they may not be directly involved in the purchase or distribution. Any individual entirely unconnected with the purchase and distribution of pesticides can be protected, knowing that in case of emergency the label information including the antidote or first aid may be of extreme importance. Likewise, every housewife who purchases fruits and vegetables from the market is indirectly protected by the labeling of pesticide products whose directions for use indicate a safe rate of application which will not leave a dangerous residue of pesticides on fresh fruits and vegetables.

The importance of obtaining quick and accurate information in the successful treatment of accidental farm and home poisonings is well known. The proposed establishment of poison control centers in at least one hospital in each county in New Mexico will provide a source of information for New Mexico physicians in securing rapid toxicological information when poisonings occur.

To enforce adequately the provisions of the New Mexico Economic Poisons Act, field inspectors are authorized to collect samples of pesticides and to enter into any store, warehouse, car, or any place presumed to contain economic poisons for the purpose of inspection or sampling. They are also authorized to issue and enforce written or printed stop sale or removal orders of economic poisons when the product being offered for sale is in violation of any of the provisions of the Act.

During the calendar year 1958, 221 manufacturers or formulators have offered 1,711 registered products for sale in New Mexico. Insecticides comprise approximately 1,293 of this total number; fungicides, 210; herbicides, 176; germicides, 85; and rodenticides, 47. Official samples of these products taken by the inspectors are analyzed under the direction of the state chemist and the results are mailed to the manufacturer or formulator, and to the dealer or consumer where the sample was secured. An annual report is issued each year, listing the registrants and their products offered for sale, as well as other information on the use and safe handling of presticides.

FEED CONTROL OFFICE

The primary purpose of the New Mexico Feeding Stuffs Law is to protect the consumer against inferior products which doubtless would soon appear on the market if the feed trade were not under state control. The law is primarily a correct-labeling act. The purchaser should study the labels found upon the tag or bag, be able to interpret the guaranteed analysis and the feeding quality of the ingredients listed, and apply this information when purchasing feeds for his particular purpose. The Feed Control Office is concerned mainly with seeing that the proper information is placed on the labels and checking upon the truth of these statements. It must not be assumed by the purchaser that every brand which meets the manufacturer's guarantee is a high-grade feed. The Commercial Feeding Stuffs Law does not prevent the sale of a low-grade feed if it is properly labeled and is offered for sale in compliance with the law.

The New Mexico Commercial Feeding Stuffs Law is in general similar to those adopted by most other states. The term "commercial feeding stuffs" shall be held to include all feeding stuffs used for feeding livestock and poultry except the following: (a) whole grain or seeds; (b) whole hays, straws, cottonseed hulls and corn stover, when unmixed with other materials; (c) all other materials consisting of 60 per cent or more of water. It requires that all feeding stuffs sold, offered or exposed for sale, or delivered in New Mexico, must be registered with the Feed Control Office of the State Department of Agriculture. Uniform blanks for this purpose will be furnished by the office upon request. Registrations are permanent unless cancelled for cause. Each package of feed must bear a complete label. The label must be printed on one side of a tax tag attached to the package or upon the side of the package itself. The label must be clear and distinct, printed in type of sufficient size to be easily read, and conform in all cases to the uniform labels adopted by the Association of Feed Control Officials.

The following is required upon the label and must be exactly the same as that given in the application for registration: (a) the net weight of the contents of the package; (b) the name, brand or trade-mark of the material; (c) the name and principal address of the manufacturer or person responsible for placing the commodity upon the market; (d) the minimum per cent of crude protein; (e) the minimum per cent of crude fat; (f) the maximum per cent of crude fiber; (g) the minimum per cent of nitrogen-free extract; and (h) the specific name of each ingredient used in the manufacture of the feed. In addition to registration and being properly labeled, all feed is subject to the payment of tonnage tax of 12 cents per ton to provide funds for the inspection, analyses, and investigation in administration of the law.

Many years ago, when commercial feeds were simple mixtures of a few ingredients, a poultry feed could be fed to cattle or other farm animals. Now, with all the medicaments, antibiotics, and other additives to poultry feeds, this would be a dangerous practice. Much time is required to examine all the labels for feed registered in the state. The information on the label increases in importance and should be carefully read and directions for its use followed to obtain maximum results.

The Feed Control Office has the cooperation and assistance of the U. S. Department of Agriculture in control of adulterated and misbranded interstate shipments. The Feed Control Officer is commissioned by the U. S. Department of Agriculture to collect samples of interstate shipments of feed, and any interstate shipment of feed showing deficiency and adulteration may be sampled not only under the New Mexico Commercial Feeding Stuffs Law, but also under the Pure Food and Drug Act. Such feed samples are analyzed under the direction of the state chemist, and a duplicate portion of the sample is then forwarded to the Food and Drug Administration laboratory. Federal prosecution of these cases does not prevent action also by the Feed Control Office if it is found necessary for the protection of New Mexico consumers. By means of this cooperation this office is in the position to give New Mexico consumers additional protection in the purchase of feeding stuffs from the manufacturers in other states.

The Feeding Stuffs Law makes the dealer responsible for feeds sold by him. All dealers are advised to withdraw from sale shipments of feeds which they know do not comply with the provisions of the Feeding Stuffs Law, until such time as they can be legally sold. The dealer is directly responsible if feed in his possession fails to meet the requirements of the law, and the same penalty applies for exposing or offering for sale any unlabeled feeds, or feeds not having the New Mexico inspection fee paid. The dealer should always voluntarily withdraw from sale all feeds which he knows or suspects of being legally unsalable and then write the Feed Control Office, giving details concerning the transaction and feed. The Feed Control Office will assist in every manner possible.

Feed inspections are planned to cover thoroughly the places where feeds are manufactured, sold, and used with a minimum of expense. Complaints are thoroughly investigated, and difficulties are adjusted, if possible, where found. Analyses of official samples are reported to all interested parties as promptly as possible.

During the fiscal year 1956-57, 579 official samples were collected and analyzed. During the 1957-58 fiscal year, 894 official samples were collected and analyzed. Of the 579 official samples taken in 1956-57, 242 were deficient in some nutritional respect. Of the 894 samples taken during 1957-58, 409 were deficient in some nutritional respect. Approximately 3,783 brands of feeds are currently registered in New Mexico by 405 manufacturers.

Total tonnage of commercial feeding stuffs as computed from the sale of inspection tax tags and tax stamps for a group of ten-year periods are as follows:

Fiscal year	1929-1930	57,840 tons
" "	1939-1940	105,101 tons
" "	1949-1950	187,166 tons
" "	1956-1957	297,601 tons
" "	1957-1958	210,590 tons

This practice of "custom mixing" has grown to be a real problem. To meet this problem, regulations under the New Mexico Commercial Feeding Stuffs Law were revised, and became effective July 1, 1958.

The terms "custom-mixed feeds," "customer-formula feed," "special-formula feed," and "made to order feed" are synonymous and mean a mixture of commercial feed and/or feed material, all or any part of which is furnished by the firm or person who processes, mixes, mills, or otherwise prepares such mixture, and which is mixed according to the specific instructions of the purchaser. The final purchaser may supply his own grains or other materials to be used in the custom mix. Any person or firm engaging in a custom-mixing operation shall render a report quarterly, accompanied by an inspection fee of 12 cents per ton on all feeding stuffs and/or feed materials used in custom-mixed feeds, except those ingredients supplied by the final purchaser.

Each lot of custom-mixed feed left in the custom-mixer's stock shall be properly identified. Custom-mixed feed may not be offered or exposed for sale to the general public.

FERTILIZER CONTROL OFFICE

Fertilizer regulatory work in New Mexico was authorized by Chapter 151, of the Session Laws of New Mexico for 1929, and amended in 1953.

The New Mexico Commercial Fertilizer Law is essentially a labeling law, requiring manufacturers to guarantee the accuracy of information on containers of fertilizer and in registrations filed in this office, so that each purchaser may determine for himself the value of the fertilizer offered for sale. Inspection and analysis by the Fertilizer Control Office at frequent intervals will give information as to the reliability of the labels which the manufacturer attaches or prints on the container of each parcel of fertilizer.

Commercial fertilizers are defined in the law as "... any substance shall be deemed to be a commercial fertilizer if by reason of its chemical composition or other quality, it is sold, offered or exposed for sale, or distributed in this state for the purpose of increasing the crops produced by land."

This definition includes the common commercial fertilizers carrying nitrogen (N), phosphorus (P_2O_5), and potash (K_2O), and also includes inoculating materials and all materials for which plant nutrition is claimed.

Each brand of commercial fertilizer coming under the provisions of the New Mexico Commercial Fertilizer Law must be registered annually in this office. Applications for registration must be made in the form of an affidavit on blanks furnished by this Office. A separate registration for each brand and grade of the same brand is required. Application for registration of each brand and grade must be accompanied by a fee of $5. Registrations may be filed for new fertilizers at any time during the year, but all registrations expire December 31.

Commercial fertilizers sold, offered, or exposed for sale or distribution in New Mexico are subject to an inspection fee of 25 cents per ton. Payment of this fee is to be made quarterly in January, April, July, and October, for the preceeding three months, along with a certified statement as to fertilizer sales for that period. If any quarterly affidavit is not filed or if the inspection fee is not paid within the 30-day period, a penalty of $5 per day for each delinquent day thereafter shall be assessed for each delinquency.

For each brand of commercial fertilizer sold, offered or exposed for sale or distribution in New Mexico in packages of only five pounds or less or in bottles of only one quart or less, there may be paid by the person, firm, association or corporation registering the brand an annual inspection fee of $10 in lieu of the inspection fee based on tonnage, such annual fee to be paid during the month of July of each year.

The quantities of commercial fertilizers sold in New Mexico for a number of years are given in the following table. These figures are compiled from notice of shipments and quarterly tonnage reports made by the manufacturers.

Year	Report of Shipment
1930	1,787.00 tons
1935	1,636.00 tons
1940	2,406.37 tons
1945	8,000.00 tons
1950	13,649.04 tons
1955	27,367.59 tons

Our self-supporting office is paid for by revenue derived from the registrations and inspection fees of 25 cents per ton payable on commercial fertilizers sold in New Mexico.

The utility of a fertilizer can be generally judged from the amounts of three constituents guaranteed — nitrogen, available phosphoric acid, and potash. Some soils may require the application of definite quantities per acre of each of three constituents, while others may require the application of only one or two of the plant foods named. Purchasers of commercial fertilizers are advised to study their soil requirements and determine in advance of purchase the kind of fertilizer needed. Advice and assistance in such cases can always be obtained from county extension agents or the Agricultural Experiment Station or the Extension Service at New Mexico College of Agriculture and Mechanic Arts. Although the Fertilizer Control Office does not make recommendations regarding the kinds, amounts to use, and values of commercial fertilizers, it is always ready to assist purchasers and users of fertilizers by answering questions regarding the guarantees and analyses of the different brands by securing and analyzing samples which are suspected of being below guarantee made by the manufacturer.

Data	1956	1957
Tons of commercial fertilizer sold in New Mexico	28,657.37 tons	38,173.22 tons
No. of samples procured and analyzed	183	368
No. of samples found deficient in guarantee	10	45
Nitrogen	(3)	(21)
Phosphoric acid	(6)	(21)
Potash	(1)	(3)
No. of firms selling fertilizer in state		93
No. of registrations on file		312

STATE SEED INSPECTION

The New Mexico State Seed Law assists buyers, dealers, and users of agricultural and vegetable seed in obtaining seed of high quality, and preventing the introduction of noxious weeds into cultivated areas. All 48 states now have state laws to control the sale of seed. These laws supplement the Federal Seed Act. All agricultural or vegetable seed sold, offered, or exposed for sale or distributed within the state for sowing or planting purposes is subject to inspection and "stop sale" if not in compliance with the State Seed Law and Regulations. This law is primarily a labeling law, requiring the following information:

Every container of agricultural seed offered for sale in the state must bear a label or tag giving the following information. The only exception is seed sold by the grower on his own farm **without advertising.** In addition, there must be no false or misleading statements on the tag or in advertising, whether in speaking or writing.

This may be the name of the person who first labeled the seed, or if another person is selling the seed, the name of the latter. He is responsible for the accuracy of the tag.

Seed must be of the kind, type, or variety claimed. If the seed cannot be identified by examination, the dealer must have a grower's declaration of variety or other proof of the identity of the seed.

The items obtained by a purity analysis.

The items obtained by a germination test.

Where alfalfa, red clover, sorghum, sudan grass, range grasses or field corn was grown.

Name and address of seedsman
Kind of seed——— Lot No.———
Origin———
Pure seed —% Germination—%
Other crop—% Hard seed——%
Weed Seed—% Total———%
Inert ———% Date of Test—%
Noxious Weed Statement ———

Date must be within one year of sale.

The number of seeds of each secondary noxious weed, per ounce or pound, must be given if the seed contains more than: 6 noxious weed seeds per ounce, in bluegrass or seeds of similar size; more than 18 per pound in sudan grass; or more than 5 per pound in cereals or other large seeds. Secondary noxious weed seeds are: Dodder, White horsenettle, Johnson grass, Wild oats, Texas blueweed.

Seed containing seeds of any primary noxious weed must not be offered for sale. Primary noxious weeds are the following: Bindweed, camelthorn, Nutgrass, Poverty weed, Russian knapweed, Whitetop and Halogeton.

If the seed has been treated with a POISON, the label or an attached tag must give a CONSPICUOUS WARNING.

MIXTURES: Each component present in excess of 5% must be given in order of predominance with the germination percentage for each kind. The word MIXTURE or the word MIXED must be included on the label.

The words CERTIFIED, REGISTERED, or FOUNDATION may be used only when the seed is approved by a recognized certifying agency.

A label on seed is not to be interpreted as a guarantee of good seed but if it is an honest and accurate label, it provides information by which seed quality may be determined. Read the label for your own protection. No seed should be purchased unless it is labeled.

Although the State Seed Inspection Office cooperates with the Agricultural Experiment Station and the Extension Service of the New Mexico College of Agriculture and Mechanic Arts, the New Mexico Crop Improvement Association, federal and other agencies of law enforcement pertaining to seed problems, it attempts no educational or research program. Inquiries relative to varieties, production, or processing are referred to the proper agency or office for attention and recommendations.

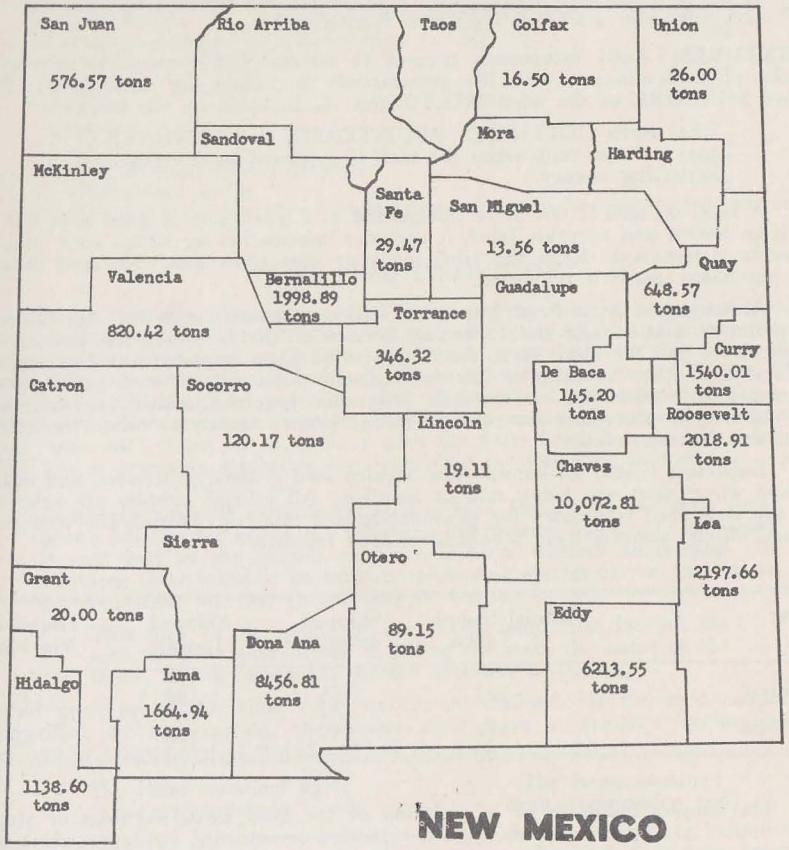
Inspectors visited all known New Mexico seed dealers, processors, and other places where seed was being sold or handled. All official samples are referred to the state seed laboratory for examination and analysis. During the past two years, official samples have been collected as follows:

Year	Official Samples Taken	Shipped Interstate	Shipped In-state	Found in Violation
1956-57	727	535	192	141
1957-58	517	359	158	69

On samples found to be in violation of the Seed Law, warnings or stop-sale notices are issued until the seed is relabeled or returned for reprocessing or disposal other than for seed purposes.

The federal farm programs of acreage reserve, soil bank, and the extended drought have created a demand for range grass seed. Special emphasis of inspection has been placed on these to prevent the introduction of noxious weeds to the New Mexico ranges. A shipment of crested wheatgrass which was made to the northwestern part of the state to reseed a pipeline right-of-way was found to contain the noxious weed seed halogeton. A portion of the seed was planted before the analysis was completed by the state seed laboratory; however, the remainder was withdrawn and held for proper disposal. The area planted is kept under close observation to eliminate the poisonous weeds as they emerge. So far as is known, this is the only evidence of halogeton in the state.

Fertilizer Consumption by Counties in New Mexico
January 1, 1957 to December 31, 1957



NOTE—the figures given for each county are according to Notice of Shipments made by manufacturers. This amounted to a total of 38, 173.22 tons.

STATE SEED LABORATORY

State Seed Analyst, Elizabeth McSwain

The New Mexico Seed Law provides for a state seed laboratory in order that tests may be made not only to check the truth of the claims for seed actually on the market, but also to assist the growers and dealers in learning the quality of planting seed before they make any claims for it.

The samples handled can therefore be classified as (1) inspection samples, which are collected by the seed inspection office and what the laboratory tests

for that office, and (2) service samples, which are submitted by farmers, processors, and dealers. The service samples include samples of seed tested for members of the New Mexico Crop Improvement Association to determine if the seed harvested from fields which have met the field requirements for certification can pass the test of laboratory standards.

Since a complete "test" consists of purity analysis, noxious weed seed examination, germination test, and in many cases, additional examination for determination of kind and variety, the number of tests made exceeds the number of samples. Testing of complex pasture and lawn grass seed mixtures adds to the number of tests since the components must be separated and each germinated according to its own particular requirements. Service samples (allowing three free samples for farmers on seed which is not for sale) were charged for at the rate of $1 for purity analysis, including noxious weed seed count, and $1 for germination tests of all except seeds of chaffey grasses. Samples of chaffey grass seed were charged for at a rate of $2 for purity and $1.50 for germination. Charges for mixtures were based on the principal component plus one-fourth the charge for each additional component. To encourage dealers in the practice of including germination tests as a part of their annual inventory of carry-over seeds, inventory samples have been given a special rate of one-fourth the usual charge for germination. To offset the reduced rate, the samples were tested at times convenient to the laboratory and the samples were not kept on file for reference for one year, as are all other samples.

In spite of better methods of weed control and the development of highly specialized seed cleaning equipment, weed seeds continue to lower the quality of certain New Mexico crop seeds. During the past two years, seeds of several of the weeds classified as prohibited under the New Mexico Seed Law were found in samples submitted to the laboratory. **Field bindweed** occurred in five service samples and one inspection sample of seeds of cereals; **halogeton** was found (for the first time in the history of the laboratory) in one service sample and two inspection samples of crested wheatgrass seed (all produced outside of New Mexico); **Russian knapweed** was found in one service sample of alfalfa seed.

The harvesting of native stands of blue grama seed in the fall of 1957 gave the seed laboratory an opportunity to observe the contamination of native grasses with weed seeds. The percentage of weed seed by weight averaged 3.18% (compared with an average of .50% for Kentucky bluegrass, as an example of cultivated grass) with a high of 43%. Russian thistle, fireweed, buffalo bur, and narrow-leafed poverty weed were the worst offenders. Along with the common Russian thistle were found seeds of **Salsola collina.** Insect damage was also noted. Larvae of a gall midge were detrimental to seed set in certain areas. It is the purpose of the seed laboratory to make every seed test contribute in some way to New Mexico agriculture, whether it helps in immediate marketing or simply makes the sender more quality conscious. No test, however, can be useful if the sample is not representative of the material it purports to represent; if not representative, it may be misleading and therefore dangerous. Individuals who submit samples are urged to use as careful methods as those required for official samples: portions from never less than seven scattered locations if seed is in bulk; from every bag in small lots of bagged seed, and never from fewer than one-fifth of the total number of bags. When samples are drawn before the seed is processed — or even before it is harvested — these samples may have considerable value in determining how to handle the seed, but the laboratory has tried to impress on growers that these preliminary samples are not necessarily representative of the "finished product" — the lot of seed which will later be planted or sold.

Table I shows the principal kinds of seeds tested during the two years from July, 1956, through June, 1958. Average germination percentages for each of the years are also shown. The laboratory averages often reflect unfavorable harvesting conditions, as was the case with cottonseed in the fall of 1957.

Chart I shows the range of germination percentages for cotton and sorghum.

Table 2 lists other less serious weed seeds encountered in certain crop seeds.

TABLE 1. Principal Kinds of Seed Tested, 1956- 1958

	SERVICE SAMPLES 1956-1957 / 1957-1958				INSPECTION SAMPLES 1956-1957 / 1957-1958			
	Number	Average Germ.	Number	Average Germ.	Number	Average Germ.	Number	Average Germ.
FIELD SEEDS								
Alfalfa	476	90% *	310	89% *	53	92% *	53	95% *
Barley	56	89%	57	92%	23	92%	24	94%
Corn	53	87%	41	74%	20	90%	1	85%
Cotton	642	87%	1090	72% **	74	89%	60	78%
Millet, foxtail	43	88%	31	89%	16	85%	7	89%
Millet, pearl	12	85%	51	67%	1	88%	—	—
Oats	28	92%	48	92%	14	91%	14	83%
Peanuts	54	81%	125	77%	11	75%	17	82%
Rye	12	69%	15	78%	17	78%	11	75%
Sorghum	526	81%	580	81%	190	82%	88	84%
Sudangrass	227	86%	249	82%	49	86%	15	81%
Wheat	45	84%	94	94%	21	91%	25	94%
Other field seeds	91	—	161	—	45	—	32	—
GRASS SEEDS								
Bermuda	8	78%	3	85%	19	89%	10	85%
Bluegrass, Ky.	2	80%	8	75%	19	78%	14	78%
Grama, blue	15	60%	156	75%	6	83%	8	84%
Mixtures	10	—	11	—	4	—	10	—
Wheatgrass, crested	10	65%	38	79%	2	82%	10	88%
Other grass seeds	63	—	49	—	47	—	42	—
VEGETABLE SEEDS	370	—	429	—	93	—	76	—
FLOWER AND TREE SEEDS	14	—	22	—	—	—	—	—
IDENTIFICATION	10	—	34	—	—	—	—	—
TOTALS	2767		3702		724		517	

NOTE:

* —This figure is the sum of germinated and hard seeds, always given separately on report.

**—On a number of these samples "firm" seeds were reported in addition to the germinated seeds. These seeds were apparently dormant and might be germinable later in the season, depending upon various conditions.

TABLE 2

OCCURRENCE OF VARIOUS WEED SEEDS IN CERTAIN CROP SEEDS

Kind of Crop Seed: / Class of Sample: / Year:	ALFALFA Service 56-57	57-58	Inspection 56-57	57-58	CEREALS Service 56-57	57-58	Inspection 56-57	57-58	MILLET Service 56-57	57-58	Inspection 56-57	57-58	SORGHUM & SUDANGRASS Service 56-57	57-58	Inspection 56-57	57-58
Number of Samples Containing:																
SECONDARY NOXIOUS WEED SEEDS:																
Dodder	101	49	3	2	—	—	—	—	2	—	—	—	—	—	—	—
Johnsongrass	97	44	7	1	4	7	2	2	3	5	3	—	45	55	10	6
Texas blueweed	30	5	—	—	1	—	—	—	1	1	—	—	—	1	—	—
White horsenettle	5	7	—	—	3	5	1	1	1	20	—	—	72	99	7	9
Wild oat	—	—	—	—	5	5	4	4	—	—	—	—	—	—	—	—
OTHER WEED SEEDS:																
Barnyardgrass	17	11	2	1	—	—	—	—	1	2	1	1	4	—	3	—
Buffalo bur	1	2	—	—	—	—	—	—	3	1	2	—	12	11	1	—
Fireweed	7	10	3	1	—	—	—	—	—	—	—	—	—	—	1	—
Foxtail	47	23	6	4	1	—	—	—	1	—	1	—	—	1	—	—
Gaura	—	—	2	—	4	8	—	2	—	—	—	—	—	—	—	—
Goathead	—	—	—	—	—	—	—	—	—	—	—	—	4	5	1	—
Goosefoot	28	15	—	—	—	2	1	—	—	—	—	—	1	—	1	—
Knotweed	12	10	4	11	—	—	—	—	—	—	—	—	—	—	—	—
Pigweed	18	35	7	4	1	2	—	—	2	8	6	4	5	22	1	1
Russian thistle	24	39	2	2	5	4	1	—	6	16	1	—	42	58	—	1
Sandbur	15	13	1	1	—	1	—	—	2	—	—	—	—	2	—	—
Sunflower	—	3	—	—	1	5	1	—	3	—	—	—	10	4	3	—
Witchgrass	23	11	4	—	—	—	—	—	2	—	—	—	—	—	—	—

CHART 1

GERMINATION RANGE — COTTON AND SORGHUM

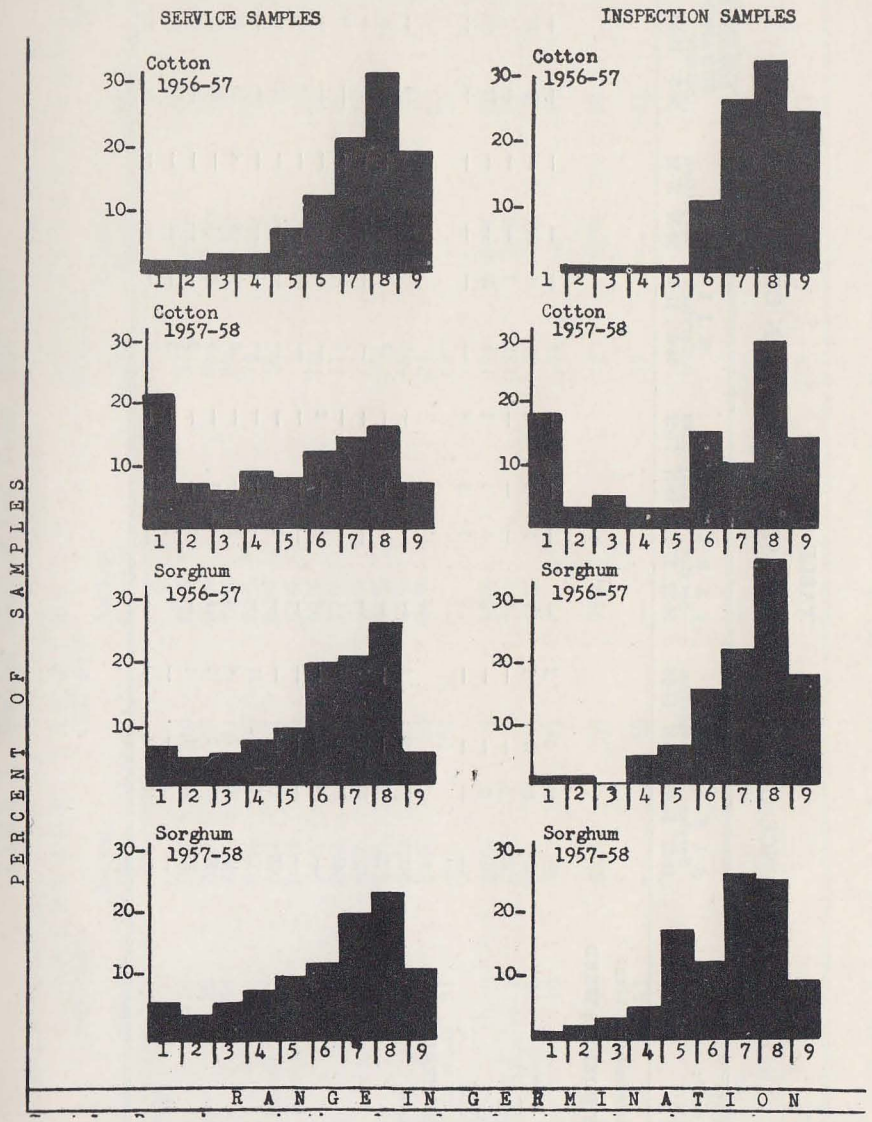


Chart 1. Range in germination of samples of cotton and sorghum seed tested 1956-58. The numerals at the bottom of each graph represent germination percentage ranges as follows: 1 for below 60; 2 for 60-64; 3 for 65-69; 4 for 70-74; 5 for 75-79; 6 for 80-84; 7 for 85-89; 8 for 90-94; and 9 for 95-100.

CHEMICAL LABORATORY

State Chemist, L. T. Elliott

The consolidation of the state chemist laboratory, formerly operated under the direction of the head of the chemistry department of New Mexico Agriculture and Mechanic College and the feed and fertilizer laboratory, served as a foundation for the present state chemist laboratory, now operated as a separate division under the Director of the New Mexico State Department of Agriculture. This arrangement has resulted in the analyses of more samples for the various divisions of the Department giving them a more complete coverage in their respective fields, thereby enabling them to give better srvice to the people of New Mexico.

There has been a considerable increase in the number of samples sent in by private individuals and commercial concerns for analysis. A charge must be made on samples sent in by private individuals and commercial concerns, as our budget does not carry an appropriation for such work. These charges are determined by the amount of time and material needed for this analysis.

During the fiscal years 1956-57 and 1957-58, the state chemist laboratory analyzed the following number of samples:

Type of Samples	1956-57 Samples	1956-57 Det.	1957-58 Samples	1957-58 Det.
Official Samples (feed, fertilizer and economic poison)	855	3,168	1,543	4,982
Service Samples (private individuals and commercial concerns, including silage samples)	191	612	210	518
Totals	1,046	3,780	1,753	5,500

An infrared recording spectrophotometer was purchased and installed in the laboratory during the 1957-58 fiscal year. This will speed up the analysis of many different materials, especially economic poisons and some fertilizers. This will enable us to give a greater service to the people of New Mexico by giving the Department a quick report on the samples collected by its inspectors so that action may be taken at once on materials that do not meet the guarantee or minimum requirements.

REALIZED GROSS INCOME AND NET INCOME OF NEW MEXICO FARM OPERATORS FROM FARMING, 1949-57.

	1949	1950	1951	1952	1953	1954	1955	1956	1957
	$1 M	$1 M	$1 M	$1 M	$1 M	$1 M	$1 M	$1 M	$1 M
REALIZED GROSS FARM INCOME:									
CASH RECEIPTS FROM FARM MARKETINGS	198.9	213.1	244.2	217.1	192.8	187.9	162.5	201.5	197.6
Government Payments	1.1	2.4	2.9	1.7	1.2	2.8	2.1	5.7	15.0
Value of home consumption	10.5	9.7	11.1	10.8	9.0	7.7	7.4	7.1	7.3
Gross rental value of farm dwellings	7.6	8.2	9.0	10.3	10.7	10.3	10.1	8.6	7.5
Sub-Total, Gross Income	218.1	233.4	267.1	239.9	213.7	208.7	182.2	222.8	227.4
Farm production expenses	120.1	139.9	162.6	156.4	143.1	134.5	145.2	150.6	161.9
REALIZED NET FARM INCOME	97.9	93.6	104.5	83.6	70.6	74.1	37.1	72.3	65.5
Net change in farm inventories	+ .2	— 7.3	+ 19.2	+ 9.7	— 15.9	— 4.2	+ 16.0	— 36.4	— 4.0
TOTAL NET FARM INCOME	98.1	86.2	123.7	93.3	54.7	69.9	53.1	35.9	61.6

Statistics: Office of Agricultural Statistician, U.S.D.A., Las Cruces, New Mexico

NEW MEXICO CASH RECEIPTS FROM FARM & RANCH MARKETINGS, BY COMMODITIES 1956 — 1957

Commodity	1956 1,000 Dollars	1957 1,000 Dollars	Commodity	1956 1,000 Dollars	1957 1,000 Dollars
Livestock & Products	$		**Crops (Continued)**		
Cattle & calves	81,033	88,993	Fruits & Nuts:		
Dairy products	10,091	10,443	Apples	1,434	1,662
Sheep and Lambs	7,739	7,097	Pecans	865	1,188
Wool	3,619	6,741	Other [3]	480	532
Eggs	2,959	2,787	Other products [4]	853	851
Hogs	1,563	1,835			
Other [1]	1,961	2,159	Total, crops	92,514	77,578
Total Livestock, etc.	108,965	120,055	Total, all commodities	201,479	197,633
			Gov. payments	5,688	14,957
Crops			Net Total	207,167	212,590
Field Crops:					
Cotton lint	59,481	42,869			
Hay	6,477	6,866			
Cottonseed	7,577	5,110			
Sorghum grain	2,364	4,455			
Wheat	2,295	2,702			
Onions	1,368	1,710			
Broomcorn	2,273	1,550			
Peanuts	922	940			
Sweet potatoes	593	882			
Dry edible beans	864	768			
Potatoes	497	728			
Lettuce	547	770			
Carrots	483	508			
Alfalfa seed	580	359			
Other [2]	2,561	3,128			

[1]: Chickens, turkeys, other poultry, beeswax, honey, horses, mules, goats, rabbits and Mohair.

[2]: Rye, barley, corn, oats, soybeans, asparagus, cabbage, sweet corn, green peas, green peppers, sugar beets, tomatoes, other vegetables, cow peas, sweet clover seed, sudangrass seed, wheatgrass seed, castor beans, and others.

[3]: Grapes, peaches, pears, strawberries, cantaloupe and raspberries.

[4]: Forest, greenhouse and nursery.

Cash receipts by New Mexico ranchers and farmers for marketings in the calendar year 1957, including government payments, totaled $212,590,000, the largest since 1952. This compares with $207,167,000 in 1956 and $164,600,000 in 1955. Marketings of farms and ranch products actually produced, valued at $197,633,000 in 1957, were a little less than comparable rece.pts of $201,479,000 in 1956. However government payments of $14,957,000 in 1957 far exceeded the previous record of $5,688,000 in 1956, to bring the total farm and ranch receipts above 1956. The high government payments in 1957 resulted from very active participation in the Soil Bank Program.

Receipts for livestock and livestock products in 1957 of $120,055,000 were 10 per cent larger than receipts in 1956 of $108,965,000. But receipts from Crops of $77,578,000 were 16 per cent below the $92,514,000 which crops brought New Mexico farmers in 1956. Receipts from cotton and cottonseed of $47,979,000 represented 62 per cent of the total crop receipts in 1957. In the previous year, receipts for cotton and cottonseed totaled $67,058,000 or 72 per cent of the total crop receipts.

In this report, cash receipts represent quantities sold during the calendar year and should not be confused with the value of production in a given year.

Statistics from: Office of the Agricultural Statistician, U.S.D.A., Las Cruces, New Mexico.