STATE OF NEW JERSEY

DEPARTMENT OF AGRICULTURE

PHILLIP ALAMPI, *Secretary*

Forty-third Annual Report

OF THE

New Jersey State Department of Agriculture

July 1, 1957 — June 30, 1958

Trenton, N. J., June 30, 1958

NEW JERSEY

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Messrs. Combs and Van Nuys will retire from the Board on June 30, 1958. The new members will be Leslie M. Black of Stockton and Alvin W. String of Harrisonville.

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DEPARTMENT OF AGRICULTURE
PHILLIP ALAMPI, *Secretary*
TRENTON

June 30, 1958.

To His Excellency, the Governor, and Members of the Senate and General Assembly of the State of New Jersey:

I have the honor to transmit, on behalf of the State Board of Agriculture, the Forty-third Annual Report of the New Jersey Department of Agriculture, for the fiscal year ended June 30, 1958.

Respectfully yours,

Phillip Alampi

The State Board of Agriculture

The State Board of Agriculture is responsible for all policies of the State Department of Agriculture, and is the highest official agency representing New Jersey's agricultural industry.

The eight members of the Board are all active farmers, who serve without compensation. They meet at least once each month in Trenton with the Secretary of Agriculture and often with other officials of the Department. During the 1957-58 fiscal year, 14 meetings of the Board were held.

Terms of Board members are staggered and two new members are appointed each year. They are chosen by official delegates to the annual State Agricultural Convention for recommendation to the Governor for appointment. The law provides for 84 official delegates, who represent the county boards of agriculture, Pomona granges, and State breed and commodity organizations.

The proceedings of the 43rd State Agricultural Convention appear on page 144.

The Year in Review

The most severe drought experienced in New Jersey in many years occurred in the spring and summer of 1957. It followed closely the extended drought of 1955 and for the second time in three years farmers in the Garden State suffered serious crop losses due to a hot, dry growing season. Dairymen on the whole were the hardest hit. Most of them were able to get only one cutting of hay. They were obliged to feed a great deal of that during dry summer months when the pastures were barren instead of holding it for winter barn feeding. Yields of grain, hay and some vegetable crops were seriously reduced. Water supplies were severely curtailed.

The gross farm value of our agricultural products for the calendar year of 1957 amounted to $342,211,000, approximately 9.5 per cent below the 1956 total. A little more than one-third of the 1957 total was represented by eggs and poultry. This is a somewhat lower ratio than in the two or three years previous when nearly 43 cents of each dollar of farm income came from these products. Milk regained its place as the State's second most important agricultural commodity. Vegetables were third in value of production. Among the rapidly growing industries in New Jersey agriculture are the nursery and greenhouse businesses. Combined they have risen to fourth place in the total value of their products.

The gross farm value of agricultural products in 1957, with percentage changes from 1956 indicated, is tabulated below:

Commodity	Gross Farm Value 1957 (Preliminary)	Gross Farm Value 1956 (Revised)	Per Cent Change 1957 Compared With 1956
Eggs	$93,699,000	$101,538,000	— 6.7
Milk	65,000,000	64,218,000	+ 1.2
Vegetables	53,349,000	64,675,000	—17.5
Greenhouse and nursery	30,500,000	30,366,000	+ 0.4
Poultry	24,804,000	28,946,000	—14.3
Meat animals and wool	19,502,000	17,040,000	+14.4
Tree fruits	13,994,000	13,298,000	+ 4.8
Hay	13,642,000	16,974,000	—19.6
Grains	12,947,000	24,879,000	—48.0
Berries	7,024,000	6,267,000	+12.1
White potatoes	6,185,000	8,425,000	—26.6
Miscellaneous	1,565,000	1,518,000	+ 3.1
Totals	$342,211,000	$378,144,000	

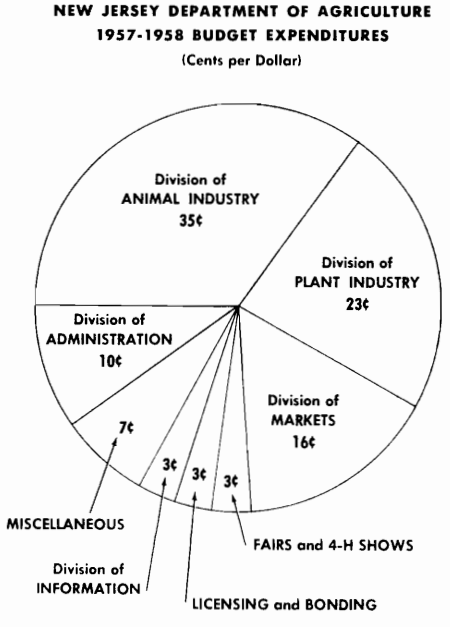
Per cent decrease for all farm products in 1957 ..... 9.5

THE WORK OF THE DEPARTMENT

Activities of the Department are classified under two general headings: regulatory and promotional. The regulatory work is comprised of the enforcement of laws enacted by the Legislature, many of which provide for control and eradication of livestock diseases, and diseases and insect pests of plant life. Others have to do with the licensing and bonding of dealers in milk, produce, eggs and poultry, and cattle, and the sale of eggs to consumers.

Promotional activities include specialized marketing projects dealing with market news, informational services, and publicizing New Jersey farm products. This year promotion of eggs, turkeys and white potatoes, which are being marketed under the New Jersey State Seal of Quality, was emphasized. These programs are conducted in cooperation with organizations of producers, as well as with individual growers, and are designed to benefit both farmers and consumers. Such lines of endeavor have contributed to the over-all agricultural economy.

The proportion of the Department's budget allotted to each of its divisions is shown in the graph below.



POULTRY AND POTATO COUNCILS

The New Jersey Poultry Products Promotion Council, organized in June 1957, had an auspicious first year. With funds provided by a mandatory tax of one cent per hundred pounds of feed paid by poultry producers, considerable progress has been made in developing a long-range merchandising program. Fifty-five producer-retailers of turkeys cooperated in the first State Seal of Quality promotion and approximately 119,000 State Seal turkeys were marketed during the 1957 Thanksgiving and Christmas holidays. The Seal is now widely used on New Jersey eggs meeting high quality standards and it is hoped that a program for poultry meat can be begun soon. Consumer acceptance and distributor cooperation in the metropolitan areas, where the effort has been largely concentrated, have been good.

Similarly, plans are underway, through the White Potato Industry Council, to market a portion of the 1958 New Jersey white potato crop in consumer size packages bearing the State Seal of Quality as an identification mark. The new packages will be introduced by suitable programs of advertising and promotion.

In all cases where the State Seal is used, the quality must conform to strict standards approved by the State Board of Agriculture and the products must be inspected under Department of Agriculture supervision.

LIVESTOCK DISEASE CONTROL

A high spot in the activities of the Department during the fiscal year was the attainment of a goal long sought by livestock disease eradication authorities. On June 3, 1958, New Jersey became the 13th state to be classified as a Modified Certified Brucellosis-Free Area. This achievement was made possible by the cooperation of dairy herd owners, as well as by the dedicated zeal of disease eradication specialists and the accelerated program of the United States Department of Agriculture, which is cooperating with all states towards this goal. It is of interest also to note that all New Jersey dairymen qualified for the Department of Health regulation which stated that on and after April 1, 1958, all milk sold or used in New Jersey must be produced by brucellosis-free animals.

A new State law designed to control contagious and infectious diseases of swine became effective December 1, 1957. The Department was made responsible for its enforcement. The law made mandatory the cooking of all garbage fed to swine, and required the licensing of all garbage-feeding hog farms. In addition, the State Board of Agriculture adopted regulations designed to improve sanitation conditions. A farm is licensed only after it meets the provisions of both cooking and sanitation regulations. It is felt that this measure will be highly beneficial to this industry and better control any disease outbreaks on garbage-feeding hog farms.

NEWS SERVICES

The establishment of a daily country shipping point market news service provided an additional means of acquainting buyers and sellers with information to guide them in intelligent merchandising. The trial run of this news service holds promise of further expansion and greater benefit to our farmers and buyers.

The Department expanded its information services in the field of radio and television to provide listeners with an informative presentation on agricultural news as well as market reports. Quite a number of stations in New Jersey have accepted this as a public service for the people in their listening area.

PLANT PEST CONTROL

It was evident from an intensive survey and scouting that the large scale spray program for the control of gypsy moth in the spring of 1957 was extremely effective, making unnecessary any spray program for the spring of 1958. Certain plant materials, however, were placed under quarantine because they represented a hazard in the spread of gypsy moth. This applied particularly to the Christmas tree business.

Another pest which represented a potential danger to New Jersey agriculture is the white-fringed beetle which first made its appearance in the State several years ago. A rapid reduction of the beetle population has resulted over the several years because of intensive treatments in the area. The control authorities believe that this pest has been practically eradicated in this short time, again due to intensive efforts and a high degree of cooperation among all people concerned.

JUNIOR BREEDERS' FUND

In 1921, a trust fund first referred to as the Frelinghuysen Fund and later known as the New Jersey Junior Breeders' Fund, Inc., was established by Senator Joseph S. Frelinghuysen and Julius Forstmann. The fund amounted to $30,000 and was established for the purpose of lending money to boys and girls to purchase purebred livestock and thus get a good start in an agricultural project. It is administered by the State Board of Agriculture. In the 37 years that the fund has been in existence, loans of more than $350,000 have been made. More than 4,200 loans are recorded, many of which are now being made to the second generation of original borrowers. This fund has been a great incentive to young people and has taught them very practical principles of business, including the meaning of borrowing, the responsibility of paying debts, the reason for interest on notes, and similar business experiences. Over the years, the losses have been infinitesimally small. Great credit for this goes to the integrity of the boys and girls and their good business sense.

RURAL ADVISORY COMMITTEE

The Rural Advisory Committee, established some four or five years ago for the purpose of studying problems affecting rural life in New Jersey, principally such matters as taxes, schools, water, planning and zoning, and highways, experienced its greatest period of activity during the last year. Under the leadership of an Executive Director who took over at the beginning of the year, a definite program of study was initiated and is now in progress. Several areas of the State have been selected for pilot studies from which it is expected that larger programs can be developed. As a result of such information, it is anticipated that the committee can make recommendations for remedial legislation to effect better conditions and reduce the severity of problems of special impact on rural living.

These are a few of the principal activities and accomplishments of the Department during the fiscal year. Details on these and other projects are to be found in the reports of the various divisions which follow.

Report of the Division of Markets

WARREN W. OLEY, *Director*

The severe drought which occurred during the summer of 1957 was very hard on most farm crops. Rainfall in New Jersey from May 1 through October 31 was only 41 per cent of normal. During those six months only 9.26 inches of rain fell in Trenton.

Poor pasture conditions, which prevailed throughout the summer, created great hardships for New Jersey dairymen. Fortunately, sufficient rain fell in March and April to bring on a fairly good first cutting of hay. Much of this had to be fed during the summer and stores for the following winter were badly depleted. The corn crop for silage was very poor and corn for grain was also far below normal.

More New Jersey farm land was irrigated than ever before, although in some cases farmers had difficulty in obtaining sufficient water supplies. Where water was available, however, vegetable and potato crops made satisfactory progress. Fruit crops varied. Small fruits, especially strawberries, did well. Peaches suffered from lack of rainfall. Fall rains helped size up the apple crop to a certain extent and apple quality and color were excellent.

More adequate rainfall, beginning in November 1957, helped stands of fall-planted grains. Weather in the first half of the 1958 calendar year was wet and cold with rainfall 50 per cent above normal. These conditions resulted in a late harvest season and much lower sales of most spring crops.

It is interesting to see how seasons tend to average out. The 1957 summer drought was exceptionally severe. This was followed by heavy precipitation in the 1957-1958 winter and 1958 spring, and total rainfall for the fiscal year was almost two inches above normal.

Quality of most farm crops, except for those seriously affected by the drought, was excellent. The most important of our cannery crops, tomatoes, yielded an average of 8.2 tons per acre, which is larger than the average of the last few years. Quality was the highest in the last 20 years with the exception of 1951, which was another dry season.

It is interesting to note that volume of vegetables on the auction markets, which handle enough produce to be classed as a guide for general vegetable conditions, was only 1.1 per cent below the satisfactory summer of 1956 while prices per package for all sales were 0.5 per cent higher.

While problems remain to be solved in the dairy industry and consumer prices for milk are low in comparison with other foods, New Jersey's milk industry has been greatly stabilized by Federal Milk Marketing Order 27 which went into effect August 1, 1957.

The poultry farmers have had a better year than in 1956-1957, and prices for eggs have been somewhat improved.

During the year an old organization which was very effective in cementing favorable working relations between this Division and the College of Agriculture and the Experiment Station was reorganized. It is called the New Jersey State Marketing Council and is made up of the heads of the Department and the College and Experiment Station, and the staffs of the Division of Markets of the Department of Agriculture and the Department of Agricultural Economics of the College. The director of this Division is secretary of the reorganized Council. Two meetings have been held during the year. The objectives are to understand more thoroughly the programs of work and the accomplishments of the two agencies so that there can be closer cooperation and a greater degree of understanding in agricultural matters.

Relations with other departments have in general been cordial. This relationship is especially fine with the Division of Weights and Measures of the Department of Law and Public Safety and with the Department of Conservation and Economic Development.

The following pages give in some detail the objectives and accomplishments of all programs of work of the Division. A reference will be made to the accomplishments of other marketing organizations which reflect the endeavors of personnel of this Division.

BUREAU OF FRUIT AND VEGETABLE SERVICE

An important phase of this Bureau's work is the supervision of the inspection and certification of fresh fruits and vegetables for domestic and foreign shipment and the grading of raw products for processing. This service is conducted in accordance with practices approved by the Federal and State Departments of Agriculture. All inspection and grading work is performed on the basis of established standards. The service is supervised and conducted under a cooperative agreement between the Federal and State Departments of Agriculture and the New Jersey Agricultural Society.

The amount of inspection work varies from year to year and is dependent upon several factors. Some of these factors are quality, demand, market prices at home and abroad, crop production, and marketing regulations on certain commodities. Increase of apple and white potato inspections this fiscal year was the main reason for the 55 per cent over-all increase in the number of inspections made on products for fresh market consumption, as compared with the last fiscal year.

The volume of products graded for processing has varied from year to year only in proportion to production and contracted acreage. Processors of canned and frozen foods who buy raw supplies in New Jersey have continued for a number of years to make their purchases on the basis of established standards or contract specifications. Inasmuch as prices received by

growers are directly proportionate to quality delivered to processors, they welcome the assistance given by inspectors at grading platforms as to ways and means by which they can improve their grades. The inspectors point out mistakes and make observations and suggestions as to better harvesting and handling practices and stress the importance of close field supervision during the harvesting operation.

PURPOSE OF INSPECTION

The first step required for orderly marketing of fruits and vegetables is packing in accordance with the requirements of official standards. These standards furnish the yardstick for measuring variations in quality and their use has made possible a basis for satisfactory dealings in domestic and foreign markets.

Inspection and certification of products on the basis of established standards are indispensable in the settlement of disputes between buyers and sellers. They make the settlement of claims against transportation companies easier when it is necessary to establish the value of a product before a fair adjustment can be made. Establishment of grade is necessary to permit an intelligent comparison of prices in the market place and provides a basis for market news prices.

Fruits and vegetables may be more effectively distributed when they are classified and separated into various grades. This provides the opportunity of finding the market that will give the greatest returns for the grade of the product offered.

Inspection and certification in accordance with standards provide a means of assuring purchasers of obtaining products that are uniformly graded and packed and enable the seller to advertise and promote his products on a sound basis. Financing is made easier when establishment of grade is of first importance in determining the value of products upon which loans may be made.

Grading provides a stimulus to better methods of production and marketing because it helps growers and shippers to correct their mistakes. It assists them in obtaining better returns by requiring them to adopt more careful and effective methods of growing, harvesting, packing and marketing their produce, and assists in the elimination of waste in handling.

The inspection service is permissive and provides unbiased certification at reasonable cost. It is available to applicants throughout the State on carlots, trucklots, warehouse and storage lots. Bureau personnel work with the local fruit and vegetable auction markets and city farmers' markets, and cooperate in the program for certifying roadside farm markets.

This fiscal year, 78 Federal-State fruit and vegetable inspectors, licensed by the United States Department of Agriculture, were required to handle the inspection and grading of commodities for fresh market and processing in New Jersey.

CERTIFYING FRESH PRODUCE

Apples

Apple inspections this fiscal year were about 75 per cent greater than last year. There were fears early in the growing season that considerable damage to apples would result from the extended drought. However, rains beginning in late August proved to be ample enough to produce a good crop of clean fruit with fine quality, flavor and color. Growers maintained their spray programs for insect and disease control and this, coupled with ideal picking weather in October, resulted in a harvest of 3,200,000 bushels in New Jersey, 20 per cent more than the last 10-year average.

Inspection and certification of apples for export shipment are mandatory under the U. S. Export Apple and Pear Act. There was a considerable increase in apple exports this fiscal year over the past several and, hence, the volume of apple inspections increased.

Apples kept well in storages until January. About that time it was evident that the larger sizes were showing advanced maturity. It became increasingly difficult as the late storage season approached to find varieties and sizes that were not too advanced in maturity to meet the U. S. Export Standards for Condition. This condition was general throughout the northeastern areas of production. Even some lots shipped from the northwestern producing areas for trans-Atlantic shipment were found out of condition upon arrival in eastern ports of export.

Slightly more than 80 per cent of all apples inspected this fiscal year were certified for export. Three hundred and thirty-six lots, comprising 204,960 bushels, were inspected and certified. This compares with 191 lots, consisting of 108,631 bushels, last year.

Green Corn

The Cooperative Growers' Association, Inc., of Beverly again requested inspection of green corn this season. The long drought greatly curtailed the crop and the deal was of only three weeks duration. Most growers were equipped with facilities for irrigating but water supplies were insufficient. As a result, only a small percentage of the normally large production in Burlington County was harvested.

Only 17 lots, consisting of 7,240 crates of one-bushel capacity, were certified this year. In July 1956, 29 lots (10,464 crates) were certified.

White Potatoes

About 80 per cent of the New Jersey white potato acreage is under irrigation. In the fields that were not irrigated, the hot, dry weather caused drying down of vines and early maturity. This prevented proper sizing and reduced yields. In irrigated fields potatoes were of normal size and excellent quality.

The average yield per acre this year was 190 hundredweight as compared with last year's 210 hundredweight. Acreage this year was estimated at about 18,000; last year 17,000.

Growers and packers did an excellent job of grading and sizing potatoes this year. All of the larger shippers requested that Federal-State inspectors be assigned to them on a full-time basis. This required the placing of 19 inspectors in the Central Jersey area with headquarters at Hightstown.

During the season 3,007 lots of white potatoes (862,511 hundredweight equivalents) were inspected and certified, as compared with 1,858 lots (646,085 hundredweight equivalents) during the 1956 crop season.

CANNERY CROPS

Slightly more than half of the vegetable acreage in the State is planted to crops for processing. The processing industry is the most important outlet for Jersey-grown vegetables, exclusive of white potatoes. A considerable volume of small-size white potatoes are processed. These would otherwise be a total loss because they are too small for fresh market sale.

The two most important processing crops for which the grading service is requested are tomatoes and asparagus. Other crops are carrots, snap beans, sweet potatoes, red sweet peppers and green tomatoes. Grading is done for the purpose of establishing the value of each load delivered to the processor. Contracts specify prices to be paid growers according to quality, based on standards or specifications. The inspectors determine the quality by analyzing samples from each load according to specifications and applying the percentages to the entire load. The value of each load is directly proportionate to the quality delivered as established by inspection. This system encourages growers to deliver quality which will net them the greatest returns and at the same time provides the processor an opportunity to maintain a high standard finished product at minimum cost.

Asparagus

The largest single activity of this Bureau is the grading of green asparagus for processing. There were 24 asparagus receiving stations located strategically throughout the growing areas this spring, making it convenient for growers to deliver their daily cuttings with a minimum of time. Each station must be manned by one or more of our inspectors; 35 inspectors and two supervisors were required to handle the work this season.

Ranking second to California in the production of asparagus, New Jersey grew 33,500 acres this year. Normally about 65 per cent of the crop goes to processors and 35 per cent to fresh market. This year an estimated 2,500 acres were dropped by the processing industry, due mainly to large inventories left over from the previous season's pack.

Processors had no difficulty in contracting their desired acreage at the same price they paid in 1957. This was 10 cents per pound for N. J. No. 1 spears, 7 inches in length, 4½ inches minimum green color, ⅜ inch minimum diameter measured at the butt of the spear.

Seven different contracts were used by processors in getting their supplies this season. Last year there were only three. Most asparagus was contracted on the basis of the specifications in the paragraph above. Variations in contract specifications are necessary because the needs of canners differ from those of freezers. In order to pack an all-green spear, freezers must insist on contracting for longer minimum green color than is necessary for canners.

One contract made no reference to grade specifications and was simply an agreement between the processor and growers as to the maximum length and minimum diameter of spears. All other contracts were based on the New Jersey Standards for Green Asparagus for Processing. All specified a minimum diameter of ⅜ inch, measured 7 inches from the tip or at the butt of the spear. Four contracts specified maximum spear length of 7 inches. The length of the minimum amount of green color on the stalk varied from 4½ inches to 5¼ inches with other variations in between. Two contracts specified 9 and 9¼ inch spear lengths with minimum lengths of green color of 5½ and 6½ inches respectively.

Contract prices varied according to the specifications. However, processors of frozen asparagus fixed their contract prices at a level that would insure growers contracting with them per-acre returns approximating the returns received by growers contracting with canners.

The inspection service does not enter into the arrangement of terms and agreements between processors and growers. However, when the grading service is requested, inspectors assume the responsibility of enforcing the terms of the contract in an unbiased manner. This season nine New Jersey and five out-of-state processors packed Jersey grown asparagus graded by Federal-State inspectors.

Throughout the harvesting season this year, asparagus quality was above normal. Moisture was ample, being constantly replenished by timely rains. This, coupled with prolonged periods of cool temperatures, prevented too rapid growth and kept the tips tight and spears crisp and firm. Insect damage, which normally takes a heavy toll, was practically nonexistent during the entire month of May and early part of June.

Total volume graded this year was 48,675,114 pounds, as compared with last year's total of 50,692,611 pounds. The decrease may be directly attributed to the reduction in acreage contracted.

Grade averages this season under the regular contract based on New Jersey Standards were 75 per cent N. J. No. 1; 5 per cent culls and 20 per cent butts. Last season the averages were 71 per cent N. J. No. 1; 6 per cent culls and 23 per cent butts.

Grade averages on the canner-grower contract specifications this year were 84 per cent pay weight and 16 per cent butts. Last season's averages were 91 per cent pay weight, 3 per cent contract culls and 6 per cent butts.

Tomatoes

Tomatoes are the most important crop for processing in New Jersey, both from the standpoint of volume processed and dollar value. New Jersey is one of the top ranking states in tomatoes for processing, being outranked in most years only by California and Indiana and in some years also by Ohio.

With only a very small percentage of the acreage irrigated, it was feared that the drought would reduce tomato production to a new low. As the season progressed and loads began arriving at the processing plants, it was soon evident that tomatoes were truly a dry weather crop. Yields were reduced, but quality was above average.

Throughout the month of August 1957 most growers did an excellent job of picking, and delivered loads of red-ripe, high quality tomatoes. With no rain to cause cracking and mold development, practically no trimming was required in processing plants. Tomatoes contained a minimum of liquids, giving processors a product containing high solids and thereby reducing cooking time to a minimum. Plant recovery was the highest percentage ever experienced by New Jersey processors and they were able to pack a high quality product at minimum cost.

Rains late in the month following the long drought caused considerable cracking in tomatoes delivered in early September and quality began to drop.

When the season closed near the end of September the records showed that an average of 8.2 tons per acre had been harvested and delivered to processors. The 32 Federal-State inspectors assigned to the work had graded 144,196 tons with average grades of 69 per cent U. S. No. 1, 29 per cent U. S. No. 2 and 2 per cent culls. The average percentage of U. S. No. 1 tomatoes was only 1 per cent lower than the highest season's average ever recorded. That was in 1951, another dry year.

In 1956 the average yield was 12.2 tons per acre; the volume graded, 157,464 tons; and the average grades, 64 per cent U. S. No. 1, 33 per cent U. S. No. 2 and 3 per cent culls.

SUMMARY 1957 CANNERY TOMATO SEASON AND COMPARISON WITH PREVIOUS 10 YEARS

Seasons	Total Tons	U. S. No. 1 (Per Cent)	U. S. No. 2 (Per Cent)	Culls (Per Cent)
1957	144,196	69	29	2
1956	157,464	64	33	3
1955	36,710	47	49	4
1954	130,462	62	36	2
1953	192,623	66	32	2
1952	127,418	57	39	4
1951	215,875	70	28	2
1950	195,697	69	29	2
1949	147,076	63	34	3
1948	132,561	60	36	4
1947	204,395	62	35	3

Other Cannery Crops

While asparagus and tomatoes are the two most important crops grown for processing in New Jersey, there are several other processing crops for which our grading service is requested. Each is graded on the basis of the U. S. Standards for Processing for each commodity.

The following list shows the products and volume of each graded and a comparison with last year's products and volume:

1957-1958		1956-1957	
Product	Pounds	Product	Pounds
Carrots	11,547,552	Carrots	20,110,000
Snap beans	4,027,800	Snap beans	2,828,000
Green tomatoes	2,810,000	Green tomatoes	314,000
Red sweet peppers	2,716,000	Red sweet peppers	2,528,000
		Sweet potatoes	108,000

SHIPPING POINT AND MISCELLANEOUS INSPECTIONS

In previous years, a considerable volume of asparagus shipped to Canada for processing purposes has been inspected. Under the Canadian Import Requirements, inspection and certification are compulsory. The recent increase in Canadian import tariff made the cost prohibitive this year and one of the Canadian processors moved his processing operation to Swedesboro where he rented an old processing plant, installed machinery and packed his normal pack at the source of supply. While no inspections of processing asparagus were made this year, six trucklots of bunched and crated asparagus were inspected before export to Canada to be sold in fresh markets. Total volume was 2,598 crates. Canadian shipments inspected the previous year consisted of 22 lots, comprising 427,686 pounds, for processing and eight lots, comprising 1,864 crates, for fresh market.

In addition to the products covered in detail in this report, other products, such as beets, cabbage, cucumbers, lettuce, onions, sweet peppers, sweet potatoes and tomatoes were inspected and certified. A considerable volume of these products was exported to Canada. Total inspections of the above products covered 50 lots, containing 23,028 packages.

Federal-State inspectors were also stationed at several of the shipping point fruit and vegetable auction markets for inspection and arbitration purposes.

The following table shows the 10-year record of shipping point inspections by products:

TEN-YEAR RECORD OF SHIPPING POINT INSPECTIONS BY PRODUCTS

	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55	1955-56	1956-57	1957-58
Apples	100	789	234	796	157	228	369	150	191	336
Asparagus	50	93	46	10	45	36	24	14	32	6
Beans	..	..	1	..	1	2	..	..	..	..
Beets	..	..	1	..	..	1	..	..	..	1
Cabbage	3	8	5	4	7	2	1	6	6	8
Carrots	5	6	..	..	1	1	1	..	10	..
Cauliflower	5	2	..	..	..	..	..	..	..	..
Celery	5	2	..	..	..	..	..	..	..	..
Collards	..	..	..	..	..	..	..	..	..	2
Corn	91	37	67	92	113	135	91	33	35	17
Cucumbers	3	8	..	1	4	49	1	5	..	7
Lemons	..	1	..	..	..	..	..	..	..	..
Lettuce	4	1	2	..	5	1	5	1	36	14
Onions	36	28	15	42	14	27	28	15	9	6
Onions, green	10	..	..	..	2	1	..	..	..	..
Parsley	..	1	..	..	..	..	..	..	..	..
Peaches	..	1	1	5	3	3	8	1	2	..
Peppers	36	48	..	5	5	2	..	..	..	3
Potatoes	12,586	10,454	18,429	9,989	1,748	782	632	493	1,858	3,007
Radishes	7	3	..	..	..	..	..	..	..	..
Rutabagas	..	..	..	..	3	..	..	1	..	..
Spinach	..	2	..	..	1	..	..	..	..	..
Squash	..	1	6	..	..	..	..	..	..	..
Sweet potatoes	33	5	26	12	7	24	9	33	2	1
Tomatoes	..	1	1	..	..	4	..	..	12	10
Turnips	..	1	..	..	1	..	..	..	..	..
Mixed fruits and vegetables	684	550	..	..	..	..	..	..	..	..
Mixed vegetables	155	128	3	..	2	1	3	2	2	..
Totals	13,813	12,170	18,837	10,956	2,119	1,299	1,172	754	2,195	3,418

TERMINAL INSPECTIONS

While the major portion of the regulatory work of this Bureau is the inspection and certification of products grown and packed in New Jersey, it further includes inspections in New Jersey terminal markets on products received in interstate commerce. Inspections are made at the request of the receivers of such produce. Various products are inspected in carlot, truck-lot and less-than-carlot quantities, but most requests are for potato inspections. Other work in this category is the inspection of supplies of fresh products purchased by the New Jersey State Hospitals at Trenton and Marlboro, and supplies of food for use of crews at sea.

Only inspectors appointed by the United States Department of Agriculture as collaborators are eligible to make terminal inspections. Authorized for this work in New Jersey are the chief of the Bureau, three State supervisors and one Agricultural Society inspector. All terminal inspections are certified on straight Federal certificates rather than the Federal-State type used in reporting shipping point inspections.

During this fiscal year the following commodities were certified at various terminals in New Jersey:

Product	Volume
Apples	342 bushels
Cabbage	300 crates
Carrots	1,223 bushels
Grapefruit	5,660 boxes
Hyacinth bulbs	4,000 bulbs
Lettuce	400 crates
Onions	1,900—50 lb. sacks
Oranges	21,521 boxes
Potatoes	39,515 hundredweight
Squash	6 bushels
Tomatoes	383 boxes
Watermelons	243 melons
Tomato, collard and cabbage plants	1,133 hampers

Inspections on fresh fruit and vegetable deliveries to institutions, including those on items for replacements of rejections on original deliveries, amounted to 191. A total of 1,359,945 pounds was passed, and 108,853 pounds were rejected. One inspection was made on ship supplies; 9,333 pounds were passed and 800 pounds were rejected.

MARKET ACTIVITIES

Despite the severe summer-long drought, most New Jersey vegetable crops made fairly good yields. Statistics of the nine produce auctions confirm this. An accompanying table gives volume of farmer sales on the markets and gross values. Total volume of all sales was only a small amount lower than the sales in 1956. While the table does not show 1955 figures, the sales in 1956 were about 10 per cent greater than in 1955.

Prices for most fruits and vegetables were good in 1957. Some were below the average of the preceding year and some were higher. Of the more important vegetable crops, asparagus, snap beans, cucumbers, lettuce and onions were lower. Prices received for cabbage, sweet corn, eggplant, peppers, tomatoes and sweet potatoes were higher.

Cool, wet weather delayed planting and harvesting operations in the spring of 1958. This may cause reduced volume of sales of some crops. Other spring fruits and vegetables may show an increase in volume because such weather conditions favor their growth. The reduction in asparagus acreage contracted for by processors has thrown some additional supplies of this crop on the fresh market. During the spring months (to June 30) of this year, 1,457,744 packages of fruits and vegetables were sold on the auctions. Total value was $4,151,737.42.

Statistics on two of our most important spring crops are very revealing. The volume of asparagus on the produce auction markets was 20 per cent greater than in either 1956 or 1957. This past spring 567,745 crates (30-pound) were sold for $1,910,333. The price per pound was about 3 per cent under the two previous years.

In the case of strawberries, the auctions sold 188,819 crates of 16 quarts each for $874,772. The volume was 40,000 crates higher than in 1957, but prices averaged $4.63 a crate or 29 cents a quart, compared with $4.99 a crate or 31 cents a quart in 1957.

The produce auction associations are making every endeavor to keep their methods of operation practical and efficient. They add new facilities as new methods are proven good. Several stericoolers or hydro-coolers are in operation. These have done much to expand market outlets. This past fall, the Division's supervisor of fruit and vegetable standardization cooperated with representatives of the Cedarville and Vineland associations in a study of the new vacuum cooling process for lettuce. Convinced that this process has merit, the Cedarville association raised about $45,000 and has established a unit at its market.

Representatives of the Division attend all membership meetings and many of the monthly directors' meetings of the marketing associations. They also work closely with the operators of city farmers' markets.

Shipping Point Auction Markets

Following the method of reporting used in previous annual reports, information in this section is given for the complete calendar or crop-growing year. Therefore, the entire marketing year of 1957 is covered. Volume and value for the nine operating auctions was slightly below the season of 1956 as may be seen in the table on page 25. The table on page 26 shows the principal commodities sold at the auctions during the 1957 calendar year with comparable information for 1956.

City Farmers' Markets

The largest and most important farmers' markets in cities are owned and operated by farmers' organizations. These are located in Newark, Paterson, Bradley Beach and Trenton. The first three are wholesale markets; the Trenton market retails direct to consumers. The wholesale outlets do some retail selling and the retail market does make some sales in wholesale lots. In general, the city farmers' market is declining in service to both farmers and dealers. This seems to be a trend over the country and is due to high cost of operation, loss of time by farmers and competition from shipped-in produce.

The principal farmers' market operated by a municipality is in Atlantic City. Here, also, the services are declining. During the past fiscal year the Atlantic City Farmers' Market handled 153,425 bushels of fruits and vegetables, 33,400 dozens of eggs and 20,125 pounds of poultry. Gross sales were $261,205.

SUMMARY OF SALES AT FRUIT AND VEGETABLE AUCTION MARKETS

Market	Season of 1957 — Number of Packages Sold	Season of 1957 — Value of Sales	Season of 1956 — Number of Packages Sold	Season of 1956 — Value of Sales
Beverly	201,878	$331,591.90	267,381	$402,055.05
Consigned and direct	184,080*	477,431.55	203,000*	477,000.00
Cedarville	513,632	1,080,816.65	605,011	1,546,946.08
Glassboro	367,473	759,815.94	448,059	721,573.57
Hammonton	336,529	1,266,583.71	262,318	1,005,586.60
Blues to processors	429,122 lbs.*	90,115.62	160,043 lbs.*	35,209.52
Sweets to processors	205,861 bu.*	257,190.25	485,154 bu.*	604,255.70
Hightstown	380,682	512,268.05	348,190	383,464.57
Consigned and direct	7,336*	8,294.81	32,195*	65,052.05
Landisville	697,087	1,284,334.68	646,159	1,110,555.71
Consigned and direct	79,748*	109,860.33	87,265*	147,051.33
Pedricktown	145,836	391,796.65	151,599	423,746.45
Swedesboro	710,768	1,747,672.55	754,128	1,957,237.00
Asparagus to processors	1,199,253 lbs.*	122,923.43	1,798,835 lbs.*	224,857.46
Vineland	886,954	1,428,675.37	851,803	1,522,924.67
Totals—by auction	4,240,839*	$8,803,555.50	4,334,648*	$9,074,089.70
Value—all sales	.....	$9,869,371.49	.....	$10,627,515.76

Average price per package (by auction), 1957	$2.075
Average price per package (by auction), 1956	$2.093
Per cent of decrease in price per package, all commodities (by auction), 1957 under 1956	0.9%

(In addition to markets listed, other markets may have had special sales, no record of which is available in Division of Markets office.)

* Not included in totals sold by auction or in average price per package by auction, but included in "Value—All sales."

Miscellaneous

The Cooperative Marketing Associations in New Jersey, Inc., was organized more than 25 years ago as an advisory committee to the Department on matters pertaining to marketing cooperatives, especially the auction associations. The work of the committee soon became much broader and in 1936 the committee organized an association and incorporated, having other associations as members. There are 17 member associations covering the work in fruits and vegetables, poultry and eggs, and livestock. The fruit and vegetable section holds five summer meetings. One annual meeting is held. The association sponsors the Cooperative Interests Dinner during Farmers Week. It is also very active in sending young people to summer sessions of the American Institute of Cooperation. This program of work has continued many years. The association works closely with and is very helpful to the Department. The Division director has been secretary to the association since its organization.

PRINCIPAL COMMODITIES SOLD AT FRUIT AND VEGETABLE AUCTION MARKETS
VOLUME IN 1957 WITH 1956 COMPARISONS

Commodity	Unit	1957	1956
Apples	Bushels	31,752	23,291
Peaches	Bushels	164,770	166,777
Blackberries	Crates, 12 pints	3,120	44,724
Blueberries and huckleberries	Crates, 12 pints	222,117	179,391
Raspberries	Crates, 12 pints	7,416	4,331
Strawberries	Crates, 24 quarts	98,899	84,139
Asparagus	Crates, dozen bunches	453,376	464,035
Beans, lima	Bushels	17,910	20,747
Beans, snap	Bushels	195,950	144,874
Beets	Bushels	9,634	8,817
Broccoli-rabe	Bushels	62,826	56,474
Cabbage	Bushels	73,995	86,555
Cantaloupes	Bushels	38,358	52,273
Cauliflower	Crates, 1½ bushel	3,610	7,310
Corn, sweet	Bushels or sacks	74,019	110,727
Cucumbers and pickles	Bushels	285,894	153,996
Dandelion	Bushels	27,118	17,186
Eggplants	Bushels	83,273	88,368
Leek	Crates	4,741	.....
Lettuce	Crates, 2 dozen	253,043	243,513
Okra	Climax baskets, 12 quarts	15,987	24,093
Onions	Sacks, 50 pounds	78,982	104,157
Parsley	Bushels	31,449	35,585
Peppers	Bushels	587,200	551,840
Potatoes, sweet	Bushels	552,491	901,256
Potatoes, white	Sacks, 100 pounds	13,931	20,802
Radishes	Crates	17,274	13,615
Scallions	Crates	11,384	18,703
Squash	One-half bushel	91,168	54,838
Tomatoes	Climax baskets	602,653	655,072
Watermelons	Each	5,781	5,188
Watermelons—icebox	Bushels	5,587	4,143

BUREAU OF MARKET REPORTING AND COOPERATIVES

Two programs of work constitute the principal responsibilities of this Bureau. Market reporting is a service responsibility of State departments of agriculture. As handled by this Division, it becomes a routine series of daily and weekly reports with occasional seasonal special reports covering commodity activities. The work with cooperatives is regulatory in nature. There is a great advantage, however, in combining these two programs under one Bureau chief. The service work in market news is greatly aided by close cooperation and assistance from the marketing cooperatives. Service in market reporting, service to cooperatives and regulation of the cooperatives as required by State law, therefore, become the combined functions of the Bureau.

MARKET REPORTING

The primary aim of the crop and market information service is to keep New Jersey producers informed of market trends and crop conditions in New Jersey and in competing areas. This information is vitally important to New Jersey producers in order that they may market advantageously. In addition, and equally important, is the program to acquaint buyers with the products available in New Jersey as to time of maturity and volume available. In a project of this type all avenues of information must be explored. Information is checked for accuracy and must be sufficiently complete to give the help desired. This requires continuous contacts with officials of similar agencies in other states, individual farmers, and professional marketing men attached to buying and selling organizations.

As in previous years, market reporting work has been largely confined to weekly summaries released in the *Weekly Market Review* and the *Auction News*. During the past fiscal year a daily country shipping point market news service has been developed. While the program has had only one season, it gives every promise of filling a definite need. This need has developed through changes in buying practices, especially by the larger chains and supermarkets.

The *Weekly Market Review* is a digest of the prices of grains, feed ingredients, hay, straw, eggs, fruits and vegetables, poultry and livestock at the terminal markets, as well as prices of eggs, poultry and livestock at the country farmer-owned auction markets. This four-page publication includes one page of statistical summary which compares present prices with those of the previous week and those of the same date a year ago. Most interest in the *Review* centers around the page devoted to eggs. The information on this page is comprehensive, having in addition to the high, low and weighted average prices of various sizes and grades of eggs at the auction markets, a report of cold storage holdings in New York and total receipts of eggs during the previous week in the New York market. The selling price of cartoned and candled eggs per dozen is also included.

Market Conditions reports are issued during the active season, and cover 10 important New Jersey crops. The first issue for most commodities is mailed prior to the marketing season. That issue is designed to give general information of importance before harvest and often before planting. The report includes new government regulations pertaining to the commodity, trends toward different containers, new varieties appearing on the markets, and crop conditions in competing states and in states that harvest shortly before we do. Due to a heavy load carried by the Bureau, the *Market Conditions* reports have not been sent out as often as in previous years.

New Jersey Truck Crop News has continued to be a popular and informative weekly report. It contains spot news obtained the day before and often during the morning of publication. The Trenton Weather Station of the Department of Commerce, the Crop Reporting Service of the United States Department of Agriculture and this Department prepare the material cooperatively. This Bureau heads the program and the publication is mimeographed in this Department. It is mailed under the franking privilege of the Trenton Federal Office.

In preparing the report, the Trenton Weather Bureau supplies rainfall and temperature data for the previous week with comparisons and rainfall accumulations for the past four weeks. The Crop Reporting Service through its contacts with producers in the State obtains information on the development of crops during the week. Division employees also accumulate crop information in their daily inspection work, farm and market visits. The publication, in addition to being helpful to producers and buyers, is also helpful to food editors and others responsible for food pages in various publications. New Jersey is not a very large State in farm acreage. However, its nearness to the greatest and most important markets in the world and its ability to harvest and deliver promptly in a farm-fresh condition makes it newsworthy to the food columnist.

Auction News which is an informative advertising and reporting publication distributed mainly to buyers and large receivers is prepared in the Bureau from weekly reports sent in by the managers of the nine associations operating auctions for fruits and vegetables. The associations are all members of The Cooperative Marketing Associations in New Jersey, Inc. This State cooperative supplies the paper used in this publication and also pays all mailing costs. These expenses in turn are prorated among the nine auction associations in proportion to the benefits as determined by volume of business carried on and length of season of operation.

For the past two winter seasons the Division, in cooperation with the Philadelphia office of the Market News Service of the United States Department of Agriculture, carried on a country shipping point f. o. b. price reporting program for sweet potatoes. These price reports were issued twice a week as part of the USDA service. The New Jersey Department financed the program. The reports have been very well received by growers and buyers. As a result of that success and because of the great need for similar information on other fruits and vegetables, a number of requests were received from other commodity groups for an f. o. b. country shipping point market news service. The Department agreed to expand the market reporting service of the Division of Markets to include f. o. b. prices of the major fruits and vegetables offered in season and out of storage. Eggs and poultry are to be added if a workable program can be developed.

Starting the first of May, the initial effort was made on asparagus. The Department marketing representative made numerous contacts with weekly and daily newspaper editors, as well as radio program directors, and received

considerable support for such a news effort. In addition, arrangements were made with Associated Press and United Press International to carry this report on their news wires to all media in the State. The coverage to date has been satisfactory. To further improve the coverage and the market news service to our producers, a tie-in with the United States Department of Agriculture leased market news wire service is being arranged.

Promotion and Advertising

Some promotional activities are conducted as part of the crop and information service work. Paid advertising is placed in trade papers—*The Packer, The Produce News* and the *Food Trade News* in Philadelphia—to acquaint distant buyers with commodities available in New Jersey during certain weeks of the year.

This program is carried out in cooperation with the Division of Information and through use of the Farm Products Publicity Fund. The Division of Information has been most helpful in preparing the advertisements and in placing the ads in the trade papers. They also have contributed to the cost through use of certain funds made available to them from the Department of Conservation and Economic Development. The Cooperative Marketing Associations in New Jersey, Inc., has borne most of the cost of this work through contributions made into the Farm Products Publicity Fund.

Paid ads make possible the acceptance of certain special articles printed in so-called free space and often in connection with the advertisement. *The Packer*, in particular, has been very generous in printing such articles and special articles prepared by its area representative. The goal is to keep information on New Jersey farm products continually before the buying public.

COOPERATIVES

Work with the more than 100 marketing and purchasing cooperatives in New Jersey includes both regulatory and service functions. Provisions of the New Jersey Agricultural Cooperative Associations Act define the regulatory functions. This State law requires the filing by each agricultural cooperative of an annual financial statement, and copies of by-laws and Certificate of Incorporation with the Secretary of Agriculture, and provides for penalties for failure to comply. It also provides for methods of dissolution, protection from improper use of information filed and other minor requirements.

The Bureau supplies information to the directors and members of cooperatives, as well as to their managers, accountants and attorneys, that will assist them in proper organization, management and responsibilities, and also aid in maintaining a good financial structure. Information is also sent to them on regulations and statutes, both Federal and State, and especially on new rules or court decisions that may affect their operation. Much

of this information is disseminated through the bi-monthly publication *The New Jersey Cooperative News.*

The chief of the Bureau is on the staff of the American Institute of Cooperation for the 1958 Summer Session to be held at Pennsylvania State University. He is also a director of the National Society of Accountants for Cooperatives. In addition to the foregoing programs, there are certain other societies allied to the work in which Bureau personnel are interested.

SPECIAL ACTIVITIES

Some assistance has been given to the White Potato Industry Council in developing a program of merchandising and promoting the 1958 white potato crop. As the year closed, the Bureau chief has been requested to take charge of certain responsibilities which the Department carries on in cooperation with the White Potato Industry Council.

The asparagus industry is developing a program of promotion and advertising for both fresh and processed asparagus. At the present time, only the growers of asparagus for processing have contributed money to the advertising program. The Bureau chief is treasurer of the incorporated, non-profit organization known as the New Jersey Asparagus Council.

The Farm Bureau Committee on Cooperatives was formed a number of years ago. The director of the Division and the chief of the Bureau have been advisers of the organization since its founding and the Bureau chief has been responsible for the youth activities of the organization. The Bureau chief also cooperated with Rutgers University as a lecturer on New Jersey cooperative business as a part of a general course in agricultural economics.

DAIRY PRODUCTS MARKETING

OFFICIAL GRADES PROGRAM

Federal Milk Marketing Order 27 became effective August 1, 1957. Thirteen of the counties of northern New Jersey are included in the Order, which also embraces the metropolitan New York area and much of upstate New York. The eight southern New Jersey counties are under regulation of the Office of Milk Industry.

Since Order 27 has been in effect, several small milk dealers who were receiving services from the Department of Agriculture have discontinued operating their processing plants and are having their milk processed at larger plants. Two medium-size plants have grown large enough to maintain their own inspection service and have discontinued the services of the Department of Agriculture.

In the past fiscal year certain changes in procedure in official milk grades work were made. These were largely made to conform with Department of Health regulations. The work with the dealers and producers, comprising the 14 dealers' organizations continuing in the grades work, has been carried out smoothly and with no difficulties.

Once each year every milk plant employee where milk is sold must be examined by a physician to determine if he is medically satisfactory to handle milk. In the past year 113 employees were given milk handlers' cards by the Department of Agriculture after satisfactorily passing the medical examination.

New Jersey Dairy Laboratories of New Brunswick, of which Dr. David Levowitz is director, has made microscopic analyses of all milk samples taken in the course of control work. During the year, 3,263 samples were collected and analyzed and reports sent from this office to producers, dealers and health officers cooperating.

During the year 78 warning letters were sent from this office to producers having two consecutive high bacteria counts. Two producers were suspended from their market because of a third high count, but all were reinstated as soon as sanitary conditions had been corrected or a satisfactory bacteria count had been secured from the producer.

This year 14 dealers purchased and processed New Jersey official grades milk. This milk comes from 146 farms and is produced by 9,566 cows. The herds are physically examined once a year by veterinarians in accordance with the grade regulations.

The accompanying table records the physical examination of cows by counties during the fiscal year 1957-1958 and the results of the examination.

RESULTS OF VETERINARIAN EXAMINATION OF HERDS BY COUNTIES

County	Number of Herd Examinations	Number of Animal Examinations	Number of Animals Passed	Number of Animals Isolated	Number of Animals Condemned
Burlington	15	609	605	4	..
Hunterdon	125	4,472	4,392	75	5
Mercer	15	377	370	7	..
Monmouth	8	334	325	9	..
Morris	26	834	828	6	..
Salem	5	199	194	5	..
Somerset	62	2,194	2,156	38	..
Sussex	13	492	490	2	..
Warren	1	55	55	..	..
Totals	270	9,566	9,415	146	5

No. of herds in which all animals were passed	201 or 74.4%
No. of herds in which animals were excepted	69 or 25.6%
No. of animals passed	9,415 or 98.42%
No. of animals isolated	146 or 1.53%
No. of animals condemned	5 or 0.05%

The New Jersey Official Grades Milk Dealers' Association was reorganized in 1956-1957 and for a while gave promise of an active program. The enthusiasm died out slowly and the work of the association has not been as effective as expected. The supervisor of dairy products standardization has secured speakers to attend meetings of the association. He has also, with the cooperation of the New Jersey Official Grades Milk Dealers' Association, the New Jersey Milk Dealers' Association, the Dairy Department

of Rutgers University and representatives of processing plants, made arrangements for a Driver-Salesmen Course to be available to any milk dealer and his drivers. The course will be held at Rutgers University and is to be started in the fall of 1958.

Following the organization of the Poultry Products Promotion Council and the White Potato Industry Council and the development of a State Seal of Quality program for poultry, eggs and potatoes, there has been considerable interest shown in such a program for milk produced in New Jersey. It has been felt that the producers and dealers in the official milk grades program would be the logical group to start such a program. These people have been under Department supervision for years and quality of milk produced is excellent.

In March 1958 the supervisor contacted several milk dealers, some of whom have been under State supervision, in regard to starting a State Seal of Quality program. After discussing such a program for milk with the dealers, the supervisor wrote up a set of regulations. The regulations and program were presented to the State Board of Agriculture. The Board approved the regulations and program in May, with the provision that an Advisory Committee be appointed to aid in the administration of the program. In June the supervisor submitted six names to the Secretary of Agriculture to be approved as members of an Advisory Committee for the State Seal of Quality for milk program. The State Board approved the committee as submitted.

Manufacturers of glass milk bottles submitted bottles with the State Seal of Quality imprinted on them to the Department of Agriculture. The paper container companies are in the process of developing a design including the use of the approved State Seal emblem. As yet, they have not submitted designs for Department approval.

The supervisor attended the New Jersey Dairymen's Council meetings throughout the year, representing the Division of Markets. He also attended hearings called by the Office of Milk Industry pertaining to the pricing of milk.

LIVESTOCK AUCTION MARKETS

The six livestock auctions operating in New Jersey have continued their fine cooperation by sending us weekly reports on all sales, giving class of animals sold and prices obtained. During the past year the number of head of animals sold was only slightly larger than in the 1956-1957 year, but total money returns were about 27 per cent higher. The following chart shows the sales at the six cooperating markets for the fiscal year.

SUMMARY OF SALES AT LIVESTOCK AUCTION MARKETS

Market	No. of Head	Value
Flemington	19,294	$781,475.27
Hackettstown	50,635	3,336,314.84
Mount Holly	3,364	81,237.71
New Egypt	8,431	617,305.18
Sussex	44,988	2,764,046.06
Woodstown	30,167	1,812,605.13
Totals	156,879	$9,392,984.19

BUREAU OF POULTRY SERVICE

The severity of the New Jersey poultry industry's four-year economic depression was slightly abated during fiscal 1957-1958. Farm prices of eggs improved 15.76 per cent by comparison with the previous year. Dissatisfaction with market egg prices continued among producers because the 50 cents-per-dozen level was reached or exceeded during only four months (October, November, December 1957, and March 1958). "Half-dollar eggs," which would result in relative prosperity, have been a reality during only 10 of the 54 months from January 1954 to July 1958. New Jersey live poultry prices have been similarly depressed for five years; however, the annual average was 4.6 per cent above 1956-1957. "Quarter-dollar poultry," like "half-dollar eggs," is the producer satisfaction level, which has not been attained since 1952-1953. Feed costs were 2.4 per cent lower in 1957-1958 than in the previous year, a relative saving of about 10 cents in the annual feed consumption of 100 pounds per layer, and about one-half cent per roasting-type bird.

The protracted poultry depression has taken its toll of producers; however, the State's total laying flock has been reduced only 5.7 per cent, from 14,274,000 layers in January 1957 to 13,447,000 layers in 1958, according to the Crop Reporting Service. Historically, the peak year for market egg poultry population was 1956, with 14,340,000 layers (revised estimate). While many egg farms are depopulated, and some are converted to broiler production, there has been expansion of individual farm flocks as producers seek to compensate for lower returns by increasing the number of production units. The average New Jersey market egg flock has nearly doubled in size since 1945, a Federal survey shows, and is now about 4,000 layers. No reliable statistics can be cited for meat poultry production; however, a similar trend toward expansion of individual flocks is confirmed by field observations. The somewhat more favorable conditions have encouraged optimism among egg producers, who have started larger numbers of layer replacements than last year.

POULTRY STANDARDIZATION

Operating under the N. J.- U. S. Poultry Improvement Plan for the 23rd year, the Bureau certified 778,503 birds as Pullorum-Typhoid Clean in 298 flocks in 16 counties with 74 hatcheries cooperating. The number of birds in participating flocks was 25.7 per cent less than the record high of 1,034,633 birds in 668 flocks and 10.2 per cent less than the 1956-1957 total of 870,684 birds in 394 flocks. Production of chicks in the State-supervised hatcheries was approximately 39,000,000, which is 34.8 per cent more than the previous year's 28,931,000. About 200,000 turkey poults were produced under State supervision.

There were 109 privately-employed workers certified as flock selectors and 118 as pullorum-typhoid testing agents working in various phases of the N. J. -U. S. National Poultry Improvement Plan. The State inspector and seasonally employed assistant are supported by fees paid by participants.

Department personnel selected and blood-tested 359,865 birds (44.9 per cent of the total) and 441,029 birds were handled by field agents. The agents were assisted and their work was closely checked and found satisfactory by the Bureau of Poultry Service inspector and two Division of Animal Industry men. Selecting agents operated in two breeding stages, Approved and Certified. Testing agents operated in the Pullorum-Typhoid Clean stage.

The average participating flock numbered 2,612 birds last year, 175 per cent greater than the 949-bird flock average of 10 years ago. The participating hatcheries total capacity in New Jersey is 11,347,480 eggs per setting. This is 87.5 per cent of the total hatchery capacity for New Jersey. The average hatchery capacity is 153,344 eggs per setting, about 68 per cent greater than 10 years ago (average capacity in 1947-1948 was 91,148 eggs).

The decrease in the numbers of hatching egg flocks, hatcheries and breeders in New Jersey is attributable to economic and competitive factors. The number of breeders increased as the State's layer population increased, but now the trend is reversed, and fewer replacement chicks are needed. In the past, New Jersey has exported many chicks to other States, but now those States have developed their own breeding and hatching facilities. Many New Jersey flock owners previously had their own eggs hatched locally for next season's breeders, but now approximately 300,000 pullet chicks are imported from out-of-state hatcheries for future breeders each year. Increased labor costs on farms are also a factor, forcing the smaller individual hatcheryman to devote more time to operating his farm, diverting his efforts from soliciting and servicing chick customers. Widely advertised franchised names, all of which have out-of-state proprietors, also play a big part in the decrease in hatcheries. Chicks produced under 13 such franchises were being sold by 20 New Jersey hatcheries last year. Breeding flock owners are finding they are not adequately compensated for the increased costs of producing hatching eggs by comparison with market egg costs and returns. The high mortality of breeding and hatchery enterprises in New Jersey has also affected many other states similarly.

The breeding and health classifications used were:

Breeding Stages	Pullorum-Typhoid Classes
N.J.-Register of Merit	N.J.-U.S. Pullorum-Typhoid Clean
N.J.-U.S. Record of Performance	
N.J.-U.S. Certified	
N.J.-U.S. Approved	

The scope of the services the poultry standardization program rendered is indicated in Poultry Table 1.

POULTRY TABLE 1

N.J.-U.S. Improvement Plans	Number in 1957-58	Number in 1956-57	Per Cent Changes
Number of flocks cooperating	298	394	—24.3
Total number of breeders	778,503	870,684	—10.5
Number of hatcheries cooperating	74	83	—10.8
Hatchery capacity cooperating	11,347,480	10,936,850	+37.5
Hatchery capacity in New Jersey	12,963,000	14,191,000	— 8.6
Number of birds in pullorum-typhoid classes only	648	1,177	—44.9
Number of birds in Approved stages	754,249	838,985	—10.0
Number of birds in Certified stages	23,606	30,522	—22.6
Number of birds in ROP trapnest	1,507	2,760	—45.3
Number of females in ROP breeding pens	471	856	—44.9
Number of ROP cockerels leg banded	1,438	2,369	—39.2
Percentage of birds reacting to the pullorum-typhoid test	0.0060	0.0065	— 0.0005
Number of flock inspections	302	330	— 8.48
Number of hatchery inspections	116	106	+ 0.94
Number of ROP inspections	6	16	—62.5

POULTRY TABLE 2

CLASSIFICATION AND DISTRIBUTION OF BIRDS UNDER SUPERVISION IN THE POULTRY STANDARDIZATION PROGRAM

		NUMBER OF BIRDS			
County	Number of Flocks	N.J.-U.S. Certified Pullorum-Typhoid Clean	N.J.-U.S. Approved Pullorum-Typhoid Clean	N.J.-U.S. Pullorum-Typhoid Clean	Totals
Atlantic	10	....	38,250	....	38,250
Bergen	3	....	941	....	941
Burlington	6	577	5,670	....	6,247
Cape May	2	....	11,158	....	11,158
Cumberland	63	4,644	119,575	....	124,219
Gloucester	14	16,700	27,972	....	44,672
Hunterdon	33	....	81,908	....	81,908
Mercer	20	....	30,208	....	30,208
Middlesex	11	....	38,094	....	38,094
Monmouth	42	....	170,952	....	170,952
Ocean	47	....	169,054	....	169,054
Passaic	2	....	895	....	895
Salem	26	....	27,983	....	27,983
Somerset	9	....	22,912	610	23,522
Sussex	8	1,685	4,958	38	6,681
Warren	2	....	3,719	....	3,719
Totals	298	23,606	754,249	648	778,503

POULTRY TABLE 3

NUMBER OF BREEDERS, BY COUNTIES, BREEDS OR VARIETIES

County	Single Comb White Leghorns	New Hampshires	Rhode Island Reds	Barred Rocks	White Rocks	Crosses	In-Cross Bred	Others	Turkeys: Broad Breasted Bronze	Turkeys: Broad Breasted White	Turkeys: Others	Totals
Atlantic	28,279	....	2,137	....	....	7,834	....	....	....	....	....	38,250
Bergen	227	....	236	....	478	....	....	....	....	....	....	941
Burlington	4,900	....	577	....	....	770	....	....	....	....	....	6,247
Cape May	11,158	....	....	....	....	....	....	....	....	....	....	11,158
Cumberland	93,233	162	4,941	....	2,763	21,646	....	1,474	....	....	....	124,219
Gloucester	29,994	....	....	....	....	14,069	....	....	609	....	....	44,672
Hunterdon	72,978	723	1,007	....	480	6,211	....	....	150	359	....	81,908
Mercer	13,040	....	....	872	....	15,188	....	....	646	....	462	30,208
Middlesex	37,769	....	....	....	....	....	....	....	202	50	73	38,094
Monmouth	158,045	....	....	....	4,812	8,095	....	....	....	....	....	170,952
Ocean	159,230	....	....	....	....	8,686	....	....	1,138	....	....	169,054
Passaic	631	....	264	....	....	....	....	....	....	....	....	895
Salem	20,063	564	....	80	1,254	5,824	....	198	....	....	....	27,983
Somerset	22,661	....	....	....	....	251	....	610	....	....	....	23,522
Sussex	5,306	....	678	....	....	....	....	38	455	110	94	6,681
Warren	2,601	....	....	....	....	1,118	....	....	....	....	....	3,719
Totals	660,115	1,449	9,840	952	9,787	89,692	....	2,320	3,200	519	629	778,503

Poultry Tables 2 and 3 give the classification and distribution of birds under supervision, and the number of birds banded by breeds and by counties. Ocean County leads in numbers of breeding birds, followed by Monmouth, Cumberland and Hunterdon.

White Leghorns accounted for 85.2 per cent of the total of all varieties enrolled in the State program. New Hampshires and Rhode Island Reds went down in numbers, the former significantly to 1,449 birds compared with 4,675 birds in 1956-1957. Plymouth Rocks also decreased in number, there having been 952 of the Barred variety and 9,787 White Rocks. White and buff Cornish continued to grow in popularity to supply males for crossing on other varieties to produce the modern meat type chicks.

One New Jersey ROP breeder is selecting poultry families for the factor of interior egg quality, with the Bureau's technical assistance.

Participation in the Turkey Improvement Program totaled 4,353 birds in 1957-1958, which is a 44.5 per cent decrease from 1956-1957.

Six new agents qualified at the 17th annual school for flock selectors and pullorum-typhoid testers. Instructors from the College of Agriculture cooperated with the Division of Markets and the Division of Animal Industry.

One Federal supervisor visited the State once. The National Poultry and Turkey Improvement Plans National Conference in Louisville, Ky., was attended by two members of the Division of Markets and one member of the Division of Animal Industry, and one industry representative who acted as the voting delegate.

Lists of participating breeding flocks and hatcheries, with their official ratings, were published in circular form, and also in *Farm Service News*.

COOPERATIVE MARKETING

The cooperative egg marketing associations with which the Bureau of Poultry Service works are of two types. Those which originated as auction markets, located at Vineland, Mount Holly, Hightstown, Flemington, Hackettstown and Paterson, physically handle the eggs of their members, and largely have independent price-making mechanisms. Those which were organized to "bargain" in behalf of their memberships, located at Toms River and Lakewood, negotiate contracts which, among other things, stipulate prices that will be paid to the producer. The pricing base is the New York market quotation.

The total volume of eggs marketed by all reporting cooperatives was 1,780,162 thirty-dozen cases, 19.59 per cent less than the 1956-1957 average. The Bureau also worked with eight other egg-marketing cooperatives but no official inspection service was performed and no volume reporting program system has been established.

The past year marked the start by producer organizations of a new method of paying their members for eggs on the basis of quality yield. There are many problems to solve in such a procedure but it is realistic, rewarding the poultryman who produces and markets the quality of egg needed to hold his market.

The volume and dollar value of all eggs sold is reported for the auction markets located at Vineland, Mount Holly, Hightstown and Flemington, which are under State inspection supervision; and at Hackettstown and Paterson, which operate on market grades. These cooperatives marketed 1,036,495 cases of eggs (31,094,850 dozens), 13.75 per cent less than last year. The total value was $14,391,230.55, which is 0.088 per cent less than the previous year. The average value, regardless of size or quality, was $13.88 per case or 46.27 cents per dozen, 15.76 per cent more than the 1956-1957 average of 39.97 cents per dozen.

Five cooperative markets conducted live poultry sales during 1957-1958, and sold a total of 3,110,486 pounds of poultry which was 26.58 per cent less than the previous year. The total value of this poultry was $567,329.31, which is 23.3 per cent less than last year. The average price per pound of all the poultry marketed by the five cooperatives was 18.2 cents as compared with the 1956-1957 average of 17.4 cents.

Table 4, "Summary of Egg and Poultry Auction Markets," shows the volume and value of sales at each of the "auctions" and the total of all sales for the year.

POULTRY TABLE 4

SUMMARY OF EGG AND POULTRY AUCTION MARKETS
July 1, 1957 to June 30, 1958

Market	Cases of Eggs	Value of Eggs	Crates of Poultry	Pounds of Poultry	Value of Poultry	Total Value
Flemington	328,815	$4,557,897.15	35,961	1,661,705	$326,228.53	$4,884,125.68
Hackettstown	22,852	314,463.31	5,397	318,601	56,174.23	370,637.54
Hightstown	100,159	1,351,839.30	6,030	325,789	50,836.82	1,402,676.12
Mount Holly	54,024	730,310.72	9,771	536,252	100,108.99	830,419.71
Paterson	40,780	564,404.23	4,475	268,139	33,980.74	598,384.97
Vineland	489,865	6,872,315.84	.....	.....	.....	6,872,315.84
Totals	1,036,495	$14,391,230.55	61,634	3,110,486	$567,329.31	$14,958,559.86

Average price per case, 1957-58 $13.88
Average price per pound of live poultry, 1957-58 $0.182
Average price per case, 1956-57 $11.99
Average price per pound of live poultry, 1956-57 $0.174

Table 5, "Average Price Per Dozen Eggs on Six New Jersey Auction Markets," provides a comparison of seasonal values on a monthly basis.

POULTRY TABLE 5

AVERAGE PRICE PER DOZEN EGGS ON SIX NEW JERSEY AUCTION MARKETS

Month	1957	For Comparison- 1956	1939
July	$0.4362	$0.4536	$0.2647
August	.4463	.4351	.2678
September	.4666	.4520	.2948
October	.5219	.4322	.3029
November	.5308	.4145	.3118
December	.5023	.4050	.2453
	1958	1957	1939
January	.4442	.3787	.2372
February	.4485	.3814	.2260
March	.5344	.3622	.2305
April	.4296	.3918	.2218
May	.4364	.3329	.2146
June	.4040	.3514	.2384

Table 6, "Ten-Year Summary of New Jersey Poultry and Egg Auction Sales," traces the development of the marketing program.

POULTRY TABLE 6

TEN-YEAR SUMMARY OF NEW JERSEY POULTRY AND EGG AUCTION SALES

Year	Number Cases of Eggs	Number Crates of Poultry	Pounds of Poultry	Total Combined Value Eggs and Poultry
1957-58	1,036,495	61,634	3,110,486	$14,958,559.86
1956-57	1,201,770	83,501	4,237,116	15,143,821.58
1955-56	1,181,742	99,084	4,954,517	18,245,286.84
1954-55	1,348,732	112,629	5,718,722	18,148,548.35
1953-54	1,334,554	116,074	5,869,994	22,068,208.60
1952-53	1,291,951	114,313	5,869,308	23,083,519.57
1951-52	1,180,320	130,754	6,882,213	20,302,196.16
1950-51	1,067,278	122,147	6,548,720	19,353,488.51
1949-50	1,007,268	123,392	7,170,230	16,035,952.60
1948-49	807,739	102,301	5,194,487	16,331,155.63
Totals	11,457,849	1,065,829	55,555,793	$183,670,737.70

AUCTION MARKETS EGG-FEED RATIO

The accompanying ratios of egg prices compared with feed costs (Table 7) reveal that there were four months in fiscal 1957-1958 (October, November, December and March) which were favorable economically to New Jersey producers. A rule of thumb assumption is that an egg-feed ratio of 8 dozen = 100 pounds is an indication of poultry prosperity.

POULTRY TABLE 7

NEW JERSEY EGG AUCTIONS—EGG-FEED RATIO

	July			August			September		
	1957	1956	1939	1957	1956	1939	1957	1956	1939
EGGS									
Total dozens sold	2,664,720	2,880,810	891,300	2,808,300	3,011,730	900,540	2,700,480	2,850,210	855,660
Total price paid	$1,162,365	$1,306,748	$235,920	$1,253,228	$1,310,539	$241,138	$1,260,158	$1,288,418	$252,290
Av. price per doz.	$0.4362	$0.4536	$0.2647	$0.4463	$0.4351	$0.2678	$0.4666	$0.4520	$0.2948
FEED									
Av. 100 lb. scratch	$3.80	$3.95	$1.60	$3.80	$4.00	$1.50	$3.80	$4.00	$1.86
Av. 100 lb. mash	$4.30	$4.60	$2.18	$4.35	$4.60	$2.16	$4.35	$4.60	$2.02
Av. 100 lb. laying ration	$4.05	$4.28	$1.89	$4.08	$4.30	$1.83	$4.08	$4.30	$1.94
RATIOS									
Doz. eggs required to buy 100 lb. feed	9.3	9.4	7.1	9.1	9.8	6.8	8.7	9.5	6.6
No. lb. feed one doz. eggs will buy	10.7	10.6	14.0	10.9	10.1	14.6	11.4	10.5	15.2

	October			November			December		
	1957	1956	1939	1957	1956	1939	1957	1956	1939
EGGS									
Total dozens sold	2,856,000	3,345,630	995,430	2,505,600	3,347,190	969,330	2,519,370	2,958,480	1,135,350
Total price paid	$1,490,517	$1,446,021	$301,571	$1,330,092	$1,387,468	$302,285	$1,265,570	$1,198,238	$278,465
Av. price per doz.	$0.5219	$0.4322	$0.30296	$0.5308	$0.4145	$0.3118	$0.5023	$0.4050	$0.2453
FEED									
Av. 100 lb. scratch	$3.75	$3.95	$1.78	$3.70	$3.95	$1.77	$3.75	$3.95	$1.83
Av. 100 lb. mash	$4.35	$4.40	$2.54	$4.25	$4.45	$2.25	$4.30	$4.45	$2.58
Av. 100 lb. laying ration	$4.05	$4.18	$2.16	$3.98	$4.20	$2.14	$4.03	$4.20	$2.20
RATIOS									
Doz. eggs required to buy 100 lb. feed	7.8	9.6	7.1	7.5	10.1	6.9	8.0	10.4	9.0
No. lb. feed one doz. eggs will buy	12.9	10.3	14.0	13.3	9.8	14.6	12.4	9.6	11.2

POULTRY TABLE 7—Continued

NEW JERSEY EGG AUCTIONS—EGG-FEED RATIO

	January			February			March		
	1958	1957	1939	1958	1957	1939	1958	1957	1939
EGGS									
Total dozens sold	2,381,940	2,983,500	1,099,080	2,126,580	2,661,480	1,085,550	2,402,580	3,033,420	1,372,230
Total price paid	$1,058,034	$1,129,944	$260,807	$953,859	$1,015,234	$245,377	$1,283,953	$1,098,913	$316,304
Av. price per doz.	$0.4442	$0.3787	$0.2373	$0.4485	$0.3814	$0.2260	$0.5344	$0.3622	$0.2395
FEED									
Av. 100 lb. scratch	$3.75	$3.95	$1.54	$3.75	$3.95	$1.54	$3.75	$3.90	$1.56
Av. 100 lb. mash	$4.30	$4.45	$2.04	$4.25	$4.45	$2.04	$4.30	$4.40	$2.06
Av. 100 lb. laying ration	$4.03	$4.20	$1.79	$4.00	$4.20	$1.79	$4.02	$4.15	$1.81
RATIOS									
Doz. eggs required to buy 100 lb. feed	9.07	11.1	7.5	8.9	11.0	7.9	7.5	11.4	7.9
No. lb. feed one doz. eggs will buy	11.0	9.0	13.3	11.2	9.08	12.6	13.3	8.7	12.7

	April			May			June		
	1958	1957	1939	1958	1957	1939	1958	1957	1939
EGGS									
Total dozens sold	2,557,020	3,109,500	1,213,620	2,925,750	3,243,720	1,388,070	2,646,510	2,626,860	1,117,170
Total price paid	$1,098,574	$1,218,392	$269,177	$1,165,565	$1,079,987	$297,863	$1,069,310	$923,263	$266,289
Av. price per doz.	$0.4296	$0.3918	$0.2218	$0.4364	$0.3329	$0.2146	$0.4040	$0.3514	$0.2384
FEED									
Av. 100 lb. scratch	$3.85	$3.90	$1.58	$3.90	$3.85	$1.64	$3.85	$3.80	$1.69
Av. 100 lb. mash	$4.50	$4.40	$2.11	$4.45	$4.40	$2.18	$4.45	$4.30	$2.18
Av. 100 lb. laying ration	$4.18	$4.15	$1.84	$4.18	$4.13	$1.91	$4.15	$4.05	$1.94
RATIOS									
Doz. eggs required to buy 100 lb. feed	9.7	10.6	8.3	9.6	12.4	8.9	9.3	11.5	8.1
No. lb. feed one doz. eggs will buy	10.3	9.4	12.1	10.4	8.06	11.2	9.7	8.7	12.3

The annual range of egg price variation occurred between the March 1958 high of 53.44 cents and the June 1958 low of 40.40 cents per dozen.

Poultry feed cost 2.4 per cent less than a year earlier.

Based on actual price reports and estimates, the 1957-1958 hypothetical average New Jersey hen produced 16 dozen eggs at a feed cost of $4.07 with a gross income of $7.40 for eggs, leaving a balance of $3.33 per bird for all other costs. Her 1956-1957 counterpart produced eggs with a farm value of $6.30, at a feed cost of $4.19, leaving a balance of $2.11. The "golden year" was 1948: egg income, $11.60 per layer; feed cost, $5.08; balance, $6.52.

GRADING AND INSPECTION SERVICE

The total of all eggs graded, as well as eggs given extended inspection under supervision of Bureau of Poultry Service personnel, was 2,275,946 cases or 68,278,380 dozens.

New Jersey Wholesale Grades for Eggs are applied at the cooperative auction markets located at Vineland, Mount Holly, Hightstown and Flemington. Their total volume of sales was 972,863 cases or 29,185,890 dozens, 14 per cent less than the previous year. The Paterson and Hackettstown cooperatives are on market grades and their figures are not included in this section.

Bureau personnel also supervised another form of inspection service on 743,667 cases of eggs for two bargaining cooperatives. Licensed graders employed by the cooperatives determine percentages of different qualities in every producer's lot inspected, and record the information on grading certificates, but no declaration of grade is made. These inspection reports are used for purposes of price determination, and for producer education on quality improvement.

Eggs inspected prior to delivery to public institutions totaled 12,043 cases. These eggs must conform to New Jersey Consumer Grade A and are packaged in 30-dozen cases. Grading certificates are issued for each lot inspected.

Promotion of the State Seal of Quality, which in January 1958 replaced the old style official egg grade label used since 1937, has aroused greater interest in the State grading service for quality designation and source identification of eggs in consumer packages.

It is too early to make accurate comparisons between pre-January marketing under official consumer grades and that which has occurred since the advertising program began January 23. However, at the close of fiscal 1956-1957 there were 36 firms, cooperatives and individuals under contract to apply official New Jersey Consumer Grades for Eggs to eggs graded into retail packages. The volume of consumer-graded eggs in 1956-1957 was 515,978 cases, or 15,479,340 dozens. At the close of the 1957-1958 fiscal year, 51 were licensed to use the new State Seal of Quality, the number of

applicants for grading service having increased sharply through the mid-year period. The recent year's volume of officially graded product was 547,373 cases, or 16,421,190 dozens, a 6.08 per cent increase over the previous year. Of this volume, 274,368 cases were marketed in the five months since the promotion began.

A small volume of eggs was graded in behalf of the United States Department of Agriculture. This work is performed under a Federal-State agreement which limits the service to one place of business.

Periodic supervisory visits were made at all egg-grading plants under contract. Each plant has an authorized grader who is licensed by the Department to apply the grades in conformity with the official standards.

Administrative costs are recovered by the application of a graduated scale of fees. Other grading services requiring the issuance of grade certificates are available at an hourly rate.

Eviscerated turkeys were the first product to be marketed under the State Seal of Quality during the 1957 holiday season. Veterinarians of the Division of Animal Industry inspected facilities for slaughtering and dressing, and made pre-mortem observations of the condition and health of 55 flocks. The staff of the Bureau of Poultry Service visited these farms to supervise grading and to give technical assistance to turkey growers.

FRESH EGG LAW ENFORCEMENT

Enforcement policy in administering the Fresh Egg Law continued to emphasize the law as the basic set of rules for marketing eggs properly. Personnel assigned to this work received excellent cooperation from wholesalers and retailers, in proof of which numbers of inspections increased while violations decreased.

Enforcement personnel made 10,022 inspections at retail outlets, 4.14 per cent more than last year. Violations among all stores amounted to 856 or 8.54 per cent, a 3.15 per cent decrease. There were 206 warnings issued. Sixteen violations resulted in informal hearings.

Table 8 shows by counties the number of stores inspected and the number of stores in violation.

SOURCE IDENTIFICATION LAW

One full-time agent was assigned to enforcement of this law, and three temporary employees were provided for the last half of the fiscal year.

There were 1,798 "Source I. D." inspections made, of which 805 revealed violations. Most of these violations were minor and in many cases immediate corrections were made to comply with the law. Forty-three letters of warning were issued, and five violations resulted in informal hearings.

POULTRY TABLE 8

NUMBER OF STORES INSPECTED AND PER CENT VIOLATIONS, BY COUNTIES

County	Independent Stores			Chain Stores			All Stores		
	Stores Inspected	Number of Violations	Per Cent Violations	Stores Inspected	Number of Violations	Per Cent Violations	Stores Inspected	Number of Violations	Per Cent Violations
Atlantic	421	14	3.33	12	10	8.33	433	24	5.54
Bergen	710	24	3.38	75	3	4.00	785	27	3.44
Burlington	381	11	2.89	29	13	44.83	410	24	5.85
Camden	837	39	4.66	44	29	65.91	881	68	7.72
Cape May	127	2	1.57	5	2	40.00	132	4	3.03
Cumberland	178	12	6.74	20	7	35.00	198	19	9.60
Essex	1,272	89	7.00	91	10	10.99	1,363	99	7.26
Gloucester	288	22	7.64	18	13	72.22	306	35	11.44
Hudson	1,873	71	3.79	97	16	16.49	1,970	87	4.42
Hunterdon	85	16	18.82	16	2	12.50	101	18	17.82
Mercer	617	122	19.77	47	14	29.79	664	136	20.48
Middlesex	394	54	13.71	41	14	34.15	435	68	15.63
Monmouth	364	51	14.01	54	5	9.26	418	56	13.40
Morris	84	5	5.95	10	2	20.00	94	7	7.45
Ocean	312	36	11.54	31	7	22.58	343	43	12.54
Passaic	436	18	4.13	28	4	14.29	464	22	4.74
Salem	129	8	6.20	6	3	50.00	135	11	8.15
Somerset	151	19	12.58	17	6	35.29	168	25	14.88
Sussex	35	....	....	5	....	....	40	....	....
Union	545	56	10.28	69	21	30.43	614	77	12.54
Warren	60	6	10.00	8	....	....	68	6	8.82
Totals	9,299	675		723	181		10,022	856	

	1957-58	1956-57
Total stores inspected	10,022	9,624
Total violations	856	1,250
Average per cent violations	8.54%	12.99%

The primary objective of the law is to protect egg producers from unscrupulous practices of those who trade on the New Jersey name by substituting eggs originating outside the State. Another objective is to correct the misrepresentation that occurs when second-hand egg cases are reused without removal or obliteration of the markings of previous users. A third objective is that of requiring the source of the eggs to be stated on the container. Across-the-board compliance by producers, distributors and retailers is essential for the State Seal of Quality program and for the success of the promotional project.

POULTRY PRODUCTS PROMOTION

The Poultry Products Promotion Council, whose staff is currently part of the Division of Markets, was incorporated into the Department of Agriculture on July 1, 1957. The Council is composed of growers, poultry feed distributors, and representatives of the Department and the College of Agriculture. Its activities are financed by a State tax on poultry feeds equivalent to one cent per 100 pounds, paid by all New Jersey poultrymen and collected by feed distributors.

During the first year of the Council's activities, which were financed by a $100,000 State Treasury loan, preparations were completed for the long-range poultry products merchandising program, encompassing quality control, source identification and quality certification by use of the Department's State Seal of Quality, backed up by advertising and promotion.

The promotional activities were closely coordinated with the quality control and grading work of the Bureau of Poultry Service, adhering to the policy that guaranteed conformity to quality grades and New Jersey source are the most promotable assets.

An egg quality improvement plan, basic to the success of the marketing program, was developed. Three field representatives working with the Department's inspection and regulatory personnel, and with the State Agricultural Extension Service, cooperative marketing agencies, receivers and producers, made 2,321 farm visits that resulted in 556 on-farm egg quality surveys. Technical assistance was made available to producers for the improvement and conservation of egg quality, and to those who needed help to improve their market preparatory practices. Monthly summaries of the surveys were compiled by the Rutgers Department of Agricultural Economics and distributed to persons directly interested.

In cooperation with the regulatory staff of the Department, improvement of quality conservation practices in distribution channels and at retail points was also stressed.

A consumer research study was sponsored to provide basic information for the promotional work. A total of 5,500 consumers was interviewed in the New York City, metropolitan New Jersey and Philadelphia market areas to ascertain preferences, buying habits, uses and consumption statistics for

fresh eggs and poultry meat. The findings proved of assistance in guiding farmers to produce in accordance with market preferences, and to the Council in designing programs of advertising and publicity.

Distribution surveys were completed to determine the various ways in which New Jersey eggs, poultry and turkeys are marketed. Information relative to distribution points and estimated volume of products merchandised under the State Seal of Quality was made available to the agency.

Fifty-five producer-retailers of turkeys cooperated in the first State Seal of Quality promotion. Approximately 120,000 turkeys, tagged with the seal, were marketed during the Thanksgiving and Christmas sales periods. Promotional literature, publicity, and paid advertising were provided by the Council.

The promotional program for high quality "Genuine New Jersey" eggs was inaugurated on January 23 and sustained through June. Newspaper advertising and radio coverages reached a combined total weekly audience of 1,906,894.

Merchandising services rendered by the newspapers on the schedule resulted in 3,969 letters and 1,095 cards mailed to food merchants, 4,322 reprints of the opening advertisement mailed to food retailers, and 1,800 personal calls to the food trade.

Activity in the field of public relations, including Division of Information releases, resulted in 73,887 lines, the equivalent of 30 newspaper pages, devoted to the State Seal of Quality program in newspapers, trade, food and farm publications.

The Council provided 1,500 large egg posters, 5,000 window streamers and more than 600,000 carton inserts to assist the licensed egg distributors at retail points.

Each distributor was supplied with a sales kit containing reprints of the newspaper advertisements, and samples of the in-store display material for use in soliciting prospective accounts.

Preliminary steps were taken toward developing a marketing program for the State's poultry meat growers. A cooperative organization was formed by a group of growers who plan to merchandise New Jersey grown poultry, eviscerated and consumer-packaged under Department supervision, and with advertising and promotional support.

The Department obtained a grant of $25,000 from the Agricultural Marketing Service of the United States Department of Agriculture. Under a work agreement with the Federal agency, this money with a matching amount from the Council's budget was used to employ personnel to work with producers, dealers and distributors for improvement of quality and uniformity of products.

Report of the Division of Animal Industry

Dr. R. A. Hendershott, *Director*

A new Bureau of Swine Disease Control was established in the Division of Animal Industry in November 1957. It is responsible for enforcement of the new law pertaining to the licensing of garbage-feeding hog farms, as well as for other matters relating to the prevention and control of swine diseases.

With this change and those made effective in June 1957, the Division now consists of three bureaus: the Bureau of Livestock Disease Control, the Bureau of Poultry Disease Control and the Bureau of Swine Disease Control. The Division laboratory services all three of these bureaus.

BUREAU OF LIVESTOCK DISEASE CONTROL

Bovine Brucellosis

New Jersey reached the goal of being classified as a modified certified brucellosis-free area on June 3, 1958. The State met all qualifications for official certification: all herds of cattle were included in the brucellosis testing program, the rate of infection was less than 5 per cent of the herds and less than 1 per cent of the animals, all reactors were slaughtered, and all infected herds were retested as provided in the Uniform Methods and Rules.

All New Jersey dairymen qualified for the Department of Health regulation which required, effective April 1, 1958, that all milk sold or used in New Jersey must be produced by brucellosis-free animals.

Utilization of the brucellosis ring tests of composite milk samples was expanded to reduce the blood testing of dairy herds to every other year. Non-dairy herds of more than five head are tested annually; non-dairy herds of five or less head are tested every other year.

The rate of brucellosis infection in New Jersey is actually lower than the blood test results would indicate. During this fiscal year, 1,428 reactors were disclosed in testing 159,400 blood samples. The reaction rate was 0.9 per cent. It should be kept in mind that these blood tests included tests of herds which were suspicious on brucellosis ring tests of composite milk samples. Moreover, negative brucellosis ring tests were disclosed in 5,819 herd tests representing 266,161 animals. If all the herds had been tested just as often as they were, but the blood test had been used to the exclusion of the ring test, the 1,428 reactors would have resulted from 425,561 tests. The rate of infection would then have been only 0.34 per cent instead of 0.9 per cent.

Official calfhood vaccination against brucellosis at no expense to the owner has been a part of the Cooperative Brucellosis Eradication Program in New Jersey since July 1, 1946. Official Brucella vaccination won rapid acceptance here, with 13,381 calves being vaccinated the first fiscal year. The number of calves vaccinated annually increased until a high of 23,626 was reached during fiscal year 1952-1953. The number of calves vaccinated annually has decreased since that time due to the fact that fewer calves have been raised.

More than 95 per cent of all calves raised in New Jersey are officially Brucella vaccinated. Since it was recently reported that 40 per cent of the calves raised in the United States are officially Brucella vaccinated, we are well ahead of the national average. During fiscal year 1957-1958, 4,675 lots including 15,665 calves were officially vaccinated against brucellosis in New Jersey.

During this fiscal year, 14 counties were modified certified brucellosis free: Essex, Mercer, Warren, Ocean, Middlesex, Gloucester, Cumberland, Somerset, Salem, Burlington, Morris, Monmouth, Hunterdon and Sussex. Three counties were recertified: Atlantic, Cape May and Passaic.

BOVINE TUBERCULOSIS

The bovine tuberculosis eradication program was conducted in accordance with established procedures and policies. All cattle herds of more than five head are tuberculin tested annually; herds of five or less head are tuberculin tested every other year. All animals reacting to the tuberculin test are promptly sent to slaughter, and all herds from which reactors have been removed are quarantined until they have passed the prescribed number of tests without evidence of reaction.

During this fiscal year, added emphasis was placed on attempting to trace the origin of infection. Federal and State veterinarians made a study of cattle movements to and from each herd found to be infected.

Occasionally, a meat inspector observes lesions of tuberculosis in an animal which was not designated a reactor. According to standard procedure, meat inspectors report such findings to animal disease eradication officials. It is extremely important to make every effort to trace these animals to the herd of origin and make indicated tests and investigations.

During this fiscal year, reports from meat inspectors were received on five non-reactor cows which presented tuberculosis lesions on post-mortem examination. All five of these animals were traced to herds of origin. Three of them were traced to herds in other States; proper Federal and State officials were notified. The two New Jersey herds which were involved were carefully tested and studied.

The entire State of New Jersey is modified accredited tuberculosis free. During this fiscal year, 11 counties were completely tested and qualified for reaccreditation: Atlantic, Burlington, Cape May, Gloucester, Hunterdon, Middlesex, Monmouth, Ocean, Passaic, Salem, and Somerset.

CATTLE UNDER SUPERVISION

1945-1958

	Herds	Animals	Tuberculosis Reactors Indemnified	Brucellosis Reactors Indemnified	Calves Officially Brucella Vaccinated
1957-1958	6,987	175,026	175	1,224	15,665
1956-1957	8,014	185,327	162	1,830	16,179
1955-1956	8,488	194,937	141	2,133	17,514
1954-1955	9,483	204,620	173	1,801	17,886
1953-1954	9,797	214,212	188	653	22,029
1952-1953	10,415	215,660	135	362	23,626
1951-1952	10,683	207,959	193	254	22,394
1950-1951	11,273	200,496	232	166	19,944
1949-1950	11,962	205,105	198	191	18,305
1948-1949	12,692	200,817	282	190	16,183
1947-1948	13,478	201,238	368	206	14,813
1946-1947	14,347	202,034	770	203	13,381
1945-1946	14,867	201,349	707	209	.....

CATTLE AND GOAT SURVEY

June 30, 1958

County	Cattle		Goats	
	Herds	Animals	Herds	Animals
Atlantic	77	287	8	83
Bergen	52	726	23	175
Burlington	563	20,462	14	66
Camden	110	1,353	9	48
Cape May	49	396	2	2
Cumberland	372	4,975	8	54
Essex	26	455	4	27
Gloucester	385	4,526	31	92
Hudson	...	...	..	..
Hunterdon	1,119	27,943	34	298
Mercer	313	6,265	11	31
Middlesex	254	4,742	16	82
Monmouth	456	8,281	20	95
Morris	389	8,235	35	197
Ocean	92	944	13	38
Passaic	55	393	16	78
Salem	625	16,244	10	48
Somerset	467	11,017	37	348
Sussex	763	30,974	9	59
Union	25	143	6	20
Warren	795	26,665	28	100
Totals	6,987	175,026	334	1,941

SUMMARY OF TESTING

July 1, 1957 to June 30, 1958

TUBERCULOSIS ERADICATION PROGRAM

Veterinarians Testing	Cattle		Goats	
	Lots	Animals	Lots	Animals
State	1,036	27,631	69	415
Federal	317	7,478	43	265
Accredited practitioners	6,382	167,207	169	1,250
Total	7,735	202,316	281	1,930

Reactors — 213 or 0.11%

BRUCELLOSIS ERADICATION PROGRAM, BLOOD TESTING

Veterinarians Testing	Cattle		Goats	
	Lots	Animals	Lots	Animals
State	1,454	32,734	62	345
Federal	455	10,815	31	203
Accredited practitioners	6,381	115,851	135	887
Total	8,290	159,400	228	1,435

Reactors — 1,428 or 0.90%

BRUCELLOSIS ERADICATION PROGRAM, BRUCELLOSIS RING TESTING

	Division of Animal Industry Laboratory	Out-of-State Laboratories	Total
Herds tested	6,159	135	6,294
Animals in tested herds	287,202	5,282	292,484
Clean herds	5,702	117	5,819
Animals in clean herds	261,414	4,747	266,161
Suspicious herds	457	18	475
Animals in suspicious herds	25,788	535	26,323

BRUCELLOSIS TESTS OF IMPORTED CATTLE

Veterinarians Testing	Lots	Animals
State	896	7,333
Federal	233	2,871
Accredited practitioners	269	4,633
Total	1,398	14,837

Reactors — 13 or 0.86%

BRUCELLOSIS REACTORS INDEMNIFIED

	July 1, 1957 to June 30, 1958	December 16, 1940 to June 30, 1958
Cattle Appraised		
Registered	90	1,632
Grade	1,134	10,488
Total	1,224	12,120
Appraised Value		
Registered	$35,732.00	$490,320.00
Grade	353,232.00	2,624,984.40
Total	$388,964.00	$3,115,304.40
Average Appraised Value		
Registered	$397.02	$300.44
Grade	311.49	250.28
Total	$317.78	$257.04
Salvage		
Registered	$13,337.79	$164,916.56
Grade	181,500.94	1,194,524.15
Total	$194,838.73	$1,359,440.71
Average Salvage		
Registered	$148.20	$101.05
Grade	160.05	113.89
Total	$159.18	$112.17
State Indemnity		
Registered	$13,185.22	$181,035.21
Grade	85,082.88	694,912.65
Total	$98,268.10	$875,947.86
Average State Indemnity		
Registered	$146.50	$110.93
Grade	75.03	66.26
Total	$80.28	$72.27
Federal Indemnity		
Registered	$4,417.00	$71,356.08
Grade	28,747.99	241,606.86
Total	$33,164.99	$312,962.94
Average Federal Indemnity		
Registered	$49.08	$43.72
Grade	25.35	23.04
Total	$27.10	$25.82

BRUCELLOSIS SERVICE FEES AND INDEMNITY PAID

1945-1958

	State Indemnity Paid	Federal Indemnity Paid	State Veterinary Service Fees For Testing	Federal Veterinary Service Fees For Testing	State Veterinary Service Fees For Vaccination	Federal Veterinary Service Fees For Vaccination
1957-1958	$98,268.10	$33,164.99	$2,279.90	$37,373.95	$1,051.95	$17,242.50
1956-1957	143,400.01	48,048.65	8,542.85	47,336.63	9,636.50	10,173.50
1955-1956	168,913.00	56,516.13	14,433.25	41,585.98	22,024.50	.....
1954-1955	142,561.23	46,105.99	24,880.25	18,554.00	20,790.50	.....
1953-1954	53,787.83	8,071.00	37,602.55	.....	24,121.50	.....
1952-1953	30,883.20	10,339.77	33,826.95	.....	25,771.50	.....
1951-1952	23,676.13	7,950.45	12,427.85	.....	24,480.50	.....
1950-1951	14,070.37	4,904.19	8,973.50	.....	22,447.50	.....
1949-1950	17,027.83	5,745.34	7,395.05	.....	21,137.50	.....
1948-1949	18,521.50	6,289.40	6,397.05	.....	18,704.00	.....
1947-1948	20,666.25	7,077.12	5,312.75	.....	17,210.50	.....
1946-1947	17,814.89	6,337.06	3,358.90	.....	14,975.00	.....
1945-1946	16,349.96	6,835.27	1,916.00	.....	.....	.....

TUBERCULOSIS REACTORS INDEMNIFIED
July 1, 1957 to June 30, 1958

Cattle Appraised	Total	
Registered	18	
Grade	157	
Total	175	
		Average
Salvage		
Registered	$3,124.50	$173.58
Grade	24,540.10	156.31
Total	$27,664.60	$158.08
State Indemnity		
Registered	$2,491.51	$138.42
Grade	11,298.57	71.97
Total	$13,790.08	$78.80
Federal Indemnity		
Registered	$866.84	$48.16
Grade	3,841.61	24.47
Total	$4,708.45	$26.91
Sum of Salvage, Federal and State Indemnity	$46,163.13	$263.79

Total State indemnity paid for tuberculin test reactors from the beginning of this work in 1916 to June 30, 1958—$4,001,673.55.

Infected Herds as of June 30, 1958

Tuberculosis	Brucellosis
48	208

CERTIFICATION OF CATTLE IMPORTS AND EXPORTS

All cattle moved into New Jersey are required to comply with New Jersey laws and regulations. An official health certificate from the state or country of origin gives the history of each animal. The animals are then examined, and certain classes of animals are tested as indicated. The table titled "Cattle Imported and Released" shows the number of various classes of cattle that were imported, and the states and countries from which they were moved.

All states and countries have laws and regulations governing entry of cattle. The Division of Animal Industry attempts to keep acquainted with the most recent laws and regulations of all states. Official health certificates are issued covering cattle moved out of New Jersey. If the movement is to another country, the certificate is sent to the local office of the United States Department of Agriculture to be certain that the requirements of the country of designation are complied with. The table titled "Cattle Shipped Out

of New Jersey" shows the number of cattle moved out of New Jersey and the states or countries to which they were moved.

CATTLE IMPORTED AND RELEASED

July 1, 1957 to June 30, 1958

Origin	Adult Dairy and Breeding	Dairy and Breeding Under 6 Mo. of Age	Feeder Steers
Canada	1,403	..	..
Colorado	2	..	50
Connecticut	41	..	..
Delaware	251	..	..
Florida	...	..	47
Georgia	2	..	..
Idaho	...	..	58
Illinois	33	..	51
Indiana	4	..	..
Ireland	3	..	..
Kansas	6	1	..
Kentucky	...	..	18
Maine	...	1	..
Maryland	278	31	18
Massachusetts	18	1	..
Michigan	245	5	..
Minnesota	15	..	..
Mississippi	1	..	..
Missouri	7	..	110
New York	4,895	59	..
North Carolina	40	3	..
Ohio	108	..	..
Oklahoma	3	..	..
Pennsylvania	640	15	629
Tennessee	3	..	..
Texas	7	..	..
Vermont	18	2	..
Virginia	35	..	..
Washington	3	..	..
West Virginia	3	..	..
Wisconsin	6,954	..	..
Wyoming	..	..	29
Totals	15,054	118	1,010

CATTLE SHIPPED OUT OF NEW JERSEY

July 1, 1957 to June 30, 1958

Destination	Lots	Animals
Alabama	1	1
Arizona	4	4
Arkansas	5	6
British West Indies	1	3
California	16	16
Canada	17	31
Central America	9	37
Colorado	13	125
Connecticut	40	55
Cuba	3	4
Delaware	29	97
Florida	21	60
Georgia	18	19
Idaho	2	2
Illinois	24	75
Indiana	8	8
Iowa	13	21
Italy	1	3
Kansas	1	1
Kentucky	15	16
Louisiana	3	19
Maine	6	18
Maryland	66	178
Massachusetts	23	34
Michigan	8	18
Minnesota	3	3
Mississippi	10	10
Missouri	19	20
Montana	2	2
Nevada	7	7
New Hampshire	2	2
New York	136	386
North Carolina	387	652
Ohio	21	25
Oklahoma	21	26
Oregon	2	11
Pennsylvania	350	976
Puerto Rico	6	9
Rhode Island	3	3
South America	2	12
South Carolina	6	38
Tennessee	37	42
Texas	23	31
Utah	1	1
Vermont	5	5
Virginia	91	656
West Virginia	11	28
Wisconsin	11	12
Wyoming	1	4
Totals	1,504	3,812

ANTHRAX

Four outbreaks of anthrax were encountered during this fiscal year; two in Sussex County, one in Burlington County and one in Mercer County. Five animals died; 248 were immunized in the affected herds.

Anthrax vaccination was provided for farmers in a section of Salem County. These vaccinations were conducted on 579 animals in 25 herds. This practice has been in effect because of soil conditions following an extensive outbreak of anthrax many years ago.

MUCOSAL DISEASE COMPLEX

In the course of providing consultation service for private veterinary practitioners, mucosal disease complex was disclosed in two herds. One of these herds was in Somerset County, the other in Mercer County.

MANGE IN CATTLE

A report was received from the United States Department of Agriculture indicating that some animals in a national show had been found to have mange. Animals from two New Jersey herds were involved. These herds were inspected by Federal and State veterinarians. The herds were found to be affected with mange, and were treated by their private veterinary practitioners under Federal and State supervision.

SHEEP SCABIES

Periodic inspections of sheep flocks were made during the year to examine for scabies and other conditions. As the year ended, 407 flocks containing 9,658 sheep were under supervision.

Scabies was observed in 10 flocks. The flocks were quarantined. Therapeutic dipping was supervised. Only six flocks are awaiting release at the end of the fiscal year.

SHEEP INSPECTION

July 1, 1957 to June 30, 1958

Number flocks under supervision	407
Number sheep in flocks under supervision	9,658
Number inspections conducted	398
Number sheep inspected	12,536
Number farms quarantined for scabies	10
Number farms remaining under quarantine at end of year	6

SCRAPIE

In cooperation with the United States Department of Agriculture, the New Jersey State Board of Agriculture agreed to approve indemnity payments for sheep slaughtered because they were exposed to scrapie, or because they were progeny of sheep affected with scrapie.

In May, a Suffolk ram imported here from an infected flock in another State was destroyed under this program.

Indemnity, in the amount of $50.00, was paid for one sheep slaughtered because of exposure to scrapie.

MISCELLANEOUS DISEASES

As part of the front line of defense against invasion of animal diseases, our veterinarians frequently investigate diseases, suspected diseases and obscure conditions. Only a few unusual cases are described here.

In August 1957, at the request of a private veterinary practitioner, an unusual condition was studied in a dairy herd in Hunterdon County. Two cows died, and four additional cows became ill. Careful study coupled with laboratory examinations resulted in a diagnosis of plant poisoning.

In March 1958, two of our veterinarians provided consultation service to a private veterinary practitioner and collected laboratory specimens in connection with an unusual condition in a bovine herd in Sussex County. Some of the symptoms resembled the mucosal disease complex. Clinical and laboratory study indicated that the probable diagnosis was a variant form of pasteurellosis.

Acting on a report from a private veterinary practitioner in Hunterdon County, Federal and State veterinarians diagnosed contagious ecthyma or sore mouth, a highly contagious disease in a herd of goats. Outbreaks of this disease usually run a benign course unless complications set in. The dried scabs which fall off retain the virus, which is resistant to heat and cold and can survive in the soil. A vaccine is available, and is believed to be quite effective. The private veterinary practitioner was advised to recommend vaccination.

INSPECTION OF DISPOSAL PLANTS

The Division of Animal Industry conducted inspections required prior to licensing of disposal plants, as provided by State law.

BUREAU OF POULTRY DISEASE CONTROL

PULLORUM DISEASE

During the fiscal year, 801,694 fowl were tested in the field for pullorum disease. This figure represents a decline of 108,019 from 1956-1957. The number of reactors increased to 95 or 0.011 per cent of the total birds tested, as compared with 67 and 0.007 per cent last year. The increase in reactors emphasizes the need for constant vigilance in the matter of disease control.

FOWL TYPHOID

During 1957-1958, five flocks of poultry were quarantined for fowl typhoid. Twelve flocks, some of them placed under quarantine in previous years, were released after effective control methods had been applied.

One alarming situation has arisen during the year which is and will continue to be a problem to disease control officials. The nitro-furans as a class of drugs are thought to exert a "cloaking" effect on the various pullorum-typhoid agglutination tests currently in use. Until some effective test is evolved to detect the use of these drugs in the living bird, results of tests for pullorum-typhoid will be open to much doubt.

PULLORUM-TYPHOID CONTROL

Fowl tested in field	801,694
Number reacting	95
Per cent reacting	0.011
Fowl tested in laboratory	13,356
Number reacting	15
Per cent reacting	0.112
Total fowl tested	815,050
Total fowl reacting	110
Per cent reacting	0.013

TERMINAL MARKET POULTRY INSPECTION

The Bureau's agent at the Vanderpool Street Market in Newark inspected 4,827 truck loads of poultry during the year. These consisted of some 4,722,000 birds which weighed 24,105,000 pounds. Of this volume, 33,050 birds weighing 130,300 pounds were condemned.

INSPECTION OF POULTRY

July 1, 1957 to June 30, 1958

State	Truck Loads	Birds	Approximate Weight
Connecticut	297	352,000	1,485,000
Delaware	930	1,014,000	4,650,000
Indiana	4	2,000	20,000
Kentucky	35	16,000	175,000
Maryland	5	2,000	25,000
Massachusetts	14	14,000	70,000
New Hampshire	334	334,000	1,670,000
New Jersey	2,195	2,047,000	10,975,000
New York	311	314,000	1,555,000
North Carolina	4	2,000	20,000
Pennsylvania	591	567,000	2,955,000
Rhode Island	14	14,000	70,000
Virginia	88	42,000	425,000
West Virginia	5	2,000	10,000
Total	4,827	4,722,000	24,105,000
Number of birds condemned			33,050
Approximate weight of birds condemned			130,300

POULTRY DISEASE CONTROL ADVISORY COMMITTEE

During the fiscal year a committee, representing the various facets of our poultry industry, was appointed to advise both the State Board of Agriculture and the Division of Animal Industry on industry problems. Many of the problems are of long standing and are going to require much thought and work for their resolution. Briefly, some of the pressing needs can be enumerated:

1. Testing of biologics.
2. An effective flock record-keeping system that will aid in appraising vaccines and vaccination procedures.
3. The maintenance of safeguards to prevent the introduction of new poultry diseases.
4. The establishment of an effective poultry inspection system that will assure our citizens of a wholesome supply of poultry products, and will promote the sale of New Jersey's poultry products by inspiring consumer confidence in their desirability.
5. Regional cooperation directed toward the eradication of many of our costly poultry diseases.
6. Education in sanitation and preventive medicine in the control of poultry disease.

EXPORTS OF HATCHING EGGS AND POULTRY

Most countries have laws and regulations governing entry of hatching eggs and poultry. These requirements usually include inspection of farms from which these eggs and poultry were obtained. The table on page 60 titled "New Jersey Imports of Hatching Eggs and Poultry" shows the countries to which New Jersey consignors shipped, and the classes of eggs and poultry involved. The Division of Animal Industry conducts this type of activity in cooperation with the local office of the United States Department of Agriculture.

BUREAU OF SWINE DISEASE CONTROL

GARBAGE-FEEDING HOG FARMS

The garbage-feeding hog farm law for the control of contagious and infectious diseases of swine was passed by the Legislature and took effect December 1, 1957. Under provisions of this act, the State Board of Agriculture passed regulations on October 30, 1957 and as amended November 18, 1957, to implement the law.

These regulations called for two types of licenses to be issued. Regular licenses were issued to hog farms which met all the requirements of the regulations. Conditional licenses were issued to farms which could not im-

NEW JERSEY EXPORTS OF HATCHING EGGS AND POULTRY

July 1, 1957 to June 30, 1958

Country to Which Consigned	Hatcheries Shipping	Hatching Eggs	Baby Chicks	Cockerels	Pullets	Others
Bermuda	3	...	1,770	...	4,250	...
Brazil	1	36	....	...	...	...
British Guiana	1	...	1,175	...	...	...
British West Indies	4	...	90,200	34,000	2,100	3 pigeons
Canada	3	720	5,855	1,400	3,100	24 pigeons 1,000 pheasants 8 geese 1 hen 1 rooster
Chile	2	...	700	120	280	...
Columbia	1	...	700	...	...	...
Cuba	2	...	3,000	...	7,000	...
Greece	2	...	2,200	...	...	...
Holland	1	100	....	...	...	...
India	1	...	300	...	...	...
Italy	2	24	1,000	10	90	...
Peru	2	...	1,000	7,000	1,000	...
Portugal	1	...	15	...	85	...
Puerto Rico	5	30,000	145,220	2,125	28,850	...
Bolivia	1	...	....	...	300	...
Surinam	1	...	1,100	...	...	...
West Africa	1	...	100	...	3,500	...
Totals	34	30,880	254,335	44,655	50,555	27 pigeons 1,000 pheasants 1 hen 1 rooster 8 geese

mediately make the extensive physical changes on their premises necessary to meet all requirements of the law. Conditional licenses will be allowed only through December 31, 1958.

It was found that some farms could not immediately meet the requirements for either type of license, and extensions were granted with the approval of the State Board of Agriculture, to alleviate the hardships that were created.

As of June 30, 1958, 255 of the 304 garbage-feeding hog farms in the State were licensed. The balance of 49 farms, which includes six institutions that are exempted under the law, will be licensed during July 1958 or will be prosecuted for failure to abide by the law and regulations.

Much progress and much improvement has been made during the last half of the fiscal year 1957-1958 on these farms, especially in the sanitation and manner in which they are now operating. Swine farmers are rapidly recognizing the value and importance of cooking garbage before feeding it to their herds.

Cooking breaks the cycle of the spreading of disease, not only of vesicular exanthema and hog cholera, but of trichinosis of humans as well. In addition, cooked garbage is better utilized as feed because there is less waste and animals make better weight gains.

YOUTH WORK

Another field that has developed recently is the meeting of some of the fieldmen with groups of 4-H and FFA boys in an effort to stimulate interest in the raising of swine as a project. There is a shortage of feeder swine for the garbage feeders and there would be a ready market for all the swine these boys could raise.

SWINE ERYSIPELAS

A private veterinary practitioner reported an outbreak of a condition suspicious of swine erysipelas in Somerset County. Our area veterinarian, a livestock inspector and the Division director visited the farm to study the condition and take some material for laboratory tests.

A tentative diagnosis of swine erysipelas was made and the private veterinary practitioner treated the herd with anti-swine erysipelas serum. The diagnosis was confirmed and the remaining swine recovered.

This is only the fourth recorded outbreak of swine erysipelas in New Jersey.

SWINE SURVEY

(Garbage Fed Swine)

June 30, 1958

County	Licensed (Regular)		Licensed (Conditional)		Non-Licensed		Total	
	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals
Atlantic	11	1,690	17	2,920	5	361	33	4,971
Bergen	2	2,300	..	....	..	....	2	2,300
Burlington	25	16,026	2	140	3	306	30	16,472
Camden	2	600	9	3,610	2	252	13	4,462
Cape May	6	2,184	12	1,285	4	94	22	3,563
Cumberland	6	449	1	1,000	1	20	8	1,469
Essex	..	....	..	....	..	....	..	....
Gloucester	26	41,144	59	43,476	6	1,241	91	85,861
Hudson	4	7,400	15	17,742	..	....	19	25,142
Hunterdon	4	3,025	1	300	..	....	5	3,325
Mercer	6	698	1	15	7	479	14	1,192
Middlesex	6	455	1	130	5	626	12	1,211
Monmouth	12	5,642	4	123	8	561	24	6,326
Morris	8	1,850	1	150	4	1,617	13	3,617
Ocean	4	690	1	10	1	10	6	710
Passaic	..	....	..	....	1	8	1	8
Salem	1	46	..	....	..	....	1	46
Somerset	7	1,150	..	....	1	10	8	1,160
Sussex	..	....	..	....	1	45	1	45
Union	1	50	..	....	..	....	1	50
Warren	..	....	..	....	..	....	..	....
Total	131	85,399	124	70,901	49	5,630	304	161,930

INSPECTION OF SWINE HERDS

July 1, 1957 to June 30, 1958

	Number of Inspections		
	State	Federal	Total
Grain fed farms	707	286	993
Heat treated garbage fed farms	1,439	2,746	4,185
Raw garbage fed farms	1,847	960	2,807
Total	3,993	3,992	7,985

SWINE MOVED UNDER PERMIT

July 1, 1957 to June 30, 1958

	Slaughter	Feeder	Breeder	Total
Grain fed farms	24,406	10,653	133	35,192
Heat treated garbage fed farms	141,125	182,991	1,022	325,138
Raw garbage fed farms	9,581	6,280	85	15,946
Total	175,112	199,924	1,240	376,276

SWINE IMPORTED FOR SLAUGHTER

July 1, 1957 to June 30, 1958

Walter Blaker, Clarksboro	311
C. W. Brown, Mount Royal	20
Buday Slaughter House, Flemington	108
Delaware Packing Co., Trenton	38,883
John Englehorn & Son, Newark	483,569
Fisher Bros., Bridgeton	609
Charles Haag, Inc., Hoboken	87,982
Marvel Packing Co., Trenton	246
C. Miller & Co., North Bergen	231,399
Schein's Inc., Hopelawn	82
Swift & Co., Jersey City	9,615
Trenton Packing Co., Trenton	20,847
Van Wagenen & Schickhaus, Harrison	184,996
Total	1,058,667

SWINE IMPORTED FOR BREEDING AND FEEDING

July 1, 1957 to June 30, 1958

Feeder	56,176
Breeder	122
Total	56,298

DIVISION LABORATORY REPORT

July 1, 1957 to June 30, 1958

BLOOD TESTS MADE FOR BRUCELLOSIS ON INSHIPPED ANIMALS

Samples received	14,837*
Unfit for test	9
Samples tested	14,828*
Reactors	45
Negative	14,783

* This figure includes titre carrying calfhood vaccinates eligible for entry.

BLOOD TESTS MADE FOR BRUCELLOSIS ON ANIMALS IN HERDS UNDER SUPERVISION

Samples received	161,184
Unfit for test	274
Samples tested	160,910
Reactors	1,398
Suspicious	3,846
Negative	155,666

MILK RING (BRT) TESTS FOR BRUCELLOSIS

Samples tested	17,984
Suspicious	2,262
Negative	15,722

HOTIS TEST MADE FOR MASTITIS ON MILK SAMPLES OF ANIMALS

Number of animals	39
Number of samples	39
Streptococci	34
Negative	5

BLOOD TESTS MADE FOR PULLORUM DISEASE OF POULTRY

Samples received	8,824
Samples tested	8,824
Negative	8,824

BLOOD TESTS MADE FOR LEPTOSPIROSIS OF ANIMALS

Samples received	502
Negative	294
Suspicious	207
Unfit	1

BACTERIOLOGICAL, MICROSCOPIC AND POST-MORTEM EXAMINATION
July 1, 1957 to June 30, 1958

Lots	Animal	No.	Material	Condition Suspected	Findings
116	Avian	259	Chickens	*S. pullorum*	Negative
8	Avian	45	Chickens	*S. pullorum*	Pullorum
1	Avian	1	Turkey	*S. pullorum*	Negative
1	Avian	1	Turkey ovary	*S. pullorum*	Negative
1	Avian	1	Turkey liver, spleen, ovaries	*S. pullorum*	Negative
22	Avian	302	Chicks	*S. pullorum*	Negative
7	Avian	30	Embryos	*S. pullorum*	Negative
1	Avian	1	Culture (Petri plate)	*S. pullorum*	Negative
1	Avian	1	Culture (Petri plate)	*S. pullorum*	Pullorum
1	Avian	1	Liver, spleen, ovary	Fowl typhoid	Fowl typhoid
1	Avian	3	Chickens	Fowl typhoid	Negative
1	Avian	6	Chickens	Paratyphoid	Paratyphoid
6	Bovine	6	Ears	Anthrax	Negative
3	Bovine	3	Ears	Anthrax	Anthrax
1	Bovine	1	Ear and blood	Anthrax	Negative
2	Bovine	2	Blood samples	Anthrax	Negative
1	Bovine	1	Feed and hay	Anthrax	Negative
1	Bovine	1	Blood slide, muscle tissue	Anthrax	Anthrax
1	Bovine	1	Blood sample	Anthrax	Anthrax
5	Bovine	5	Fetus	*Brucella abortus*	Negative
1	Bovine	1	Cervical swab	*Brucella abortus*	Negative
1	Bovine	1	Vaginal swab	*Brucella abortus*	Negative
1	Bovine	1	Milk and blood	*Brucella abortus*	Negative
3	Bovine	3	Blood samples	*Brucella abortus*	Negative
1	Bovine	1	Feces	*Brucellosis, vibrio fetus*	Negative
2	Bovine	3	Semen samples	*Vibrio fetus*	Negative
1	Bovine	1	Throat swab	*Vibrio fetus*	Negative
1	Bovine	1	Blood smear	Leucopenia	Unconfirmed
1	Bovine	1	Blood sample	Leucopenia	Negative
1	Bovine	5	Blood samples	Unknown	Unconfirmed
1	Bovine	2	Blood samples	CBC	Normal
1	Bovine	1	Liver, lymph blood	Septicemia	Hemolytic Staphylococcus
1	Bovine	1	Internal organs	Pathogenic bacteria	Negative
1	Bovine	1	Feces sample	Internal parasites	Coccidiosis
1	Bovine	1	Feces sample	Endo parasites	Negative
1	Bovine	1	Feces sample	Parasites	Negative
1	Bovine	1	Purulent fluid, blood, kidney	Pathogenic bacteria	Negative
1	Bovine	1	Lung	Tuberculosis	Negative
1	Bovine	6	Skin scrapings	Scabies	Chorioptic scab mite
1	Bovine	1	Skin scraping	Scabies	Negative
1	Bovine	1	Skin scraping	Ectoparasites	Negative
1	Caprine	1	Head of goat	Listeriosis	Negative
2	Equine	1	Blood sample	*Brucellosis salmonella*	Negative
1	Equine	1	Vaginal swab	Pathogenic organisms	Negative
1	Equine	1	Blood sample	Pregnancy	Negative
1	Feline	1	Dead cat	Tularemia	Negative
1	Ovine	1	Portion of stomach and lymph	Cause of death	Generalized lymphoma
2	Ovine	2	Ears	Anthrax	Negative
1	Ovine	1	Skin scraping	Scabies	Negative
1	Porcine	2	Suckling pigs	Cause of death	Lice and emaciated
1	Porcine	1	Skin scraping	Ectoparasites	Negative
1	Rodent	1	Squirrel	Tularemia	Negative

Report of the Division of Plant Industry

FRANK A. SORACI, *Director*

BUREAU OF ENTOMOLOGY

BEE CULTURE

Inspection of apiaries for the detection and control of bee disease was conducted during the year in all 21 counties of New Jersey.

Five hundred twenty-seven registered apiaries were visited and 4,890 colonies inspected during the year. American foul brood was found in 87 apiaries consisting of 265 colonies. Thus, 5.4 per cent of the colonies inspected in the registered apiaries were infected with American foul brood.

Each year a number of new apiaries are located while making regular inspections and surveys. During this year, 169 new apiaries containing 578 colonies were inspected. Of these, 17 apiaries, with a total of 32 colonies, were found to be infected with American foul brood.

From June 3 to June 24, 1957, in answer to a number of complaints, inspections were made of colonies in all apiaries that could be found within and around the areas previously sprayed for gypsy moth control in Bergen, Morris, Sussex and Warren counties.

Although no evidence of damage by the spray program was found, these inspections did reveal the widespread occurrence of American foul brood. Considerable time and effort have been spent in bringing the disease under control, especially in Bergen and Morris counties.

A meeting was held on April 25, 1958 to review the adequacy of laws concerning diseases of bees. It was attended by representatives of the various bee organizations in New Jersey. There is concern with regard to the use of antibiotics and sulfa drugs in the prevention and control of contagious bee diseases, especially American foul brood. It has been necessary to determine whether the present laws should be revised to discourage the use of the drugs in disease control. Presently, the law requires destruction of infected colonies and equipment. It is the belief of this Department and many beekeepers that antibiotics do not rid the colony of contagious bee diseases but rather serve to mask the symptoms and maintain a reservoir of disease. After a thorough review of the subject, the beekeepers concluded that the present bee laws are adequate, but that the inspection service not permit indiscriminate control efforts by drug feeding.

The drought was responsible for a very poor honey crop in New Jersey in 1957. July and August were very dry and bees gathered very little sur-

SUMMARY OF INSPECTIONS

County	Apiaries	Colonies	Nuclei	Crossed Comb	American Foul Brood Apiaries	American Foul Brood Colonies	European Foul Brood Apiaries	European Foul Brood Colonies	Colonies Burned	Microscopic Determination A.F.B	Microscopic Determination E.F.B.	Microscopic Determination Neg.
Atlantic	29	254	..	1	10	33	4	4	5	5	6	2
Bergen	70	374	..	13	16	39	..	..	16	3	..	..
Burlington	43	404	..	1	7	11	4	69	59	24	50	1
Camden	20	221	..	12	2	5	..	..	1	2	1	1
Cape May	75	461	52	1	11	24	..	..	..	12	..	1
Cumberland	14	225	..	..	6	8	1	1	..	4	5	1
Essex	19	74	..	2	3	11	..	..	3	9	..	6
Gloucester	6	26	..	4	1	1	..	..	..	..	..	..
Hudson	8	41	..	..	2	9	..	..	..	2	..	..
Hunterdon	64	548	162	65	3	14	2	15	5	..	1	..
Mercer	12	140	89	..	2	7	..	..	8	1	..	..
Middlesex	24	227	..	1	1	1	1	1	..	2	1	..
Monmouth	77	741	..	37	9	13	2	2	..	4	1	3
Morris	79	622	..	48	11	46	..	..	28	1	..	2
Ocean	4	17	..	..	..	..	..	..	..	..	..	..
Passaic	18	67	..	..	6	21	..	..	6	..	..	..
Salem	10	107	..	..	4	31	3	3	15	23	3	..
Somerset	13	82	..	..	1	3	..	..	..	3	..	..
Sussex	21	300	..	..	1	5	..	..	..	2	..	..
Union	53	221	..	..	5	10	3	7	7	4	5	..
Warren	37	316	..	12	3	5	..	..	..	..	..	..
Totals	696	5,468	303	197	104	297	20	102	153	101	73	17

Certificates of Transfer Issued: 14
Queen-Rearing Certificates Issued: 4

plus nectar except in the vicinity of lakes, canals, rivers and streams. Several showers in early September enabled bees in some areas to gather nectar from fall plants. This nectar was deposited around the brood nest where it was needed for winter food. October frosts ended the fall honey flow although pollen continued to be gathered.

During November, December and January, temperatures permitted bees to make cleansing flights and also enabled them to move to new stores. These factors help a colony of bees to winter well. In February and March, adverse weather conditions prevented bees from gathering pollen and nectar and also restricted their flight. As a result, many colonies of bees died. Winter loss, due to dysentery, poor stores, heavy snowfalls and long periods of cold weather was higher than it had been in the past two years. Despite continued unfavorable weather during April, colonies started to collect pollen and nectar. By the end of June, colonies which had survived the difficult winter had a surplus of nectar and were in very good condition.

During the fiscal year, the supervisor of bee culture participated in several meetings of beekeeping organizations and lectured on the subject of bee diseases at the annual short course in beekeeping given at Rutgers University. Through this work the beekeepers are informed of dangerous and harmful bee diseases and of the need for their control. These services are considered to be important and very helpful, especially by those who are beginners in this industry.

COOPERATIVE ECONOMIC INSECT SURVEY

Surveys to gain knowledge of current or impending pest problems are basic to efficient insect and disease control. Since the Cooperative Economic Insect Survey was initiated in the fall of 1953, many surveys have been conducted to provide more efficient pest detection and warning services to growers of this State. This year the survey has functioned to provide information on many established pests. In addition, much work was done in delimiting areas infested with recently introduced pests and in searching for pests not yet known to occur in New Jersey, but which present a threat to the agricultural interests of the State.

Data gathered by survey personnel have been interpreted by research and extension entomologists and plant pathologists of the New Jersey Agricultural Experiment Station, and information has been disseminated to growers throughout the State by means of news releases, farmers' meetings, radio, television and other media. This service aids growers in evaluating pest problems on their farms and in applying necessary control measures at the proper time.

Asparagus Beetle Survey

Asparagus beetles are serious pests of asparagus in New Jersey. In the spring, the adults emerge from hibernation and feed upon young asparagus tips causing scars. Eggs are deposited on the asparagus spears and contaminate the fresh and processed products. The beetles and larvae also feed upon the leaves throughout the growing season and contribute to devitalization of the plants.

The yearly abundance of asparagus beetles varies considerably. If the overwintering population of beetles is correlated with the severity of attack by the insects the following spring, knowledge of hibernating populations becomes useful in alerting growers to impending spring infestations. A survey to obtain information on hibernating numbers of asparagus beetles was made last winter (1956-1957) and repeated this winter (1957-1958). Commercial fields in the major asparagus-producing counties were surveyed. In each field, 100 asparagus stalks which had cracks that provided suitable hibernating quarters were selected. A cut about six inches long was made on each side of the opening, in each stalk. Counts were made of the number of beetles found in each stalk. In the table below, the results of this year's survey are presented, with those obtained last year.

RESULTS OF ASPARAGUS BEETLE SURVEYS, 1956-1957 AND 1957-1958

County	Number Locations		Average Number per 100 Stalks per Field: Common Asparagus Beetle (*Criocerus asparagi*) Adults		Spotted Asparagus Beetle (*Criocerus duodecimpunctata*) Adults	
	1957	1958	1957	1958	1957	1958
Cumberland	10	10	34.4	2.3	0.6	0.3
Salem	10	10	23.2	1.2	1.5	0.3
Gloucester	10	10	78.0	3.3	9.7	0.3
Atlantic	5	5	70.6	5.6	4.0	0.6
Camden	5	5	78.8	5.6	3.8	0.2
Burlington	5	5	51.4	11.8	2.0	1.2
Monmouth	1	..	39.0	..	4.0	..
Totals	46	45	2399	183	171	19
Average per field statewide			52.2	4.1	3.7	0.4

The number of hibernating beetles was much lower this year with only 4.1 beetles collected per field as compared with 52.2 last year. In the spring of 1957, severe infestations of asparagus beetles were reported whereas in 1958 infestations were very light. Results of the winter surveys, correlated with spring observations, indicate that similar surveys in the future will be of value in anticipating spring asparagus beetle activity and damage.

Collection of Codling Moth Larvae for DDT Resistance Studies

For several years, survey personnel have collected larvae of the codling moth (*Carpocapsa pomonella*) from apple orchards in various parts of the State for DDT resistance studies, conducted by entomologists at the New Jersey Agricultural Experiment Station.

This year two apple orchards in Burlington County were selected as collection sites. DDT had been used extensively in both orchards, but codling moth control was considered inadequate. Late in October burlap bands were placed on approximately 60 trees in each orchard. Such bands have been reported to provide shelter for overwintering larvae and to facilitate rapid collection. Although many larvae were found under the bands, the method might have been more effective if the bands had been put on the trees earlier in the fall and also removed earlier.

In one orchard in the vicinity of Mount Holly, very few larvae were found. It was later verified that this orchard had been sprayed very late in the season with heavy dosages of DDT and parathion. It is probable that many larvae that were migrating from the dropped fruit to the trees were killed by these late sprays.

Collection of larvae in the other orchard near Burlington proceeded well and 1,000 larvae were taken. Progeny of these larvae will be reared and tested during the 1958 growing season.

European Apple Sawfly Survey

European apple sawfly, *Hoplocampa testudinea* (Klug), was first found in New Jersey in Bergen County in 1951. It was confined to that county and to an area above Teaneck and Hackensack until 1955 when the pest was found in the vicinity of Preakness in Passaic County. In order to follow the spread of this insect towards other commercial apple-growing sections, a survey was made in the spring of 1957. Results of this survey showed a new area of infestation in Essex County. Another survey to detect further spread of the insect was made in the spring of 1958.

During May and June, more than 336 trees were examined at 60 locations in Sussex, Morris, Somerset, Hunterdon, Mercer, Middlesex, Monmouth and Burlington counties. Trees along roadsides and abandoned orchards were inspected. Apples on the trees and dropped apples were examined for characteristic tunneling and presence of larvae. Suspicious fruits were collected and brought to the laboratory for examination.

New infestations were found in Sussex and Monmouth counties. In Sussex County an infestation was discovered in the northeastern portion along Route 54, one mile south of the New York-New Jersey border. Three infestations were found in the northern part of Monmouth County. These latter finds are particularly important because they are near the important apple-producing areas in the center of the State. Future surveys are planned to detect spread of this pest which is capable of causing much fruit damage.

European Corn Borer Surveys

A survey to determine the population of European corn borer (*Pyrausta nubilalis*) was made in the fall of 1957. It was found that fall populations of the insect were much lower in 1957 than in 1956. Data obtained from each county surveyed are presented in the table below with comparable data from the previous year.

County	Average Number of Borers per 100 Plants 1957	1956
Sussex	4	74
Warren	8	67
Hunterdon	10	204
Somerset	151	695
Middlesex	63	567
Monmouth	408	597
Mercer	117	690
Burlington	81	609
Camden	94	226
Gloucester	53	374
Salem	41	127
Cumberland	36	154
State mean comparable counties (12)	89	365

To determine the degree of winter mortality and early development of the borers, another survey was made in the spring of 1958. The technique used to obtain data was the same as that employed in previous surveys. Eighty-nine fields in 12 counties were inspected, and it was found that larval populations had declined 27.1 per cent over winter. This is the lowest mortality rate since 1954. Based on the findings of fall and spring surveys, there appeared to be less likelihood of severe damage from European corn borer than at any time since the spring of 1955. However, populations were considered sufficiently high in the white potato areas of Monmouth, Middlesex, Somerset and Mercer counties to produce injury if weather conditions were favorable.

In the course of the spring survey, several factors causing death of overwintering borers were noted. Bird feeding accounted for 54.4 per cent of the decline; insect parasitization for 38.6 per cent; and mechanical injury for 7.0 per cent.

European Corn Borer Parasitization Survey

This Department has cooperated with the United States Department of Agriculture in conducting surveys for parasites of European corn borer larvae. Collections of larvae for the study were made during the European corn borer fall population survey. The data obtained are valuable in determining parasitization levels and consequent influences on overwintering populations.

Of a total of 878 borers collected from 21 sites in 13 counties of the State, 114 or 13 per cent were found to be parasitized. *Macrocentrus gifuensis* was responsible for the greatest number of parasitizations, 91 or 10.4 per cent. Other parasites found were *Lydella stabulans grisescens* on 1.4 per cent of the borers, *Horogenes punctorius* on 1.1 per cent, and *Chelonus annulipes* on 0.1 per cent.

Survey for Khapra Beetle

Khapra beetle (*Trogoderma granarium*) has proven to be a serious pest of stored grains and seeds in several far western states. In recent years, surveys to detect the presence of this insect in New Jersey have been made by State and Federal inspectors. Results of the survey have been negative. In February, March and April, 1958, the cooperative survey was again conducted. Commercial grain and seed handling establishments were inspected throughout the State. The inspectors carefully examined storage areas and collected samples of debris. These samples were thoroughly examined and screened under strong light.

A total of 155 establishments in 19 counties was visited during the survey. Specimens from 20 locations were submitted to the Beltsville, Md., Laboratory of the United States Department of Agriculture for identification. None of the specimens was identified as Khapra beetle.

Mexican Bean Beetle Survey

A survey to determine the overwintering population of Mexican bean beetle (*Epilachna varivestis*) was made during the 1956-1957 winter. The survey was repeated during the 1957-1958 winter, and the same procedure was employed to gather data. The duff layer on the soil in pine or mixed pine and deciduous woods near bean fields was examined for adult beetles.

Four hundred and thirteen square yards of duff from 18 locations in Cumberland, Cape May and Salem counties were examined each year.

Mexican bean beetles were found at only two locations during each annual survey. Thirty beetles were found in 1956-1957 and only three were taken in 1957-1958.

Observations in the 1957 growing season revealed that bean beetle populations were low, while in 1958, they were even lower. These observations confirmed the survey findings.

Pepper Weevil Surveys

The pepper weevil, *Anthonomus eugenii* (Cano) was discovered in Gloucester County in September by personnel of the New Jersey Agricultural Extension Service. Previously this insect had not been reported in

the United States, except in the Gulf States and those states bordering Mexico. It was doubtful that it would overwinter successfully as far north as New Jersey.

To determine the extent of the New Jersey infestation, survey personnel were assigned to inspect fields in the major pepper producing sections in the southern part of the State. The inspectors swept the fields with insect collecting nets to obtain adults. Fruits were also examined for infestations. Of the 95 fields examined, 18 showed presence of pepper weevil. The area found to be infested was in the vicinity of Vineland. One positive location was found about one mile north of Franklinville, slightly outside the generally infested area. No pepper weevils were found in the Cologne-Pomona, Cedarville, Bridgeton, Salem, Swedesboro, Glassboro or Hammonton areas where great numbers of peppers are grown.

In June, 1958 another survey was conducted to find out if the pepper weevil had overwintered successfully. Net sweepings were made in and around 28 fields where the insects were found in 1957. No pepper weevils were found. The insect may have been eradicated over winter or the number of weevils been so seriously reduced that the pest could not be readily detected.

Potato Aphid Survey

A survey to detect the overwintering abundance of eggs of the potato aphid, *Macrosiphum solanifolii,* was made in the 1956-1957 winter and repeated this year. This information should prove useful in estimating the impending importance of potato aphids on white potatoes and tomatoes, crops which are seriously affected by the insect. In making the survey, the number of eggs present on buds and in crotches of the swamp rose, which is the primary overwintering host plant of the pest, were counted. Eighteen locations in seven counties were sampled.

The number of eggs found was smaller in 1958 than in 1957. The largest numbers were found near Swedesboro, while somewhat lower numbers were detected along the upper reaches of the Maurice River.

Observations of infestations of potato aphids in potato and tomato fields in the spring of 1958 revealed high populations. This fact would appear to discredit correlation of overwintering egg counts with subsequent infestations in the spring. However, it has been speculated that cool, wet weather this spring retarded parasite populations which normally increase on pea aphids and then attack potato aphids. It may be that, over a period of years, a correlation between egg counts and spring population will be established. Results of the survey will be carefully studied by the Division and by research and extension personnel to determine whether or not it should be continued.

Spotted Alfalfa Aphid Surveys

The spotted alfalfa aphid, *Therioaphis maculata,* which causes much injury to alfalfa, has spread rapidly from the west to many states in the central and eastern parts of the country. In order to find out if the insect had yet become established in New Jersey, surveys were made in alfalfa fields throughout the State.

A survey in the fall of 1956 failed to reveal the presence of the aphid. This year, in conjunction with spittlebug surveys made in the fall and spring, net sweepings were made to collect aphids. Professor Robert S. Filmer of the Department of Entomology of Rutgers University examined the aphids and submitted suspicious specimens to the United States Department of Agriculture for identification.

In the fall of 1957, 49 samples of aphids were collected. No aphids were found that resembled the spotted alfalfa aphid. The following spring, a total of 24 samples from Gloucester, Cumberland and Salem counties was examined and 10 aphids that resembled the spotted alfalfa aphid were found in collection from seven fields. These specimens were identified as the yellow clover aphid.

Results of these surveys indicate that the spotted alfalfa aphid has not yet become established in New Jersey. Future surveys are planned to detect initial infestations if they should occur.

Spittlebug Surveys

The meadow spittlebug (*Philaenus leucophthalmus*) is a serious pest of alfalfa and the clovers. Since 1953, surveys have been made in the fall to obtain information on spittlebug egg deposition. In the spring, surveys have been conducted to determine spittlebug nymphal populations in alfalfa fields. Results of this year's surveys are presented in the table below.

County	Number Fields Examined	Average Number Egg Masses Fall 1957	Average Number Nymphs Spring 1958
Sussex	5	1.2	15.6
Warren	5	1.2	29.6
Hunterdon	5	5.6	82.0
Morris	3	..	5.7
Somerset	3	0.7	82.7
Middlesex	3	1.3	23.0
Mercer	3	0.3	11.3
Monmouth	3	0.7	4.7
Burlington	5	0.6	18.6
Camden	3	0.3	8.3
Gloucester	3	0.7	2.7
Salem	5	0.6	7.4
Cumberland	3	0.7	0.7
Cape May	3	0.3	0.7
State average per field		1.1	22.8

As in past surveys, a total of 52 fields was inspected in 14 counties. In the fall survey the number of spittlebug egg masses present on 15 red clover plants in and around the alfalfa fields was counted. In the spring, the number of nymphs present on dandelion plants in and near the fields was noted.

From 1953 to 1957, results of surveys showed a correlation between the number of spittlebug nymphs each spring and the deposition of eggs the previous fall. The ratio between the spring and fall counts was constant each year. However, this year the number of nymphs was much higher than might be expected from the fall egg mass counts. This disparity was probably due to changes in insecticidal control measures. Alfalfa weevil has become the major pest of alfalfa since 1956. Lindane was formerly used for insect control, but heptachlor is now used most extensively. Heptachlor is considerably less effective in controlling spittlebug. Also, growers now spray alfalfa when the plants are 10 to 16 inches tall instead of when they are six inches high. Most nymphal counts in the spring of 1958 were made before alfalfa was 10 inches high.

Unspotted Tentiform Leaf Miner Surveys

The unspotted tentiform leaf miner, *Callisto geminatella*, is widely known as an occasional pest of apple orchards. Never classified as a general pest, the past history of this insect labels it as a sporadic pest which may appear in large numbers for one or two years, then disappear. Although fruit is not attacked, defoliation results in premature drop of apples, and trees weakened for the following year.

The insect occurs from Arkansas to Colorado and eastward to the Atlantic Coast. Apple is the major host. Quince, pear, cherry, plums and other species show occasional mines.

Since sporadic serious defoliation has been reported in recent years in Virginia, West Virginia, Maryland and Delaware, it was decided to survey this pest in New Jersey. First observation of the leaf miner in New Jersey in any quantity in recent years was in Cumberland County in 1956. In 1957, the miners were found generally present throughout southern New Jersey. In the Vineland area, at least one case of moderate to severe defoliation was reported by late July.

Survey personnel were familiarized with damage caused by the insect in an infested orchard, then proceeded to survey commercial orchards in the leading apple-producing counties of the State. If miners were present, this fact was recorded and a sample of 300 leaves was taken, 30 each from 10 trees scattered across the block. When available, a record was taken as to whether or not parathion or other synthetic organic phosphate insecticide had been used in the spray schedule.

The survey showed that of 58 apple plantings in 11 counties, 37 were infested with the unspotted tentiform leaf miner. The amount of infestation

varied greatly from orchard to orchard. Heaviest infestations were found in southern New Jersey, but orchards in Monmouth, Warren and Morris counties showed that from 13.7 to 33.0 per cent of the leaves had mines present in them.

It is well known that the use of parathion and similar phosphate insecticides will control this pest. Records of sprays used were too scanty to be of value, but their use probably had a bearing on varying populations within the counties.

The presence of this insect was shown to be more general than had been previously supposed, and a potential for severe infestations existed in many orchards.

A more restricted survey was conducted in the spring of 1958 to determine the extent of early infestation by the unspotted tentiform leaf miner. However, difficulty was encountered in distinguishing injury by the leaf miner from injury to the leaves caused by cold weather early in the season. The findings did show that high populations were not present, and observations of orchards through the spring substantiate this point.

Sweet Potato Yellow Dwarf and Sweet Potato Cork Survey

In September 1957, a serious sweet potato virus disease known as yellow dwarf or mosaic was found for the first time in the State near Newfield. The disease was observed in sweet potato plants of the Georgia Red variety by members of the Agricultural Experiment Station staff. Symptoms of another important virus disease, internal cork, were also noted in the planting. The latter disease had previously been observed in a few sweet potato fields in New Jersey.

A survey was initiated to ascertain the extent of yellow dwarf and cork infection in the important sweet potato production areas in the southern part of the State. Survey personnel consulted with county agricultural agents to obtain leads to plantings of the susceptible Georgia Red and Nancy Hall varieties. Inspections were also made of other varieties when growers reported virus-like symptoms. In addition, inquiries were made at farmers' cooperatives, sweet potato shipping points, storage houses and packing establishments to trace susceptible or suspicious plantings. A total of 143 inspections was made during the survey and 10 farms were found where the Georgia Red was being grown. Yellow dwarf was positively identified on nine of these farms, which are located in and around Newfield, Vineland, Malaga, Egg Harbor and Swedesboro. The disease was suspected on two of the five farms where the Nancy Hall variety was grown. Cork was found on 16 farms and suspected on one other. In addition to the above locations, cork was found in Woodstown, Salem and Cologne.

Yellow dwarf was apparently imported on Georgia Red sweet potato plants from the Tifton, Ga., area. The disease can be ruinous to the sweet

potato industry, and a program of control was planned cooperatively with the Agricultural Experiment Station.

Southern Vegetable Transplant Survey

In the spring of 1958, the New Jersey Department of Agriculture called together representatives of the vegetable industry and Agricultural Experiment Station research and extension personnel to consider pest risks involved in the importation of transplants from the South. It was agreed that a study of transplant production should be made in the areas where the plants are grown.

A committee was formed to plan the study and recommend action to be taken on the findings. Prof. Charles H. Nissley, extension vegetable specialist of the Experiment Station, agreed to serve as chairman of the committee with William M. Boyd of this Division as secretary. The following New Jersey groups were represented: county boards of agriculture, industry and commodity groups, processors, growers, dealers in southern-grown plants, the Agricultural Experiment Station, the Extension Service and the State Department of Agriculture.

The study was initiated with cooperative financing of the State and Federal departments of agriculture, vegetable growers, dealers, canners and county boards of agriculture.

A senior inspector of this Division was assigned to make the study. His work was materially aided by the excellent cooperation received from the State and Federal plant pest officials in the southern area.

During March, April and May, the inspector studied growing and certification procedures in the important transplant growing sections of Georgia. Two weeks were spent in similar observations in Florida, and two days in North Carolina. During the survey, contacts were made with State and Federal plant officials, and details of regulatory methods and procedures were obtained. Studies of planting, cultural, harvesting and packing operations were generally made in company with State inspectors. Progress reports were prepared periodically and observations and recommendations were incorporated in a final report to the committee and interested agricultural agencies.

There are several important crop pests which do not presently exist in New Jersey or which are quite limited in range in this State. Those that are present in the states that may supply plants to New Jersey include the white-fringed beetle, imported fire ant, soybean cyst nematode and witchweed, all of which are under Federal quarantine. Also important are sweet potato weevil, sweet potato yellow dwarf or mosaic, sweet potato cork and pepper weevil. Transplant fields were carefully examined to detect presence of these pests, and State and Federal measures designed to prevent the movement of the pests with transplants were studied. None of these insects

or diseases was observed in transplant fields. The enforcement of Federal quarantine regulations, coupled with regular survey and eradication programs, provide reasonable assurance of excluding the pests under Federal quarantine without seriously disrupting the vegetable plant industry.

A recommendation for the exclusion of sweet potato yellow dwarf was made. This measure involves restricting sweet potato plant imports to inspected and certified plants which have been produced from potatoes grown in fields inspected and found free of the disease. It was further recommended that surveys be made to detect presence of the pepper weevil in those states that produce pepper plants for export and if the insect is found, that suitable insecticidal treatments be required before pepper plants are shipped.

An imposing number of insects and diseases destructive to crops in New Jersey exist in the South and may readily be moved with transplants. Among these pests may be listed late blight, bacterial spot, bacterial wilt, bacterial canker and southern blight on tomatoes; bacterial spot on peppers; and downy mildew and aphids on cabbage and related crops. Several species of nematodes attack the various transplants and present a constant threat. With the exception of late blight and bacterial canker, all of these plant pests were observed in fields during the study.

On the basis of observations and study, the following modifications or additions were recommended in the Georgia certification regulations and procedures to improve the quality of plants entering New Jersey.

1. Double spray with streptomycin for bacterial spot control as a requirement of pepper plant certification.

2. Bichloride of mercury seed treatment of all pepper seed. It is possible that some western-grown pepper seed may have originated in areas where bacterial spot is present.

3. Pre-pulling application of an approved fungicide not more than three days prior to pulling.

4. Stricter enforcement of land eligibility requirements. As an example: Eliminate land for pepper plant certification where plants have been left in the field to produce a pepper crop and where nematode-susceptible crops have been grown.

5. Stricter supervision of packing operations and maintenance of identity of plants from field to packing shed and through packing operations.

6. Enforcement of ruling requiring 10-foot separation between varieties to aid in preventing varietal mixtures.

In his final report to the committee, the inspector stated that the present course of action in New Jersey under which no restrictions are placed on the movement of vegetable plants should not be continued. Vegetable plants that have not been inspected may now move freely into the State. It has been proven that such plants harbor insects and diseases. Even if such pests are not new to the State, they can be expected to reduce yields and to threaten the production of neighboring farms.

The best possible program for protection of the industry would be one which would involve refusing entry to plants that have not been produced under an acceptable certification program in the state of origin. Major advantages of such action would be reduction of risk from insects and plant diseases and further assurance of a supply of plants of high inherent quality. Such a program would take full advantage of regulations of the state of origin designed to protect and assure varietal purity, seed treatment, land eligibility, planting, spraying, inspection, packing and labeling, etc. The inspector felt that such a policy would be highly beneficial to the vegetable industry of this State and recommended this as the most advantageous course of action. Such action would not only materially aid this State's vegetable industry, but would also serve to strengthen the full certification programs of Georgia, and of other states that would initiate complete certification programs. An important disadvantage of such a program might be limitation of plant supply, if the certified plant crop were reduced. Liberal plant size regulations could overcome this disadvantage.

If such a program is objectionable, then an alternative and weaker program would be one that would require that only plants inspected not more than three days prior to pulling and found free from injurious insects and plant diseases be allowed entry into the State. This would serve to reduce pest hazard from plants not produced under a full certification program.

GOLDEN NEMATODE

Since 1948 this Department has cooperated with the Plant Pest Control Division of the United States Department of Agriculture in annual surveys of the potato growing areas of New Jersey to ascertain the presence or absence of the golden nematode (*Heterodera rostochiensis*) in the State.

During July, August and early September, soil samples were gathered at potato grading sites for processing. Soil samples were also taken on farms at Matawan and Rahway, where contaminated jute debris had been incorporated into the soil in recent years.

A total of 1,975 samples was taken, representing 6,686 acres of potatoes, with negative results.

SOYBEAN CYST NEMATODE

A survey was undertaken during the summer of 1957 to detect possible infestation by the soybean cyst nematode (*Heterodera glycines*). The work was directed by the chief of the Bureau of Seed Certification. Inspections were made in each county where soybeans were grown, with efforts concentrated in commercial production areas.

Special consideration was also given to areas where plantings of imported flower bulbs from southern areas had been made. Other locations where special hazard existed because of imported soil, seed or plant material from known infested areas were also given particular attention.

All suspicious plants were sampled and submitted to the Division laboratory for analyses. In each case, a four to six pound soil sample with segments of the roots of suspicious plants was also taken.

Many factors complicated the visual determination of suspect fields. The drought caused uneven growth, discoloration and in some cases death of the plants. A heavy infestation of mites throughout the State also made field determinations difficult. With normal growing conditions it was felt that symptoms would appear from three to six weeks after planting. But in 1957, plant growth was retarded to the point that symptoms did not appear for eight to ten weeks.

All soil samples were identified in such manner that the area could be readily resampled, if necessary. The acreage reported in this survey was estimated by visual methods. In areas surveyed a second time the acreage was not recorded.

In the course of the survey, an unknown soybean disease (possibly bacterial) was discovered. The diseased field was called to the attention of the Plant Pathology Department of the Agricultural Experiment Station for their investigation.

SOYBEAN CYST NEMATODE SURVEY IN NEW JERSEY—1957

County	Estimated Number Acres Surveyed	Number Fields Surveyed	Number Samples Drawn	Estimated 1956 Acreage Soybeans Plants (U.S.D.A. Crop Reporting Service—for Beans)
Atlantic	104	19	1	200
Burlington	3,121	316	18	9,300
Camden	278	43	1	600
Cape May	113	19	..	....
Cumberland	695	103	9	300
Gloucester	351	46	9	1,200
Hunterdon	610	24	..	2,900
Mercer	3,334	167	9	11,600
Middlesex	2,118	121	11	4,500
Monmouth	4,898	214	12	9,500
Morris	.25	1	..	100
Ocean	295	51	..	800
Salem	1,138	144	3	1,500
Somerset	743	29	1	2,400
Warren	18	2	..	100
Totals	17,816.25	1,299	74	45,000

GYPSY MOTH CONTROL

The gypsy moth (*Porthetria dispar*), introduced into the United States in 1869, has been the subject of continuous control and suppression work by both State and Federal governments. Control and quarantine programs have helped to confine the infestation to the area east of the Berkshires and Green Mountains. The mountains seemed to act as a natural barrier to

spread to the west and south. In 1950, there was a rapid spread of the moth over the barrier. Surveys in 1953 and 1954 revealed infestations in New York, New Jersey and Pennsylvania. The sudden and extensive spread of the insect to the west and south caused nationwide interest and concern.

With the development of aerial application of spray and new, more efficient insecticides, complete control of the pest seemed possible. Studies were conducted to determine whether or not the gypsy moth could be eradicated from the United States. All evidence indicated that such an objective could be achieved over a period of years, at lesser cost than scattered control efforts, and with little or no damage to other forms of life within the infested areas. Accordingly, the large-scale program was initiated in the spring of 1956 and has continued.

The control program for gypsy moth in New Jersey is broken down into four separate operations: trapping, scouting, spraying and quarantine.

Trapping is conducted during the flight season of the male moth which extends through July and August. Traps, baited with sex-attractant, are placed in the field to locate areas of infestation and to check on the effectiveness of prior spraying. The traps are regularly patrolled.

Scouting is conducted during the egg stage of the moth. Clusters of approximately 400 eggs are laid during late July and early August and remain in such state until early May of the following year. Careful examination for egg masses on all standing plant growth is conducted in areas where male moths were recovered during the trapping operation. Selective-site scouting is also conducted. This type of scouting takes into consideration favorite food species of the moth, elevation and common carrier traffic.

Spraying is conducted during the early larval stages of the moth, as soon as possible after egg hatching. In New Jersey, the spray operation would normally begin in mid May. At this stage of its life cycle the insect is extremely susceptible to the insecticidal solution of one pound of DDT to one gallon of oil to the acre.

Quarantine, to prevent the movement of infested articles into uninfested areas, is conducted throughout the entire life cycle of the insect. Regulated articles, such as timber products, shrubs, vines, plants, quarry products and other hazardous materials, are inspected and permitted to move if they do not carry any stage of the gypsy moth.

Trapping

Beginning June 17, 1957, traps were placed in the field on a seven-eighths mile grid throughout the northern half of the State. This grid is based upon the known attracting radius of one-half mile for each trap. Theoretically, the grid system saturates the area with gypsy moth scent. Thus, any male moths within the area would come under the influence of one or more traps during the flight season. The traps are serviced at 10-day intervals, at which

time they are inspected for captured moths and the component parts of each trap either freshened or replaced.

Four thousand five hundred fifty traps were placed in the field over an area of approximately two million acres of land. Thirty men were employed at this work. The southern boundary of the trapped area extended along a line running approximately from Lambertville east to Perth Amboy. In addition, 50 traps were placed at close intervals around a nursery in the vicinity of Bordentown, where an infestation of gypsy moth had been discovered in June, 1957.

During the season, three moths were caught, each at a separate trap site. The moths were found in Washington and Mendham townships in Morris County and Union Township in Hunterdon County.

Removal of traps was begun on August 28 and extended until September 24.

Scouting

Preliminary scouting for egg masses around each of the three 1957 attracting trap sites was started upon completion of the trapping program. This involved intensive search by an inspection force of eight men. Plant growth was examined within a radius of one-half mile around each trap site. This search failed to reveal egg masses. A second examination was conducted over the same ground, but now anything that could possibly harbor egg masses was ripped apart and thoroughly inspected. Again, the results were negative.

A final attempt to locate the origin of the moths consisted of conducting a selected-site survey within the triangle formed by the three trap sites. Since no sign of infestation was found, areas outside the triangle were now scouted, but again with negative results. All scouting was suspended after the first week in May, by which time a total of 3,315 open and 3,743 woodland acres had been inspected.

On the basis of this work, it was agreed that there would be no need for spraying for gypsy moth eradication in the spring of 1958 in New Jersey.

Quarantine

Seventeen inspections of especially hazardous material were made by the inspectors throughout the year. Operations involving such hazard were investigated, and approval for movement of regulated articles was granted to cover the full extent of the operation. In only two cases was certification granted for movement of specific articles over a 24-hour period. The 17 quarantine certificates issued covered three lumber operations, 12 cutting operations of Christmas trees and boughs, and two fence-post cutting operations.

Since the Christmas tree business involves considerable hazard of gypsy moth spread, retail and wholesale dealers were brought under regulation. Three hundred fifty-eight dealers were informed of the existing quarantine regulations. Inspections of their holdings were made with negative results.

JAPANESE BEETLE QUARANTINE ENFORCEMENT

The volume of nursery stock shipped inside and outside the regulated area under quarantine certification was 3,825,492 units, a decrease of approximately 290,000 units from the last fiscal year. The estimated value of this stock was $1,539,070, a decrease in value from the previous year of approximately $154,000.

A total of 6,602,614 plants was certified, as a result of treatment prior to digging, treatment after digging, or through manual or visual inspection. In addition, 629 cubic yards of potting soil, most of which was shipped outside of the regulated area, were treated, as well as 483,000 square feet of surface soil in greenhouses, frames, sheds, heeling-in areas, etc., to prevent the carriage of larvae to other areas.

The aerial application of insecticides to eliminate the need for hand mixing of insecticide with the surface soil, and the spraying of dug tree roots instead of dipping, mentioned in the 1956-1957 report both proved impractical under the conditions existing in the interested nurseries.

No changes were made, during this reporting period, in procedures affecting nurseries and greenhouses. However, in June of 1958, changes were instituted in seasonal activities directed against the adult beetle. Designation of restricted articles, actual effective dates, and the naming of special heavily infested areas were omitted, as were the requirements for screening and dusting of trucks and refrigerator cars. Instead, district inspectors were charged with the duty of applying preventive measures where warranted. Airplanes and airfields also came under this operational plan. By these changes it is hoped to accomplish the quarantine objective by concentrating regulatory action in localities, products and vehicles that present the greatest risk of spread.

Regulatory measures to prevent the spread of Japanese beetle from airfields in New Jersey by airplanes were taken at 45 airports. They included spray applications, and trap placement and collection. A total of 151 inspections was made.

Ninety-seven truckloads of farm products, consisting of 51,428 units and valued at $203,091 were certified as follows:

	String Beans		Cabbage		Peaches		Apples		Corn		Mixed	
	T/L	Units	T/L	Units	T/L	Units	T/L	Units	T/L	Units	T/L	Units
June	33	19,112	12	6,741	..	....	..	....	..	....	..	....
July	2	855	..	....	9	4,652	8	2,552	3	2,466	12	5,640
August	..	....	..	....	17	9,150	..	....	..	....	1	260
Totals	35	19,967	12	6,741	26	13,802	8	2,552	3	2,466	13	5,900

NURSERY INSPECTION

During the year, July 1, 1957 to June 30, 1958, a total of 869 nurseries was inspected for issuance of the certificate of inspection of this Department. This represents an increase of 76 nurseries over the previous year. Infestations, requiring control measures before certification could be granted, were found in 193 nurseries. There were 78 more nurseries infested than in the previous year.

The pests most commonly found are listed as follows:

Insect Pests	Number of Nurseries Infested
Juniper scale, *Diaspis carueli*	42
Holly leaf miner, *Phytomyza ilicis* and *P. ilicicola*	33
Red spider, *Tetranychus telarius* and *Metatetranychus ulmi*	32
Rhododendron lace bug, *Stephanitis rhododendri*	26
Bagworm, *Thyridopteryx ephemeraeformis*	25
Oyster shell scale, *Lepidosaphes ulmi*	25
Euonymus scale, *Unaspis euonymi*	23
Sycamore lace bug, *Corythucha ciliata*	23
Andromeda lace bug, *Stephanitis globulifera*	19
Azalea lace bug, *Stephanitis pyrioides*	18
Spruce gall aphid, *Chermes abietis*	18
Pine bark aphid, *Pineus strobi*	15
Juniper webworm, *Dichomeris marginella*	14
Mealybug (Taxus), *Pseudococcus cuspidatae*	10

Dealers Certificates

Certification was granted to 291 dealers in nursery stock. For issuance of a dealers certificate, the dealer is required to inform the Department of the sources of his nursery stock. A certificate is granted only when the Department is satisfied that stock obtained from these sources is free of injurious insects and plant diseases.

The premises of 74 dealers were inspected during the year to determine whether stock held over was free of insect pests and plant diseases. No infestations were found.

Special Certificates

Special certificates were issued to 377 private individuals and nurserymen desiring to ship plant material out of New Jersey, in accordance with the special regulations of the receiving states and foreign countries.

Canadian Certificates

One hundred thirty-three special certificates were issued for the movement of plant material to Canada in accordance with the regulations of that Dominion.

Special Corn Borer Certificates

Eighty-five special corn borer certificates were issued for the movement of herbaceous plant material into those states having regulations on account of the European corn borer.

Domestic Inspections

Twenty-two inspections were made of plant material shipped into New Jersey from other states. These inspections are made as a check on the efficiency of the various state inspection services. A part of one shipment of raspberry plants was found infected with crown gall and was condemned and destroyed. A part of one shipment of dogwood trees was found infested with root-knot nematode and was returned.

Foreign Inspections

One inspection was made of plant material shipped into New Jersey from Canada. No infested material was found.

Gypsy Moth Inspections

Twenty-three nurseries located within or near the area quarantined on account of the gypsy moth were inspected during the winter months. No infestations of gypsy moth were found.

Special (Request) Inspections

One hundred nine inspections were made for residents of New Jersey requesting identification and information about control of insects and plant diseases affecting their premises.

Native Plant Inspections

Twenty-six inspections were made for collectors desiring to move plant material from the wild. Special certificates were issued only when the plant material was found free of injurious insects and plant diseases or when control measures had been satisfactorily completed.

Truck Inspections

Six trucks carrying nursery stock were examined during the 1958 spring shipping season with the cooperation of the State Police, to determine if proper certification was carried and to ascertain whether the stock was free of insect pests and disease. Two trucks carried no certificates. The nursery stock of both trucks was inspected and after determination that the stock was free of pests, the trucks were allowed to proceed to points of destination in this State. All trucks were found transporting nursery stock free of infestation.

RED STELE DISEASE OF STRAWBERRIES

During the month of April 1958, the strawberry plantings of 41 growers were inspected. This work is performed in accordance with regulations that strawberry plants moved within the State be inspected and found free from red stele (*Phytophthora fragariae*) disease. Although 41 growers entered 141.86 acres, certification was granted to only 36 growers representing 110.61 acres of certifiable strawberry plants. A summary of the work follows:

County	Number Growers	Acreage
Atlantic	17*	66.25*
Burlington	2	8.00
Camden	3**	22.75**
Cape May	2	.38
Cumberland	4	9.10
Gloucester	4	10.50
Hunterdon	1	1.00
Mercer	3	15.25
Monmouth	4	8.50
Salem	1	.13
Totals	41	141.86

* Four growers with 27 acres rejected because of red stele.
** One grower with 4.25 acres rejected because of red stele.

BLUEBERRY PLANT CERTIFICATION

This report covers the calendar year 1957, the first year under the new blueberry certification program. Under the new program certification is based on the inspection of cutting beds, nursery plants and enough mother plants to supply cutting wood for the grower's own use and for sale. Mother plants are defined as those plants cut to a maximum of 12 inches from the ground annually to provide such cutting wood. All mother plants, rooted cuttings and nursery plants are required to be dusted twice each year with insecticides to control the sharp-nosed leafhopper, the known carrier of stunt disease. The mother plants are allowed no tolerance of stunt disease. Plants showing symptoms of other virus diseases such as shoestring, mosaic and ringspot are required to be removed by the grower. Also, five rows of field bushes on both sides of the mother plants are inspected to provide isolation. If diseases are found in the isolation rows, the grower is required to remove the infected plants.

Nursery plants to qualify as certified may not have more than 0.75 per cent stunt disease at any one inspection; nor more than a total of 1 per cent stunt for the season. It is also required that all injurious insects and plant diseases be controlled before certification is issued.

Under the new program 26 growers entered plantings for certification. At the end of the fall inspection, 94,783 mother plants, 937,658 nursery

plants and 2,118,867 rooted cuttings were certifiable. During the drought of the summer of 1957, there was concern whether mother plants would make sufficient growth. However, the mother plants made good growth and a good supply of cuttings was available. It was apparent during the fall inspection that field bushes were so severely drought damaged that growers would not have had an adequate supply of cutting wood if the older system of certification had been in effect.

The following table summarizes the incidence of disease:

Disease	Mother Plants		Isolation Plants	
	Spring	Fall	Spring	Fall
Stunt	18*	..	103	6
Mosaic	2	3	17	6
Shoestring	2	..	5	..
Ringspot	..	..	..	15
Totals	22	3	125	27

* Suspicious of having stunt.

On December 5, 1957, a meeting was called of all certified blueberry growers, members of the Department and the New Jersey Agricultural Experiment Station to review the year's program. The growers who attended the meeting favored the new program but asked that the following changes be made in certification requirements:

1. Mother plants to qualify be allowed a tolerance of 0.50 per cent stunt disease during the season.
2. Mother plants to be cut to a maximum of 24 inches from the ground.
3. Plants tagged because of disease to be removed by the growers within 24 hours after the notification by the inspectors.

The above recommendations were considered to be reasonable and will be incorporated into the certification program of 1958-1959.

POST-ENTRY QUARANTINE INSPECTIONS

During the year 195 inspections were made of plant materials imported under permit from foreign countries and growing under the supervision of this Department, in accordance with the requirements of the cooperative program of this Department and the United States Department of Agriculture.

Because of quarantine 37, revised September 1, 1948 certain plant materials imported from foreign countries and capable of carrying and spreading virus and other diseases must be grown under quarantine until released by the United States Department of Agriculture. Most material is released after two growing seasons, if found uninfected. However, the holding period is lengthened or shortened according to the types of plants and their diseases.

PLANT MATERIAL IMPORTED DURING THE YEAR, BY GENUS

Genus of Plants	Number Imported
Acer	2,715
Aesculus	75
Anthurium	1,100
Berberis	3
Corylus	46
Daphne	13
Fraxinus	18
Hydrangea	200
Juniperus	578
Laburnum	54
Mahonia	9
Malus	150
Populus	6
Prunus	200
Quercus	47
Rhododendron	31
Rosa	22
Wisteria	3
Total	5,270

PLANT MATERIAL RELEASED DURING THE YEAR, BY GENUS

Genus of Plants	Number of Plants Originally Imported	Number of Plants Released
Acer	6,088	3,639
Aesculus	15	13
Anthurium	512	394
Euonymus	200	112
Hydrangea	500	....
Ilex	390	273
Juniperus	15	1
Laburnum	94	69
Malus (Malling Stock)	500	267
Quercus	195	71
Rosa	24	24
Sorbus	100	42
Wisteria	2	1
Totals	8,635	4,906

VIRUS-FREE STRAWBERRY PLANT CERTIFICATION

Mention was made in the 1955-56 and 1956-57 Annual Reports of the initiation of a program for the production and certification of strawberry plants free from disease (particularly virus and red stele), insects and nematodes. In this project the Department would provide field inspection and certification, while the New Jersey Agricultural Experiment Station would grow clinically-tested virus-free and nematode-free foundation stock. The sponsoring Small Fruits Industry Committee of the New Jersey Horticultural Society would retain ownership of the plants, controlling distribution of the resultant progeny.

This year marks the completion of one full year of this program. Approximately 2,400 foundation plants of Sparkle were released in the spring of 1957, to two growers, for growing-on as "registered (increase)" certified plants.

Despite the extreme drought of that summer and the replanting of one bed of the Midland variety because of a poor stand, a total of 23,950 certifiable plants was dug this spring.

The distribution of these plants by the Industry Committee was as follows:

Sparkle —13,000—sold for certification during 1958 as "improved"
8,450—surplus sold to fruit growers
Midland— 2,500—sold for certification during 1958 as "improved"

A total of 1,240 Foundation plants was released to the two growers in April 1958, for the production of "registered (increase)" plants. Of this total, 900 were Sparkle and 340 Midland.

Four inspections were made of the plants growing under "registered (increase)" and "improved" certification. One planting thrived but almost half of the other was destroyed by deer.

It now appears that approximately 250,000 certified plants will be available from these plantings in the spring of 1959. A crop of strawberry plants of this magnitude will necessitate a well-planned selling program by the Small Fruits Industry Committee, assisted by the staff of the Extension Service.

WHITE-FRINGED BEETLE CONTROL

The year 1958 marks the fourth since the finding and identification of white-fringed beetle (*Graphognathus leucoloma*) in Vineland and the third since the infested properties along with a safety margin (totaling 350 acres) were first treated with dieldrin. Since that time a rapid reduction of population has resulted until, at the present time, there is promise of complete eradication. There follows a summary of white-fringed beetle finds to date:

Year	Adults	Larvae
1955	257*	numerous (late instar & pre-pupae)
1956	17	18
1957	2	none

* Dieldrin applications made spring and early summer. Emergence expected but many dead and dying.

White-fringed beetle quarantine regulations were enforced by an inspector of this Division during the fall of 1957 and the spring of 1958. He controlled the movement of plants, soil, produce, farm equipment and other items by which the pest might be spread. He also made 69 inspections for larvae and pupae turned up by farm machinery in the course of spring plowing.

During the months of July, August and the first half of September, a close and thorough inspection of the 350-acre control area was conducted. A member of the Federal Plant Pest Control Division, with full experience in white-fringed beetle control operations, was on hand for a short time to help coordinate the program and to advise of the adequacy of the New Jersey control measures.

The work was carried on in such manner as to give maximum coverage and efficiency. The form of the inspections was varied according to conditions; consisting of close and regular inspection, row-by-row inspection and blade-by-blade inspection.

Blade-by-blade inspections were made where beetles or parts of beetles were found. Row-by-row inspections were made when looking for beetles or feeding signs in cultivated fields. Regular and close inspections were made while searching for beetles and parts of beetles, or feeding signs, generally outside of the treated area or in uncultivated areas within the treated area. This type of inspection was also commonly used at nearby vegetable auction houses, packing plants, produce companies and railroad right-of-ways.

During the fiscal year only two newly emerged beetles were found, one dead and one dying. The immediate vicinity from which these beetles had emerged was further treated with dieldrin, to prevent survival of larvae from eggs that might have been laid. The area treated constituted 1,000 square feet. The dried head capsules, wing cases or other fragments of 25 beetles of previous years' emergence were also found.

There is now every reason to believe that control and eradication of this infestation of white-fringed beetle is being achieved. With the very important assistance of the Agricultural Research Service and other agricultural agencies, an insect pest capable of at least as much destruction as the Japanese beetle is being eliminated from New Jersey. Surveys of the area will still be necessary for several years.

BUREAU OF PLANT PATHOLOGY

CANKER STAIN DISEASE CONTROL

(Calendar Year 1957)

Scouting for canker stain disease of plane trees was conducted throughout this year. Approximately 100,000 trees in 11 counties were examined. The heaviest concentration of infected trees is still in the Camden metropolitan area.

The program provides annual scouting of Camden, Burlington and Gloucester counties. Elsewhere biennial scouting is performed except in those few areas in which canker stain diseased trees have been previously found.

CANKER STAIN SCOUTING BY COUNTIES

County	Total Number Trees Examined	Tagged Trees to January 1, 1957 — Total Diseased	Total Removed	Diseased Standing	Trees Tagged in 1957
Bergen	14,844	...	...	...	...
Burlington	23,295	54	53	1	26
Camden	26,850	200	170	30	131
Hudson	2,629	...	...	...	...
Middlesex	10,054	...	...	...	...
Monmouth	13,826	...	...	...	...
Ocean	800	...	...	...	...
Somerset	770	...	...	...	1
Union	6,525	...	...	1	2
Warren	1,063	2	2	...	8
Totals	100,656	256	225	32	168

A significant finding in 1957 resulted from the reporting to this Department by an official of the Phillipsburg Development Corporation (Warren County) of symptomatic trees in one of the residential areas of that development. An immediate examination revealed eight canker stain infected street trees within one city block. These trees were removed and burned within the week following. The education of concerned municipal and park officials to the recognition of the symptoms of this disease has been most helpful in the detection of diseased trees which have become symptomatic during the interval between the scoutings of the departmental inspectors.

Two diseased trees were found in Union County, one of these in a location removed from general pedestrian traffic. This tree was carefully examined for lacerations, etc., to attempt to establish the mode of infection. These attempts were unsuccessful.

The rosy canker complex which occurs presently in Camden County continues unabated and makes diagnosis for canker stain difficult. Diseased trees detected in the Camden metropolitan area are being removed more promptly than heretofore, and the canker stain condition in that area reflects this prompt attention to the disposal of infected material.

DUTCH ELM DISEASE CONTROL

(Calendar Year 1957)

A general survey to determine the trend of Dutch elm disease in the State was conducted during the year. Findings by counties were as follows:

Bergen County—	Mahwah vicinity.
Passaic County—	Wayne Township. Little change in this area from 1956. The elm reproduction in woodland areas quite noticeable.
Hudson County—	In this entirely urban territory, slight increase throughout the county, particularly in the street trees in Bayonne and Jersey City.
Warren County—	No significant change since 1956. Scattered infected trees throughout the county.
Sussex County—	Little change from 1956. The territory between Andover and Lake Mohawk the more heavily infected. Trees in the Lake Mohawk section in very good condition.
Morris County—	Boonton-Denville Road—an increase in the woodland infected trees in Morris Township. Dead elms in the Morristown Public Square quite striking.
Union County—	An increase in Roselle Park, Rahway, Westfield and Cranford on street trees.
Essex County—	East Orange, Caldwell, Montclair and Millburn.
Somerset County—	Heavier in 1957. Mostly native elms.
Hunterdon County—	Increase in the High Bridge area. Scattered trees throughout the county.
Mercer County—	Ewing Township continues as the area with a few infected trees.
Middlesex County—	Scattered—not serious.
Monmouth County—	Scattered infected trees throughout the county.
Burlington County—	General but not serious except in Burlington City.
Camden County—	General but not serious.

No symptomatic trees were observed this year in Gloucester, Cumberland, Salem, Ocean, Atlantic and Cape May counties.

Assistance to County and Municipal Shade Tree Commissions

The 17 parks of the Essex County Park system were thoroughly scouted for Dutch elm disease. These parks are scattered throughout the county and adjoin a considerable area of private and other public lands. Satisfactory control of the disease in these parks would provide relief to a considerable area where the disease has taken a distressing toll in the past 10 years.

The Park Commission has substituted a hydraulic sprayer for the mist blower formerly used to spray trees located in areas distant from the roadways. The benefits of this change should be manifest in 1958. Progress has also been made in the prompt removal of trees killed by Dutch elm disease. Two hundred sixteen diseased trees in this park system were detected in 1956 for removal. All were removed and burned by April 1, 1957. The 1957 scouting marked an additional 127 trees which were removed promptly. More thorough pre-foliar spraying of healthy elms and speedier

removal of diseased trees should result in more effective control of the disease.

The town of Montclair has had difficulty with Dutch elm disease for many years. The maintenance of public elm trees in this town is under the jurisdiction of four agencies; the Street Department, the Park Department, the Water Department and the Department of Education. A newly appointed commissioner requested the services of an inspector of this Department to make a general survey of the public grounds in Montclair and make recommendations. Accordingly, for the Street Department, 800 trees were examined, 93 marked for removal; for the Park Department, 400 trees were examined, 64 trees were marked for removal; for the Water Department, 10 trees were examined, five trees were marked for removal; for the Department of Education, 25 trees were examined, nine trees were marked for removal. A proposal for the coordination of shade tree maintenance activities within the jurisdiction of these four town agencies is under consideration. Such an effort should provide a program of Dutch elm disease control heretofore significantly lacking.

The superintendent of the Hudson County park system again requested the services of one of the departmental inspectors, and inspections of 2,500 trees in six parks were made during the month of August. Fifteen trees were marked for eradication. This is a low percentage of infection considering the elm population. The 15 diseased trees were removed and buried in sanitary land fill within one week. During the course of this inspection the superintendent of parks and the inspector of this Department thoroughly analyzed the control operations which were being employed by this park management. It became evident that the concentration of insecticide in the spray mixture was inadequate. The spray program was immediately adjusted to provide a concentration recommended by the Department.

The usual scouting and the marking of diseased trees was continued on State-owned properties. At the Annandale Reformatory, 300 trees were examined, two trees marked for removal; at the Clinton Reformatory, 100 trees were examined, five diseased trees were marked for removal. The trees at this latter institution were sprayed in 1957 after a two-year lapse of non-spraying. The acquisition of new and adequate spray equipment will undoubtedly encourage the management of this institution to spray the trees annually.

One hundred fifty trees were examined on the property of the School for the Deaf at Trenton. This institution has no equipment and hence does not spray the trees. One defoliated tree, non-symptomatic of Dutch elm disease, was tagged for removal. At the Marlboro State Hospital, 125 sprayed trees were examined and one Dutch elm diseased tree tagged.

In June, 1957 the city clerk of Burlington requested the assistance of a Department inspector to ascertain the extent of Dutch elm disease infec-

tion within the town. This inspection resulted in the detection of seven trees on city property and 22 on private property, principally in the northwestern corner of the town. One of the diseased street trees marked for removal was of such dimensions and of such potential hazard to pedestrians and vehicular traffic that the town proceeded immediately to remove and burn it. The city clerk will attempt to revitalize the elm protection work so that standing diseased trees, both on city and private property, will be removed before next spring. A spraying program is also being considered.

Three small diseased street trees were detected in the Hillcrest area in Phillipsburg. Heretofore, these trees have not been sprayed. A protective spraying program is contemplated.

Assistance to Commercial Arborists and Private Property Owners

A total of 53 requests was received from commercial arborists and private property owners for information and assistance pertaining to the condition of elm trees. With few exceptions, inspections resulted in a recommendation for tree removal. A good example of active cooperation by private property owners with this Department is provided by the Baltusrol Country Club at Springfield. This club has assumed the full responsibility for a Dutch elm disease control program on its property. Sprays were applied according to the recommendations of this Department and resulted in a sharp reduction in the number of diseased trees as indicated by the inspection results as follows:

46 trees marked in 1955
35 trees marked in 1956
6 trees marked in 1957

A list of commercial arborists available for tree spraying and tree removal work has been compiled. It has demonstrated its usefulness in numerous instances, as has the list of New Jersey certified tree experts.

Inspection of State Highway Contracts

A clause in all State highway contracts requires that this Department provide the services of an inspector for the supervision of the disposition of encountered elm wood. This service was provided for the following highway contracts during 1957: (1) Colesville, Sussex County, Route 23, 50 trees; (2) Clinton, Hunterdon County, Route 22 by-pass, 12 trees; (3) Closter, Bergen County State-aid road widening, 6 trees.

The Pequest River widening project for flood control, sponsored by the Soil Conservation Service, has been completed and all the involved elm wood disposed of in accordance with the recommendations of this Department.

General Observations

The elm leaf beetle is an annual defoliator nuisance and often seriously interferes with dependable scouting for the Dutch elm disease. In 1957 the elm leaf beetle was practically non-existent, a circumstance that prevailed even in the absence of spraying. The reason for the sudden disappearance of the beetle is not known.

The record-making drought of 1957 was responsible for abnormal appearance of the foliage on many elm trees throughout the State. This factor contributed to the difficulty of scouting.

OAK WILT SCOUTING IN NEW JERSEY

(Calendar Year 1957)

The subnormal rainfall of the period June to mid-August caused a foliar condition of the oaks which made scouting for oak wilt disease very deceptive. Premature color changes in the oak foliage made intensive examinations necessary. Several samples were submitted to the Rutgers Department of Plant Pathology and were cultured with negative results.

On the basis of the 1957 observations and the negative reports from the suspect trees from which samples were taken, oak wilt is not known to exist in the State of New Jersey.

AIRPLANE SPRAYING OF PINE PLANTATIONS FOR SAWFLY CONTROL

With the advance in the cost of airplane application of insecticides for the control of the European pine sawfly (*Neodiprion sertifer*) in red and Scotch pine plantations, the interest in this protection is steadily waning. During the spring of 1958, 728 acres were sprayed on 10 properties. The property of the North Jersey District Water Supply Commission provided 405 of these acres. Control was entirely satisfactory and no respraying was necessary.

Several of the red pine plantations in northern New Jersey displayed browning of the 1957 foliage during August and September of that year. It is believed that the record-breaking drought of the 1957 summer was responsible for the condition. This abnormal appearance has continued into the spring and summer of 1958, but the subsequent growth and behavior of these trees should aid in diagnosis.

CANKERWORM SURVEY

Inspections were again made at the 49 established stations in the northern two-thirds of the State to determine the severity of damage by the fall and spring cankerworm. As in 1957, the damage to foliage was insignificant. This behavior of these two insects during the last two seasons is without precedent for the period during which these records have been maintained.

FOREST AND SHADE TREE PEST SURVEY

A general survey is conducted annually to ascertain the occurrence and severity of shade tree damage by insects and diseases. A summary of the findings as of June 30, 1958 follows:

The rainfall during the first six months of 1958 was abundant, approximately six inches above normal. Most of the forest trees displayed a very lush growth with a minimum of pest complication.

The eastern tent caterpillar was again responsible for a very conspicuous defoliation of its primary host plants, apple and wild cherry.

The birch leaf miner was as abundant as usual. The application of carefully timed sprays for the control of this insect is not generally practiced.

The defoliation and dying branches of street and park sweetgums is still an unsolved problem. Droughts of the recent years are frequently associated with an explanation for the present condition of these trees.

Many requests for advice on the decadent condition of urban oaks have been received. Almost invariably there is a problem of scale control.

Verticillium wilt is a continuing problem with no acceptable control tool available. Many of the infected trees have been removed because of hazard to pedestrian and vehicular traffic.

The elm leaf beetle population continues at a very low level. Sporadic cases of elm leaf beetle damage were reported but very seldom required spraying.

Fall webworm, although occasionally seen, is seldom considered a pest requiring special attention. However, on the property of the Picatinny Arsenal at Dover the fall webworm infestations reached such proportions in 1957 that airplane spraying was planned for about 100 acres in 1958.

Anthracnose of native sycamores and London planes is almost an annual occurrence. During 1957 the severity of this disease was surprisingly low. During the spring of 1958 this disease was responsible for defoliation and twig blighting to a degree unseen in the previous 10 years. The activity of this fungus ceases during early summer and most of the seriously affected trees refoliate, practically obscuring the consequences of the infection rampant during the previous months.

LABORATORY ACTIVITIES

During the year the laboratory was separated from the Bureau of Plant Pathology and established as a Division-wide service. Obviously, limitations of time, personnel, space and equipment required that a degree of selectivity be exercised in the types of work undertaken. In December it was necessary to move the laboratory from the location at 3179 South Broad Street to 394 Miller Avenue, both in Trenton. The new location has been equipped as well as could be done under the circumstances, but space there is very limited and it is unlikely that the laboratory can be of maximum usefulness until the problems of space and personnel are solved.

BIOLOGICAL CONTROL OF A SAWFLY IN NATIVE PINE

The attempt to establish biological agents for the control of the sawfly *Neodiprion pratti paradoxicus* was a major program for the year. The initiation and need for this work were presented in the previous annual report.

A survey was undertaken to determine the extent and severity of infestation by this sawfly in the native pitch and short leaf pine region of the State. The estimated area of infestation in June 1957 was 1,100 square miles. This area extended in a roughly oval shape from Jamesburg in the north to New Gretna in the south, and from Medford in the west to Toms River in the east. The affected counties were Middlesex, Monmouth, Ocean, Burlington and Atlantic.

The infested area was redetermined in June 1958, to trace the spread and aid in developing the parasite distribution program. This survey showed an extension of the southern limit of infestation to the vicinity of Tuckahoe. The western boundary in 1958 was from Tuckahoe to Millville, then to Marlton and Mount Holly. The infested area thus included parts of Cumberland and Camden counties in addition to those known to be infested in 1957. No significant change was noted in the eastern and northern boundaries of the infestation. The estimated area of infestation in June, 1958 was 1,630 square miles.

This sawfly is presumed to have been in the general area for 25 years or more, and damage to pitch pine has been reported periodically from Connecticut, Massachusetts and New York. However, the present outbreak is the most severe of record. In a number of locations the sawflies have completely defoliated pitch pine, leaving only the developing terminals of new growth. In addition, the insects frequently girdle the new growth terminals, causing them to die. When most of the new terminals are so killed, the tree dies. Fortunately, this degree of girdling is not the general rule. The common severe defoliation, however, predisposes the trees to bark beetle attack, so that there is every reason to believe that a continuation of severe sawfly infestation will result in a very substantial kill of the pines. In general, observations over the infested area made in June 1957 and June 1958 indicate a decline in the sawfly population. The area of infestation has increased but, in general, the degree of defoliation was distinctly less in 1958 than in 1957. There are still areas of extremely heavy defoliation, and some local areas in the generally infested area were severely attacked for the first time in 1958.

Because of the size of the infested area and the low monetary value of the infested species, spraying or other chemical control has been ruled out. Thus, suppression must rely on the application of biological control methods reinforcing the biological factors already present as rapidly and extensively

as possible. Accordingly, parasite rearing and distribution and the study of diseases of the sawfly were undertaken.

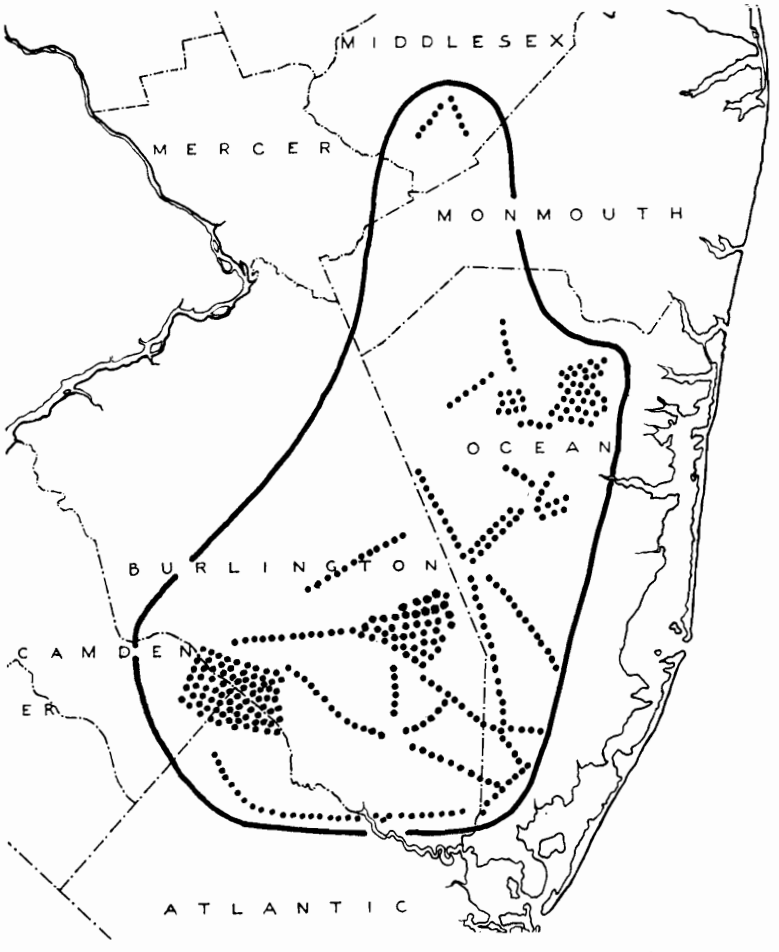
A preliminary scouting over the infested area in July, 1957 showed the chalcid sawfly cocoon parasite, *Dahlbominus fuscipennis* (formerly, *Microplectron fuscipennis*), absent in the *Neodiprion pratti paradoxicus* population. Laboratory tests indicated the parasite could attack, kill, and make a successful host of this sawfly. During July and August, 1957, 1,007,000 *Dahlbominus* were reared and distributed in the infested area. Cocoons of the very closely related sawfly, *Neodiprion sertifer*, were used in the rearing work because they were much easier to collect in the required numbers than cocoons of *N. pratti paradoxicus*. An estimated 90,000 cocoons were required in the rearing work, and these were hand collected in Washington Crossing Park. The parasite, *Dahlbominus*, was recovered from the *N. sertifer* host there and near Princeton. Host cocoons were heat-treated in water at 56° C. for three minutes, and then exposed to the parasite in special rearing boxes. The heat treatment results in a high rate of parasitism as it paralyzes the contained larvae and the percentage of successful oviposition by the parasite is increased. Heat treatment also greatly reduces the successful metamorphosis of any host insects not attacked by the parasites.

After exposing the host cocoons to the parasite, they are incubated for 10 to 12 days, preferably at a temperature of 76°F. and relative humidity of 60 per cent. The rearing boxes are then opened, the cocoons removed, and the percentage of parasitism determined by opening a representative sample. It was found that an average of 35 parasites emerged from each parasitized cocoon.

The release frames utilized in the field distribution consisted of a simple wooden frame measuring three inches square inside by three-quarters inch thick. Both sides were securely screened with 16 mesh metal insect screen. This protects the contained parasitized sawfly cocoons from attack by rodents and other insectivores after they are placed in the infested woodlands. Also, these frames permit the escape of the very tiny parasite adults while retaining any of the host insects that may chance to make a successful emergence. The release frames were usually filled with enough parasitized cocoons to produce an estimated 2,000 parasites.

The parasite release frames were placed along roadsides, some distance into the infested woodlands, and on both sides of the roads. Liberations were usually at distances of one-half to one mile apart, as dictated by the presence of pines, infestation status, and other local factors. Each spot was checked for positive evidence of sawfly infestation before the release was made. All releases were made during the period July 30 to August 16, 1957.

Life history and associated studies were made during the course of this work. Careful attention was paid to the presence or absence of other parasites and diseases. The life history of *Neodiprion pratti paradoxicus* almost exactly parallels that of a closely related sawfly, *Neodiprion sertifer*, and save for the distinct difference in host pine species attacked, the habits ap-



Approximate number and general location of parasite releases during 1957. Solid line indicates June 1958 boundary of the sawfly-infested area. Dots indicate parasite distributions.

pear identical. There is a great body of literature and experience on *N. sertifer* which can be directly applied to *N. pratti*. Significantly, it was found that a small portion of the *N. pratti* population takes two years to develop, just as does *N. sertifer*. There is a tendency to overlook the implications of this important adaptation on the part of these insects.

The following parasites were observed to be active in the area infested by *Neodiprion pratti paradoxicus*:

(A) *Aptesis basizonius* (Grav.) (formerly *Microcryptus basizonius*). Not abundant, but observed at a number of locations. This parasite was first introduced in Essex County, in 1940, on *N. sertifer*. A native of Europe, it was imported into Canada from Hungary in 1933 and following years,

for control of the European spruce sawfly. This parasitic wasp is now well established in the area infested by *N. sertifer* and has unaided made the transition to *N. pratti.* For some reason it never seems to become abundant.

(B) *Anthrax sinuosa* (Weid.). This dipterous parasite was observed to be abundant and present in nearly every sawfly infested area examined. Adult flies were observed throughout the summer in the infested area, and cocoons of the sawfly commonly contain all developmental stages of the parasite. At present it is by far the most common parasite in the cocoons of *N. pratti.* It has also been found in the *N. sertifer* population at various places in Mercer County.

(C) *Exenterus canadensis* (Prov.). This parasite was found widely distributed in the area infested by *N. pratti.* During the summer of 1957 the number recovered from *N. pratti* cocoons was not large. However, in the spring of 1958 enormous numbers of adults were found in some areas, indicating that this is a major parasite of the sawfly. Since this wasp oviposits externally on the later instar larvae of sawflies, the adults are only observed for a short period in late May and early June. There is but one generation per year. This parasite is also now quite common in *N. sertifer* in Mercer County.

(D) *Mastrus argeae* (Vier.). This species was recovered in small numbers from several locations in the area infested by *N. pratti.* It is now quite common in *N. sertifer.* This wasp is quite similar to *Aptesis* in appearance and habits, and is a parasite of sawfly cocoons.

(E) A miscellaneous assortment of arachnids, pentatomids, and hymenoptera, such as yellow jackets and hornets, have been found attacking sawfly larvae. Rodents and insectivores are quite adept at finding cocoons of *N. pratti* when these are clustered, but largely ignore the more uniformly scattered cocoons. The depredations of all of these are probably of minor consequence.

It is believed that the fly, *Anthrax,* and the wasp, *Exenterus,* are now present in sufficient numbers to be a factor in the control of this sawfly and may well be responsible for the general reduction in defoliation noted in 1958 compared with 1957.

No disease was noted in the *Neodiprion pratti paradoxicus* population, although a constant watch was maintained for diseases in the larvae.

In the spring of 1958 a series of trials was made to introduce a polyhedral virus disease of the larvae of *Neodiprion sertifer* into the population of *Neodiprion pratti paradoxicus.* These trials covered the entire larval period of the latter species. The disease agent was brought to America by the Canadian Forestry Biology Division for use against *N. sertifer.* The importation was made in 1949 from material collected in Sweden. A few trials of the disease were made in New Jersey in 1951 and 1952, but interest later waned. In June 1957, larvae of *N. sertifer* killed by this virus in a red pine plantation near Delaware, Warren County, were collected and kept in cold storage until late April 1958. Beginning April 30, 1958, and continuing through June 3, suspensions of this virus disease material were applied to larvae of *N. pratti* and also to larvae of *N. sertifer* to check for pathogenicity. All of these were field trials. In every case a true epizootic was established in *N. sertifer,* working in Washington Crossing Park where the disease did not occur prior to these trials. The results obtained on *N. sertifer* indicate

that this biological agent should be re-examined as a control measure for *N. sertifer.*

This polyhedral virus can cause disease in *N. pratti paradoxicus* larvae. The course of events in this insect differs from that found in *N. sertifer.* Reliance was not placed on death of the insects as an index of disease; a sample of dead insects from each introduction trial was examined microscopically for the characteristic polyhedra and procedures were developed for staining these reaction bodies as well as bacteria and fungi in the affected insect cadavers. Results during the spring of 1958 indicate that the first and last instar larvae of *N. pratti* are highly resistant to the disease. The mid-instar larvae of *pratti* are susceptible to infection. In these mid-instar larvae the disease produces effects quite the same as in *N. sertifer.* The most pronounced difference here observed was that the number of polyhedra produced in the larvae of *N. pratti* is frequently considerably less than is found in *N. sertifer.* However, many larvae of *N. pratti* dead of this disease contain quite as many polyhedra as are found in *N. sertifer.* The period from introduction to death in mid-instar *N. pratti* is nine to ten days. Affected larvae tend to remain attached to the pine needles, being cemented thereto by an oral and anal exudate secreted just prior to death.

Spread of the disease from the very small introduction locale (frequently a single colony of larvae) to the surrounding areas was found to occur in the *N. pratti paradoxicus* population. This spread was not as spectacular as in the case of *N. sertifer* because almost all of the larvae succumbing were removed for examination and counting as soon as they were found. The apparent resistance of the early and late instar larvae also can be expected to limit the spread of the disease. In any event, epizootics did not occur in *N. pratti* while they were easy to initiate in *N. sertifer.* Some observations point to the parasite *Exenterus canadensis* as a factor in disease dissemination. During the course of these investigations it appeared that *N. pratti* is susceptible to bacterial and fungus infections arising from the artificial contamination of their food by these organisms.

If the infestation of *N. pratti paradoxicus* in the native hard pines of the State is found to persist in succeeding years, it is believed that the potentials of these several microbiological control agents can be profitably explored.

The State Department of Conservation and Economic Development has a very definite interest in this project and has assisted materially in the fieldwork. The affected pines have an intrinsic economic significance over much of the area involved. They are often the dominant tree growth, so much so that the area is spoken of as the "Jersey Pines." In recent years a number of residential communities of some substance have been developed within the areas involved and this trend can be expected to continue. The State Forest Fire Service is also concerned, since the defoliation with attendant opening of the forest canopy predisposes such areas to fire hazard through rapid drying of the duff layer to the danger point.

CERTIFIED SEED EXAMINATION

This service is of a quality control type to assure the Seed Certification Bureau that submitted seed have been adequately treated with an approved disinfectant and, where necessary, protective insecticide. A total of 115 samples of seed was submitted for testing. Most lots were found satisfactory. A few samples of tomato seed were found inadequately treated and required retreatment for eligibility.

Many producers of tomato seed in New Jersey submit their seed to Georgia for testing to be eligible in the production of certified plants in that State. The laboratory tests must therefore be patterned after those used in Georgia, but in addition a bio-assay is used to give more detailed information. After a year's experience, it seems probable that the sterility test as applied here and in Georgia does not always reveal the desired information. The purpose of treating is to prevent the dissemination of seed-borne diseases and their appearance in the plants grown from the seed. The bio-assay test and certain field developments during the current year both in New Jersey and Georgia indicate that a small amount of contaminated seed may pass the sterility test, the contaminants being inhibited from development (or masked) by being in the same culture plate with other seeds which do carry enough sterilant to be satisfactory. The testing procedures will probably be revised to eliminate this potential weakness.

The Bureau of Seed Certification conducted a limited "drill box survey" to ascertain the quality of seed being sown as cover crop in the State. Tests in this laboratory covered only the seed treatment. A generally unsatisfactory condition prevailed in the sample submitted.

BEE DISEASE EXAMINATION

Microscopic examination was made of all bee disease material that could not be readily classified in the field. Brood smears submitted by beekeepers through the mail were also examined, the owner advised and the premises inspected where this was deemed necessary. About 200 smears required examination during this year. The results are summarized in the Bee Culture section.

Some difficulties were experienced, due to beekeepers submitting a single pooled sample from a number of dead larvae in a colony. This poor practice is being eliminated by calling the attention of the apiarists to the obvious source of error. It is not uncommon to find both American and European foul brood in the same colony.

SOYBEAN CYST NEMATODE STUDIES

A total of 75 soil samples was submitted for examination during the 1957 summer survey for the soybean cyst nematode, *Heterodera glycines*. The samples were permitted to dry for at least two weeks prior to processing.

This assures that cyst nematodes will be recovered, but precludes any determination of other genera of nematodes that may also be of economic importance. All cysts recovered were placed in 5 per cent formaldehyde solution and sent to the Federal laboratory in Memphis, Tenn., for specific identification. Species reported present were: *Heterodera weissi*, *H. cacti* group, *H. trifolii*, *H. schactii* group. It should be noted that the "*H. schactii* group" includes *H. glycines*. Unless eggs containing larvae are present, it is not possible to split this group as the cysts themselves are not taxonomically distinguishable. The list of counties from which samples were submitted and the cyst nematode status follows:

SUMMARY OF SURVEY FINDINGS FOR SOYBEAN CYST NEMATODE

Counties	Total Samples	Negative for Cyst Nemas	Cyst Nemas Found, Samples	*H. schactii* Group Nemas, Samples	*H. glycines* Samples
Atlantic	1	1	..	..	..
Burlington	17	6	11	1	..
Camden	2	..	2	..	..
Cumberland	9	9	..	..	..
Gloucester	10	9	1	..	..
Mercer	10	6	4	2	..
Middlesex	11	5	6	..	..
Monmouth	11	7	4	2	..
Salem	3	3	..	..	..
Somerset	1	1	..	..	..
Totals	75	47	28	5	..

BUREAU OF SEED CERTIFICATION

GRAIN SEED CERTIFICATION

Field crop seed production was lower in 1957 than in 1956. Hybrid seed corn was in oversupply and acreage was reduced by the growers. The extremely dry weather curtailed or reduced yields below the 1956 level. However, the 66,968 bushels of seed certified represents one of the highest yields on record in New Jersey.

One of the problems in seed production is the inability to plan two years in advance for seed needs. Some overproduction of seed is necessary to safeguard seed markets and to protect against poor seed production years, but too much overproduction results in financial losses.

Federal programs designed to reduce production of grains have been largely responsible for the reduction in seed use. The declining market for some types of certified seed is in no way a reflection upon its quality.

Barley

In 1957, a total of 429 acres of Wong barley was entered for certification compared with 576 acres in 1956. This reduction in acreage is difficult to explain because all of the 1956 barley seed production was sold and several thousand more bushels were needed to meet the demand.

The acreage entered for certification does not always indicate the amount of seed available for distribution. In 1956, 208.5 acres, 36 per cent of the total entered, were rejected from certification. In 1957, only 24 acres or 7 per cent were rejected, making the total acreage passed 405 acres compared with 367.5 acres in 1956. The low rate of rejection in 1957 was due generally to a better selection of fields.

Dog fennel, *Anthemis cotula*, a weed which caused considerable loss of barley in 1956, seemed less prevalent this year. Since chemical control of this weed is ineffective, it is believed that weather conditions during the winter must have been unfavorable for its development.

In May a special inspection was made to determine the amount of loose smut present in the seed fields. In the registered fields, which are grown from hot water treated seed, no smut was found. In the certified fields, which are one generation from hot water treated seed, an average of five smutted plants per acre was found. These figures tend to remain constant through the years, indicating that the present method of hot water treatment is satisfactory yet it has had poor acceptance. Strict control of treatment timing at critical temperature is required. There is a very slight differential between the seed killing temperature and the smut controlling requirement. Elaborate equipment to provide steam under pressure is required. A "cold water treatment" which shows great promise is under development at the Agricultural Experiment Station.

Due to extremely hot weather during early spring and lack of moisture during June, maturity of barley was hastened by two to three weeks, giving grain a bright color, low moisture and a test weight averaging 52 pounds per bushel.

A total of 23,171 bushels was sealed as compared with 19,478 bushels the previous year. Approximately 57 bushels of barley were sealed for each acre passing certification.

As has been the case for several years, the supply of certified barley did not meet the demand. Indications are that an even greater demand can be expected next year. Every effort is being made to increase the production of certified barley without sacrificing quality.

The following is a summary of the winter barley seed certification program:

Variety	Acres Entered	Acres Rejected		Acres Passed	Bushels Sealed
		Field	Bin		
Wong					
Foundation	3	..	..	3	110
Registered	49	1	..	48	2,844
Certified	377	23	..	354	20,213
Carry-over	..	..	..	..	4
Totals	429	24	..	405	23,171

Field Corn

For many years the New Jersey Field Crop Improvement Association has encouraged the production of enough seed corn to meet current demands and provide a buffer for protection against a poor production year. Accordingly, 773.5 acres of seed corn were planted in 1956. Production amounted to 28,972 bushels. When this seed was to be marketed in 1957, two factors greatly reduced demand: (1) the Federal government put the soil bank program into operation which took approximately 30,000 acres of corn out of production in New Jersey; (2) the spring planting season was extremely dry and the farmers of New Jersey were unable to plant corn. Of the 28,972 bushels of certified seed available for sale, only 8,000 bushels were sold. This caused a tremendous carry-over of 20,000 bushels of seed.

A total of 425 acres was planted for seed production in 1957. However, as it became evident that a sufficient quantity of seed was already on hand, 190 acres or 44 per cent of the planted acreage were withdrawn from certification. During field inspection, nine acres were rejected because of improper detasseling. During bin inspection, the production from 92 acres was rejected because of low germination, extensive insect damage and moldy seed. Thus, a total of 134 acres was accepted for certification as compared with 735.5 acres the previous year, a reduction of 601.5 acres or 82 per cent. This should be considered a one-year reduction. The field corn certification program is not in jeopardy, since a large supply of high quality seed is still available.

The following is a summary of the 1957 corn acreage:

Variety	Acres Entered	Acres Withdrawn	Acres Rejected		Acres Passed
			Field	Bin	
New Jersey No. 7	115	..	9	70	36
New Jersey No. 8	146	85	..	22	39
New Jersey No. 9	152	105	..	..	47
Connecticut No. 554	12	..	..	..	12
Totals	425	190	9	92	134

The average yield of all hybrids for 1957 was 20 bushels of flats per acre. This is just half the average yield of the previous year. Increased use of irrigation and good cultural practices can increase the yield of New Jersey seed corn considerably.

The seed of two new experimental hybrids was grown on a limited acreage this year. Both are medium season hybrids in the 110-day class as compared with 120-day in the full season hybrids. These short season hybrids would be most desirable in the northern counties of New Jersey. All of the seed produced in 1957 was distributed to farmers within the State for testing purposes.

Because of the large quantity of seed carried over from 1956, the Agricultural Experiment Station is conducting tests to determine the effect of aging upon hybrid seed corn. At the present time, corn eligibility for certification is limited to two years.

As a bid for a larger share of seed sales in New Jersey the certified seed growers have substantially reduced prices. New Jersey certified seed is now probably the least expensive seed available to New Jersey farmers as well as the best quality.

The following is a summary of the seed corn certified in 1957:

Variety	New Crop		Carry-Over		Bushels Sealed
	Flat	Round	Flat	Round	
New Jersey No. 7	504	29	1,668	17	2,218
New Jersey No. 8	1,294	53	5,162	20	6,529
New Jersey No. 9	549	55	3,276	14	3,894
New Jersey No. 10	...	...	1,460	3	1,463
Connecticut No. 554	304	19	578	...	901
Totals	2,651	156	12,144	54	15,005

Sweet Corn

A decision was reached early in 1957 by the Sweet Corn Industry Committee, the New Jersey Agricultural Experiment Station and the State Department of Agriculture to extend all means and measures for the production of New Jersey hybrids within the State. Seed from the western states has not proved satisfactory for New Jersey conditions.

As a necessary first step, the main effort in the 1957 season was to build and produce a sufficient quantity of inbred lines. With handful quantities of breeder seed, increases were made under careful inspection procedures and isolation to assure quality. With the help of irrigation, limited quantities of inbreds were produced, sufficient to grow about 50 acres of New Jersey hybrids in 1958.

The production of inbreds was as follows: New Jersey No. 216, 375 pounds; New Jersey No. 830, 88 pounds; New Jersey No. 1301, 125 pounds; Iowa No. 5125, 105 pounds; and Connecticut No. C-13, 1,363 pounds.

In 1957, six acres of New Jersey No. 106 were planted, one acre of New Jersey No. 114, and one acre of New Jersey No. 109.

One three-acre field of New Jersey No. 106, irrigated regularly, had a potential of 1,200 to 1,500 pounds of seed as maturity neared. Unfortunately the blackbirds chose this field as a feeding area and within hours the field was completely lost for seed purposes. The balance of the New Jersey No. 106 acreage produced a limited quantity of seed, principally because of insufficient rainfall and extremely hot weather during the pollinating period. This field of New Jersey No. 106 was also being produced by a weak pollinator (143-Y), which has now been eliminated and replaced by New Jersey No. 830.

The attempt to produce New Jersey No. 114 without irrigation failed completely. No seed was harvested.

One acre of New Jersey No. 109 was grown under irrigation and provided approximately 1,000 pounds of seed. This excellent yield gives promise that hybrid sweet corn seed production will be successful in New Jersey and will warrant a certification program.

For 1958, a production goal of 31 acres was set; consisting of five acres of New Jersey No. 106, 20 acres of New Jersey No. 109, five acres of New Jersey No. 114, and one acre of New Jersey No. 111.

A manual was prepared for new seed producers, which attempted to give information on all steps that are critical in the production of these crosses.

During the month of February, 10 growers agreed to grow sweet corn seed in 1958. Thirty-four acres were planted: two acres, New Jersey No. 101; eight acres, New Jersey No. 106; 18 acres, New Jersey No. 109; five acres, New Jersey No. 114; and one acre, New Jersey No. 111. All seed production fields are equipped for irrigation and the prospect for supplying a large portion of sweet corn seed to New Jersey farmers is now very promising.

Winter Oats

A total of 76.5 acres of winter oats was entered for certification in contrast with 122 acres entered in 1956. This year two varieties of oats were eligible for certification: LeConte, which has been certified in this State for several years and Dubois, which was recommended for the first time. The results of the intensive roguing program conducted the previous year on the LeConte variety were very evident. Only rarely was a mixture of other grains and off-type varieties found. The source of the Dubois variety was foundation seed produced outside this State. Unfortunately, mixture counts ranged as high as 1,000 mixed plants per acre and considerable roguing was required in order to meet the certification standards. During field inspection 21 acres, or 28 per cent, were rejected for mixture of other crops or inseparable weeds.

A total of 2,568 bushels of winter oats was sealed compared with 3,456 bushels the previous year. This year the entire crop was sold, as well as 915 bushels of carry-over seed.

The market for winter oats in New Jersey has not developed as rapidly as was expected, chiefly because present varieties are not well adapted to New Jersey climatic conditions. It is hoped that a new variety now being tested at the New Jersey Agricultural Experiment Station will solve this problem.

The following is a summary of the winter oat program:

Variety	Acres Entered	Acres Rejected		Acres Passed	Bushels Sealed
		Field	Bin		
LeConte					
Registered	1	..	1	..	..
Registered carry-over	..	..	..	..	36
Certified	50	13	4	33	753
Certified carry-over	..	..	..	..	879
Dubois					
Registered	2.5	..	..	2.5	123
Certified	23	8	..	15	777
Totals	76.5	21	5	50.5	2,568

Soybeans

The total acreage of soybeans entered for certification was 1,200.5, approximately the same as the previous year. The popularity of the Clark variety is still increasing and 81 per cent of the total acreage was planted to this variety. Clark produces higher yields than the Lincoln and Hawkeye varieties under normal growth conditions. This, however, is causing marketing difficulties, because more Clark soybeans are being produced than can be sold, while a shortage is being experienced in the shorter season varieties of Lincoln and Hawkeye.

Because the demand for the Chief variety of soybean has diminished and it is no longer recommended by the New Jersey Agricultural Experiment Station, the Foundation Seed Committee decided to discard this variety from certification. The Clark soybean can be substituted for the Chief—in most cases with increased yields.

During field inspection a total of 89 acres or 7 per cent was rejected because of varietal mixture, volunteer corn and poor appearance. During bin inspection a total of 437 acres or 36 per cent was rejected for poor germination, high percentage of inert material and poor appearing seed. This total of 43 per cent rejected is the highest rate of rejection ever necessary in a soybean crop. This can be attributed mainly to two factors: (1) the extremely dry weather during the spring and summer, which caused the plants to grow slowly, so that the beans did not attain proper size and maturity; (2) heavy infestations of red spider and two-spotted mites in southern New Jersey fields which resulted in early defoliation of the plants.

The soybean seed that was accepted for certification had a germination percentage of over 85 and should produce good crops. The yield of soybeans was approximately 14 bushels per acre as compared with 30 bushels per acre the previous year. Consequently, only half the total number of bushels was sealed from approximately the same acreage. The dry weather made 1957 one of the poorest production years in the history of New Jersey certified soybean seed.

It was especially noticeable in 1957 that soybeans which were combined carelessly and contained a large percentage of split beans and high inert matter had a tendency to drop in germination during the storage period. Some of these lots, which germinated 90 per cent immediately after harvest, had a germination in the 70's six months later.

The following is a summary of the 1957 soybean program:

Variety	Acres Entered	Acres Rejected		Acres Passed	Bushels Sealed
		Field	Bin		
Clark					
Registered	1	...	...	1	15
Certified	979	34	385	560	8,133
Carry-over	...	...	...	...	318
Lincoln					
Certified	102.5	55	13	34.5	327
Carry-over	...	...	...	...	48
Hawkeye					
Registered	1	...	...	1	9
Certified	117	...	39	78	540
Carry-over	...	...	...	...	31.5
Totals	1,200.5	89	437	674.5	9,421.5

Wheat

A total of 646 acres of wheat was entered for certification. This is a decrease of 41 acres from the previous year.

During field inspection, 96 acres or 15 per cent of the total acreage entered were rejected for loose smut, varietal mixture, disease or inseparable weeds. The entire acreage of the Dual variety was rejected, as was that of registered fields of the Seneca variety. The complete rejection of these two lots of seed was caused by an exceptionally high percentage of loose smut. Counts made by the inspectors ranged between 8,000 and 12,000 diseased plants per acre. These two varieties are very susceptible to loose smut and it appears the seed must be hot water treated annually to control the disease. The hot water treatment in 1956 did not control this fungus disease, due to an error in procedure.

During bin inspection 29 acres or 4 per cent were rejected. The bin rejections were caused mainly by improper harvesting of the seed. The unusually dry weather before and during the harvest period caused the grain to be very dry and brittle. In lots where handling care was not exercised during the combining operation, considerable damage was done to the seed. Lots which contained 6 per cent cracked kernels could not be cleaned properly and were rejected.

Rejections during field and bin inspection in 1957 amounted to 19 per cent of the total, compared with 30 per cent the previous year. Less acreage was entered for certification in 1957, but the total acreage certified was greater by 43 acres.

The total bushels sealed was 16,803. This is an increase of approximately 2,500 bushels over the previous year. An average of 32 bushels of cleaned seed was sealed for each acre passing certification. This is an increase of three bushels per acre over the two previous years when only 29 bushels were sealed per acre. Apparently five to ten thousand more bushels of certified wheat could have been sold.

The following is a summary of the 1957 certified wheat program:

Variety	Acres Entered	Acres Rejected		Acres Passed	Bushels Sealed
		Field	Bin		
Seneca					
Foundation	...	...	...	...	21*
Registered	11	11	...	...	.....
Certified	87	24	20	43	1,525.5
Pennoll	534	47	9	478	15,256.5
Dual	14	14	...	...	.....
Totals	646	96	29	521	16,803

* Hot water treated.

A summary of the certified seed grain sealing from 1941 to 1957 follows:

Year	Total Sealed (bushels)	Corn (bushels)	Oats (bushels)	Wheat (bushels)	Barley (bushels)	Soybeans (bushels)	Sweet Corn (pounds)
1957	66,968	15,005	2,568	16,803	23,171	9,421	2,756
1956	84,281	28,972	3,456	14,356	19,478	18,019	....
1955	56,955	8,309	5,289	17,324	22,033	4,000	....
1954	65,941	15,356	1,650	21,026	17,958	9,564	....
1953	61,182	19,794	2,115	20,172	10,438	8,663	....
1952	67,777	14,593	1,836	25,159	15,265	10,924	....
1951	56,404	13,315	2,745	19,224	13,828	7,292	....
1950	43,819	13,583	2,904	9,961	9,999	7,372	....
1949	41,935	14,288	2,145	8,666	12,366	4,470	....
1948	27,278	12,993	1,941	3,996	5,784	2,564	....
1947	23,937	9,173	1,612	5,188	6,994	970	....
1946	27,217	9,371	2,853	6,915	7,098	980	....
1945	21,226	12,408	2,306	2,424	3,653	435	....
1944*	25,253	9,534	5,316	4,068	5,473	874	....
1943*	25,074	6,461	1,408	3,917	3,023	13,263	....
1942*	24,571	9,744	1,576	4,882	2,052	5,900	....
1941*	19,159	9,125	1,750	3,706	....	3,764	....

* Total sealed represents only the principal crops.

SEED POTATO CERTIFICATION

The late seed crop of potatoes was produced on approximately the same acreage as in the previous four or five years. With declining table stock plantings in New Jersey, it is difficult to maintain the acreage of New Jersey certified seed. The acceptance of New Jersey certified potato seed remains high and very little criticism has been reported. Seed used for the production of certified seed was principally of the foundation, tuber unit or Florida tested New Jersey seed. In 1957, seed producers planted 85 per cent of

their acreage with Maine seed. The previous year 80 per cent of the acreage was planted from this source. The use of New Jersey seed for late crop increased from 2 per cent to 15 per cent. It is recommended that only New Jersey seed that has been winter tested in Florida for virus diseases be used. Because of the availability of out-of-state foundation seed that is known to be free of disease and varietal mixture, the seed grower finds it inadvisable to maintain his own foundation fields.

New regulations went into effect allowing late crop seed potatoes to be planted July 1. It is believed this change has been helpful in securing better stands with high yields and equal seed quality. At the time of the application deadline of August 20, field growth had not advanced to a point where satisfactory inspections could be made. The extremely dry weather prevented or curtailed growth where irrigation was not provided. Fields that were irrigated were watered three to four times by the first of September. Rainfall in the latter portion of the growing season was sufficient to meet plant requirements.

The first and second field inspections were completed without rejection. Disease was well controlled by the use of clean planting stock, regular spraying and adequate isolation from table stock potato fields.

Harvest commenced October 14 and continued for a three-week period. Seed was stored in dry and clean condition.

Six samples were tested in Florida. Chemical treatment was used to break the dormant period of the seed. After six to eight weeks, field readings were made in Florida to determine the virus content of the seed. All certified seed fields in New Jersey are not required to be tested in Florida, but growers are urged to cooperate for their own protection.

PRODUCTION OF CERTIFIED WHITE POTATO SEED OF NEW JERSEY

Variety	1957 Passed (acres)	1957 Production (bushels)	1956 Passed (acres)	1956 Production (bushels)
Cobbler	2.50	425	5.00	675
Katahdin	65.50	12,118	52.00	7,020
Chippewa	34.00	6,460	23.00	3,105
Kennebec	1.00	185	2.00	270
Jersey Red Skin	1.25	210	2.00	270
Totals	104.25	19,398	84.00	11,340

INSPECTION AND CERTIFICATION WORK OF NEW JERSEY LATE CROP WHITE POTATO SEED IN 1957

Seed Source	100-lb. Bags	Per Cent
Maine	1,170	85
New Jersey	214	15
Totals	1,384	100

TOMATO SEED CERTIFICATION

Inspection was requested for a greatly reduced acreage of tomato seed in 1957.

The 1,849 acres inspected in 1957 was the smallest acreage certified in New Jersey since 1933. There were two main contributing factors. First, weather and growing conditions made it impossible for the seed companies to obtain the acreage they desired. Possibly an additional 500 to 600 acres would have been inspected had high quality tomato fields existed. Secondly, there is preference for two varieties produced by Campbell Soup Company, as yet unnamed and therefore ineligible for certification. Only four varieties of tomato seed were certified in 1957 as compared with nine varieties in 1956. The 1957 acreage represents a reduction of 501 acres of the Rutgers variety, an increase of 44 acres of Marglobe, a decrease of 199 acres of Garden State and a decrease of 60 acres of the Queens variety.

The Campbell Soup Company varieties, No. 146 and No. 135 were again grown in quantity and proved worthy. Although certification could not be provided for these varieties, arrangements were made with the seed producers whereby a field inspection was made for pathological standards, thus allowing this seed to be grown in southern states. A total of 500 acres was inspected under this arrangement. This form of field inspection is acceptable for varieties that are being tested and proven. However, it is questionable whether it should be continued indefinitely. It would be a mistake to allow the regular certification program, which includes varietal tolerances, to be confused with an inspection that only encompasses diseases.

New Jersey tomato farmers encountered one of the poorest growing seasons on record. Lack of rain coupled with extremely high temperatures resulted in poor set and very small size fruit.

Despite the hot dry weather, practically no sun scald was observed. This was quite surprising in view of the fact that some scald has been in evidence annually for the past 25 years. A high percentage of stem breakage was noted in the fields. Plant stems and branches were very brittle. Blossom end rot was most severe in 1957. This condition can be ascribed to the subnormal water content of the plant and the reflection of heat from the bare soil to the underside of the tomato. Mites were a most serious pest problem. Both russet and two-spotted mites were observed doing very severe damage, in several cases causing field rejection.

The problem of finding a method to determine accurately whether the seed treatment used here meets the requirements of other states as well as the recommendation of the chemical manufacturers, has concerned New Jersey seed producers for some time. This year for the first time the Division laboratory was equipped to perform biological assay tests of all certified seed. Two tests were made of each seed lot; one for the detection of chemical treatment and one plating test for the determination of the pres-

ence of mold and fungus. The plate method is identical with the method used by the Georgia Department of Agriculture.

A series of four articles pointing out the superiority of New Jersey certified tomato seed was released nationally during the marketing season. Although New Jersey at one time supplied a large percentage of the tomato seed in the world, it is rapidly losing its position to the States of California and Michigan. These articles are expected to be of help in re-establishing the position of New Jersey seed in the United States.

Fifty-six thousand one hundred twenty pounds of tomato seed were certified in 1957 for six growers: Rutgers, 37,403; Marglobe, 7,529; Improved Garden State, 10,815; and Queens, 373.

POUNDS OF NEW JERSEY CERTIFIED TOMATO SEED VALIDATED FOR EXPORT SHIPMENT
July 1, 1957–June 30, 1958

				South Africa		For Export		
1957	Cuba	Ceylon	Southern Rhodesia	Kenya	Johannesburg	Arizona	Texas	Totals
July	...	63	100	4	...	201	...	368
August	...	5	35	...	...	...	...	40
September	50	...	...	...	...	...	...	50
November	...	...	...	...	...	...	375	375
December	...	...	...	...	100	...	75	175
Totals	50	68	135	4	100	201	450	1,008

POUNDS OF NEW JERSEY VEGETABLE SEEDS EXPORTED FOR WHICH PHYTOSANITARY CERTIFICATES WERE ISSUED
July 1, 1957–June 30, 1958

1957	Cuba	Johannesburg	Spain	Italy	For Export Texas	Totals
September	92 lbs. 14 oz.	5 oz.	...	...	...	93 lbs. 3 oz.
December	....	...	...	...	85	85
1958						
February	....	...	10	117	...	127
Totals	92 lbs. 14 oz.	5 oz.	10	117	85	305 lbs. 3 oz.

TOMATO SEED CERTIFICATION 1951-1957
VARIETAL DISTRIBUTION CERTIFIED TOMATO SEED ACREAGES

Year	Baltimore	Marglobe	Valiant	Stokesdale	Butgers	Pritchard	Improved Garden State	Ontario	Queens	Century	Brookston	Total
1957	..	179	..	..	1,208	..	436	..	26	..	..	1,849
1956	..	135	16	50	1,749	10	635	16	86	9	..	2,706
1955	..	312	29	69	2,012	10	518	..	73	17	22	3,062
1954	1	232	80	28	1,929	33	348	..	62	26	..	2,739
1953	..	243	52	30	2,035	15	320	..	38	9	..	2,742
1952	..	258	31	79	2,658	13	252	4	6	..	..	3,301
1951	3	190	10	30	3,058	10	173	2	..	..	..	3,476

Report of the Division of Information

FRED W. JACKSON, *Director*

An important function of the Department of Agriculture is to keep the people of the State, particularly the farmers, fully and promptly informed about its activities. The general information and public relations programs are centered in the Division of Information. Regular news services are maintained for press and radio, and the Division stands ready at all times to assist editors, reporters and radio personnel in obtaining special information or materials on New Jersey agriculture and related subjects.

Promotion of New Jersey farm products, in cooperation with various agricultural commodity groups, is another important function of the Division of Information. The Division is also responsible for the editing and processing of all Department publications.

NEWS SERVICES

Press releases are mailed at least once each week to a list of about 300. About 175 of these are daily and weekly newspapers and radio stations in New Jersey, New York City and Philadelphia. Much of the balance of the list is composed of farm magazines, special commodity publications, and trade journals. The 13 newsmen at the State House, representing the major wire services and metropolitan dailies, are serviced by messenger.

During 1957-58, a total of 300 releases, covering Department activities or general news of New Jersey agriculture, was distributed. This amounts to an average of almost six a week. The releases were widely and regularly used in news columns and, quite frequently, their contents occasioned editorial comment.

In conjunction with the regular news service, approximately 700 photographs or mats were issued. Division personnel supervised the taking of pictures at numerous agricultural meetings and were responsible for their distribution.

Numerous special requests were serviced for editors of farm and general publications seeking articles, photographs, and information on the Department or the State's agricultural industry.

The pilot radio service launched last year was expanded into a weekly five-minute farm news summary from the Department to key New Jersey radio stations. Contact with individual station managers and program directors was made early this year to encourage greater use of this information. Presently eight stations carry this weekly program which is furnished to them on tape.

Another regular radio feature developed this year was the Secretary's Report—a 5-minute monthly summary of Department highlights by the Secretary of Agriculture. This also receives wide distribution throughout the State and into Pennsylvania. Regular spot interviews, with members of the Department, are prepared monthly. These go to 18 radio stations covering New Jersey. Tapes run three or four minutes in length.

Through personal contact with radio stations, a greater interest in farm broadcasting was developed. Presently, several larger stations and some in metropolitan areas now present farm news, market reports and other material for New Jersey farmers, and about New Jersey agriculture for consumers.

Relations with a few television stations and program personnel were also maintained in order to place Department representatives on television programs. During the period of this report, participation in more than six Philadelphia television programs was arranged.

The radio recording facilities of the New Jersey College of Agriculture were made available to enable the Department to begin its regular radio programs. The success of the weekly farm news tapes, spot recordings and other radio work would not have been possible without the fine cooperation extended by the Agricultural Communications Office of the College.

FARMERS WEEK

Advance, current and follow-up publicity for the more than 40 agricultural groups meeting during the annual New Jersey Farmers Week is a responsibility of the Division of Information. In addition, the Division is also active in program planning and arrangements for the week.

A total of 41 press releases was issued in connection with the 1958 Farmers Week. In addition to these general mailings, special articles were prepared for magazines and for the publications of various groups interested in individual meetings. Especial acknowledgment should be made of the generous cooperation of *New Jersey Farm and Garden* which devoted much space in its January issue to advance publicity.

During the 1958 Farmers Week a daily 5-minute summary of highlights for use by radio stations was initiated. Comments by key speakers, news of meetings and interviews were combined to give radio stations throughout New Jersey a timely summary of Farmers Week developments on tape. These were used by 18 stations in New Jersey and Pennsylvania and were extremely well received.

PUBLICATIONS

The Division edits and handles the processing details for all printed Department reports, circulars and other publications.

It prepares six issues of FARM SERVICE NEWS each year. This four-page illustrated publication, devoted to news of the Department and articles of current interest on New Jersey agriculture, is mailed to approximately 18,000 farm and rural readers in New Jersey.

The following circulars and reports were edited and published during 1957-58.

Circular No. 402—Facts and Figures—Annual Potato Summary—Crop of 1956.
Circular No. 403—Woody Honey Plants for Roadside Planting in New Jersey.
Circular No. 404—New Jersey Agricultural Statistics, 1944-1956.
Circular No. 405—Dealers Licensed Under the Milk Dealers' Licensing and Bonding Act, Produce Dealers' Licensing and Bonding Act (Including Egg and Live Poultry Dealers), Cattle Dealers' Licensing Act and Disposal Plant Operators Licensing Act.
Report— Forty-first Annual Report of the New Jersey State Department of Agriculture—July 1, 1955-June 30, 1956.
Report— Forty-second Annual Report of the New Jersey State Department of Agriculture—July 1, 1956-June 30, 1957.
Farm Service News—6 issues—July, September, November, 1957; January, March, May, 1958.

Publications prepared in connection with the 1958 Farmers Week were as follows:

1958 Farmers Week Program.
Homemakers' Program—1958 Farmers Week.
Highlights of Your Convention.
Citations for Distinguished Service to New Jersey Agriculture, 1958.

As of June 30, 1958, one circular has been edited but delivery has not been completed by the printer:

Circular No. 333 (Revised)—Marketing Fresh Eggs in New Jersey.

FARM PRODUCTS PROMOTION

During the past fiscal year the agricultural activities of the State Promotion Section, a unit of the Department of Conservation and Economic Development, again were serviced on a cooperative basis through the Department of Agriculture. The Division of Information served in a liaison capacity with the participating agricultural commodity groups. This arrangement, which has been in effect since 1938, has proved satisfactory to the State agencies concerned, as well as to the cooperating farm organizations.

The allotment for agriculture was divided among seven projects. The allotment for each was supplemented by funds furnished by each of the cooperating commodity groups. As during the previous year, an effort was made to compensate for the lack of funds to purchase advertising space by making the most of every opportunity to provide editors, particularly food editors, with copy and photographs for use in reader column space. Considerable aid was contributed by enlisting the cooperation of other agencies, the food trade and the utilities, and by getting them to mention New Jersey products in their advertisements and releases and to include New Jersey products as much as possible in their demonstrations.

Acknowledgment again should be made of the excellent cooperation of the members of the home economics staffs of all four of the principal New Jersey utilities. Included on their staffs are about 40 home economics specialists who are responsible for a large number of meetings, exhibits and

demonstrations on food subjects scheduled throughout the year. Consequently, there are many opportunities when New Jersey farm products can be featured or included in demonstrations and exhibits and in recipes, thus presenting them directly to thousands of food-minded housewives. Two of the utilities again prepared at their own expense consumer leaflets on New Jersey products.

Brief outlines of the projects carried on cooperatively with the farm commodity groups during the 1957-58 year follow.

The Cooperative Marketing Associations in New Jersey, Inc.

A considerable volume of New Jersey grown fruits and vegetables is marketed through the nine cooperative produce auction markets which are organized in a statewide cooperative. This organization sponsored a series of advertisements which appeared in *The New York Packer* and *The Produce News,* the two principal publications circulating among the produce trade in the East. Advertisements were sponsored in each of these publications, running in July and August, 1957, as well as six insertions in each publication in April, May and June 1958. These produce auctions also establish a price level for many other transactions and so are beneficial in maintaining current market prices.

Blueberry Promotion

Several organizations which publicize and aid in the marketing of cultivated blueberries are sponsored by grower groups. There are several active promotion programs. The value of the cultivated blueberry crop now exceeds that of cranberries or any other small fruit. A small allotment of State funds met the cost of a series of mat releases and trade paper advertisements which appeared in *The Packer* and *The Produce News* as well as in a number of grocer trade publications.

New Jersey Field Crop Improvement Cooperative Association, Inc.

This organization produces and sells certified field crop seeds which are of special importance to New Jersey dairymen and poultrymen who produce home-grown feeds. The New Jersey hybrid varieties of corn have been featured in a series of cooperative advertisements with further mention of State-certified soybeans, wheat, oats and barley in season. The advertisements now are on a full year basis and again were carried in 12 issues of *New Jersey Farm and Garden,* 10 issues of *The Moos* and five issues of *Dairymen's League News.*

New Jersey Peach Industry Committee

This statewide organization continued last year with its promotional activities calling attention to the tree-ripened New Jersey peaches and the improved varieties now available. As usual the campaign was conducted

with the cooperation of food editors, radio commentators, representatives of the wholesale and retail trade and others concerned with the promotion of food products. A review of the season's prospects was prepared and gift boxes of peaches and cultivated blueberries were distributed. Acknowledgment is made of the usual excellent cooperation rendered in terms of newspaper reader column space, editorial mention and time on both radio and television programs.

New Jersey Apple Institute

The New Jersey growers experienced little serious difficulty in moving the main season varieties of apples, so much of the promotional effort was concentrated again on summer varieties marketed in July and August and the late spring months. A series of releases, photographs and recipes was issued in July and August, 1957, illustrating how the Starr, Twenty Ounce, and other varieties could be used by consumers. The spring season schedule was devoted to promoting Rome Beauty and Jersey Red.

In addition, the services of a publicity agent in New York City were retained on a cooperative and part-time basis to handle relations with the food page editors of newspapers and magazines, radio food editors and the representatives of the utilities. Gift packages of Stayman apples were sent to editors in December and repeated with Rome Beauty apples in March.

A dinner conference and visits to two orchards were scheduled at the farm of an apple grower with about 60 food editors and guests attending, most of them making the trip in a special bus. The response in terms of publicity throughout the winter has been excellent and aided materially in moving the crop. A series of 20 announcements scheduled on the "McCanns at Home" food hour on WOR again proved very effective in marketing late holdings of Rome Beauty and Jersey Red.

The New Jersey Strawberry Industry Committee

This group which inaugurated a new promotion program last year expanded its activities with the 1958 crop. During May and June a series of announcements was scheduled on the "McCanns at Home" food hour on WOR. Other activities included preparation and release of a series of announcements, recipes and photographs concerning the new Jerseybelle variety.

New Jersey Sweet Potato Industry Association

This organization continued to successfully market improved types of New Jersey sweet potatoes. A request was granted for an allotment of funds which were used principally to provide a series of advertisements in the two main produce trade papers, as well as for a series of mats of photographs of new sweet potato recipes and a quantity of posters and price cards.

Report of the Office of Milk Industry

FLOYD R. HOFFMAN, *Director*

BUREAU OF ADMINISTRATION

During the fiscal year covered by this report, the marketing of milk in New Jersey was greatly affected by Federal Milk Marketing Order 27, which became effective August 1, 1958. The order covers the New York metropolitan area, a large section of up-state New York and northern New Jersey. In accordance with the Memorandum of Agreement between the United States Department of Agriculture and the New Jersey Office of Milk Industry, a concurring order known as Order 57-3 was issued by the director of the Office of Milk Industry. This State order specified the same terms and provisions as the Federal order and became effective the same date.

The Federal order regulates payments to producers by handlers in the 13 northern counties of New Jersey. This includes approximately 2,000 producers in this State, and in total, will regulate the market for approximately 55,000 producers. The volume of milk regulated in this market is approximately 12 to 15 per cent of the total annual production of milk in the United States.

Reports of both producers and handlers indicate that this joint concurring order has stabilized the New Jersey producers' market for their milk. New Jersey producers are no longer threatened with a loss of market because of the inequality in prices between the states.

During the fiscal year, acting under the Memorandum of Agreement, the Office of Milk Industry participated in hearings held to consider amendments to the provisions of Order 27. The first of these hearings was held at Utica, N. Y., December 5, 1957, for the purpose of receiving evidence with respect to economic and marketing conditions in the marketing area. As a result of the testimony submitted, it was decided that no change should be made in the pricing provisions at that time.

The second, and probably the most important hearing held during the 1957-58 fiscal year, commenced on February 3 at Utica, N. Y., and was continued at Newark on February 5, 6 and 7. The main proposal was to clarify the definition of a producer-dealer. There were several other amendments proposed at this hearing, and the recommended decision was rendered on June 6, 1958. Dairy farmers will vote on the proposed amendments on August 21, 1958.

A hearing was also held at Hartford, Conn., which began on June 24 and continued into July. The purpose of this hearing was to consider the possibility of including Connecticut in the New York-New Jersey Milk Marketing Order 27.

Any milk handler licensed by the Office of Milk Industry who violated the Federal order was also in violation of Order 57-3 issued by the State. Therefore, during the year informal hearings were held by the director in those cases where handlers did not file proper reports or did not pay their handler obligation into the pool.

An act increasing the amount of license fees was passed by the Legislature and became effective at the beginning of 1957. The money derived from these increased fees was to be used to establish a program of field auditing. A budget was set up providing for seven additional auditors, two clerk-stenographers, and the necessary equipment and automobiles to accomplish this work. However, much difficulty was encountered in securing personnel and it was not until March 1957 that a full complement was provided. It is hoped that this activity will reduce the number of errors on reports and violations committed by the industry. However, the period of time has not been sufficient to determine the value and effect of this program.

The Tri-State Master Dairy Farmers' Guild promoted organization of dairymen under the Teamsters' Union. As a result of this activity, there were rumors of milk strikes from time to time.

During the latter part of October, there was a strike of retail and wholesale routemen and plant processors. This was settled through arbitration without any material effect on the supply of milk.

The director, the deputy director, or other representatives of this office attended 15 out-of-state conferences or meetings. These included the Federal-State hearings held outside New Jersey and activities of other milk industry organizations and governmental bodies. It is necessary to be represented at these affairs in order to be advised of conditions that affect the supply and marketing of milk in New Jersey.

PUBLIC HEARINGS

As required by statute, public hearings are held before price changes may be made. These hearings are advertised and notice circulated throughout the industry to afford all interested parties an opportunity to present testimony regarding their views.

During the year 1957-1958 all public hearings called solely by the Office of Milk Industry were held at the War Memorial Building in Trenton and the director presided. This does not include joint hearings held by Federal-State authorities, although notice of these joint hearings is also advertised by the Office of Milk Industry in the same manner. Below is a summary of the three hearings held in Trenton during 1957-1958. The orders referred to are explained in detail in another section of this report.

The director held a public hearing on September 5, 1957 to receive testimony on the advisability of increasing the price paid to farmers for Class I or fluid milk in the eight counties in South Jersey not under Federal Order 27.

This hearing was called at the request of producer groups who felt that the increased cost of production due to the drought and high feed prices warranted an increase in the price paid by handlers to producers. Twelve witnesses appeared and submitted testimony. These included ten representing producers, one for dealers, and one from the Office of Milk Industry. It is mandatory that the decision be announced within ten days following the hearing based on the evidence presented. Order 57-4 was issued increasing the price to farmers 40 cents per hundredweight.

On February 24, 1958, a public hearing was held for the purpose of:

1. Adjustment of prices paid to producers for Class I milk in Marketing Areas 2 and 3 in New Jersey.
2. Adjustment of resale prices paid by dealers, processors, subdealers, stores and consumers.

Attendance at this hearing was less than usual despite the wide range of prices to be adjusted. There were three witnesses for producers, one for dealers, one for subdealers, and one from the Office of Milk Industry.

As a result of this hearing, two orders were written by the director on March 11, 1958. Order 58-1 provided for two 40-cent reductions in the price paid to producers in Marketing Areas 2 and 3, effective April 1 and May 1. Order 58-2 provided for decreases in resale prices of milk in the same area and became effective May 1, 1958.

The last public hearing during 1957-58 was held June 3. This hearing was held to consider adjustment of resale prices and to receive testimony regarding the regulation prohibiting Sunday delivery of milk to stores in most areas. Nine witnesses appeared: five for dealers, one for processors, two for the Food Merchants' Association, and one from the Office of Milk Industry. No producers or consumers testified.

This hearing resulted in an order that increased the resale price of milk in the eight counties in South Jersey not under Federal Order 27. Also, it was decided not to change Regulation F-22 governing Sunday deliveries.

PRICE ORDERS AND REGULATIONS

Under the milk control law, price orders and regulations are issued from time to time. Price orders may be written only after a public hearing has been held, and they do not become effective until 15 days after they are posted with the Secretary of State. However, regulations governing industry activities may become effective on the date they are written.

The first order issued during the fiscal year 1957-58 was 57-3. The terms and provisions of this order concur with the New York-New Jersey Milk Marketing Order 27, and it regulates payments to producers in Area 1 of New Jersey. The price to producers in this area fluctuates each month and is based on the pool price figured by the Federal Market Administrator which is a published blend price plus differentials applying to producers. The retail prices in the northern section of New Jersey have not been adjusted since April, 1957. However, since the inception of Federal Order 27, the price to the consumer for milk delivered to the home and sold out of stores has fluctuated with the price structure to producers, resulting in a price above the minimum fixed by this office.

Official Order 57-4, effective October 1, 1957, increased the price to producers for Class I or fluid milk testing 3.5 per cent butterfat from $5.87 per hundredweight to $6.27. The Grade A or premium milk price increased from $6.27 to $6.47 per hundredweight. This order affected Marketing Areas 2 and 3 which include all of Mercer, Burlington, Camden, Gloucester, Salem, Cumberland, Cape May and Atlantic counties and part of Ocean County.

These prices remained in effect until the issuance of Order 58-1. This order provided for price changes to producers in Marketing Areas 2 and 3 as follows:

	Regular Milk	Grade A or Premium
April 1, 1958	$5.87	$6.27
May 1, 1958	5.47	5.87
July 1, 1958	5.87	6.27

The above prices are for milk sold as Class I (fluid) milk testing 3.5 per cent butterfat content. The two reductions were necessary to stabilize the South Jersey producers' market, and to bring prices in line with those paid in competing areas. However, at the end of the flush season, a 40-cent restoration was made to producers.

On May 1, 1958, the minimum wholesale and retail prices for regular milk were reduced one cent per quart in Marketing Area 3 and one-half cent per quart in Marketing Area 2. There was also a reduction of one-half cent per quart in the resale price of premium milk in Area 3 but no change in Area 2. Order 58-2 provided for these reductions in order to give consumers as much advantage as possible of the effect of the drop in price to producers.

However, Order 58-3 filed on June 13, 1958 and effective on July 1, 1958, increased prices to consumers one and one-half cents per quart in Area 3 for regular milk and two cents per quart for premium milk. In Area 2, the seashore area of Atlantic and Cape May counties, the price of regular milk increased two and one-half cents per quart and premium milk three

cents per quart. A comparison of the above retail prices for bottled milk is shown below:

Order	Effective Date	Area 2		Area 3	
		Regular	Grade A	Regular	Grade A
57-1	April 1, 1957	$.26½	$.28½	$.26	$.28
58-2	May 1, 1958	.26	.28½	.25	.27½
58-3	July 1, 1958	.28½	.31½	.26½	.29½

The increases in the last price order reflected an increase in producer prices, effective July 1, as well as the increases in labor costs of milk dealers. All of the prices quoted are minimum prices.

Three regulations concerning the period of advance notice which must be given prior to adding or discontinuing a supply of milk, were amended on July 24, 1957.

F-21 required producers and dealers to give 30 days notice of any intended change. F-24 required dealers and subdealers to give 30 days notice. H-2 required stores seeking to change their source of supply or to take on an additional supply to file 20 days notice of intent to change. All of these were amended to require written notice of any intended change 60 days in advance of the proposed date of change.

These amendments have not been fully accepted by members of the industry and numerous conferences and meetings have been held at the request of producer, dealer and subdealer groups to further discuss adjusting the period of time stipulated in the regulations. However, it has been proven that the 60-day period does tend to stabilize milk marketing.

Regulation H-7, effective July 31, 1957, changed the marketing areas in New Jersey from the original five areas to three new areas. This change was necessary in order to establish an area in northern New Jersey known as Area 1, which is the territory covered by Federal Order 27 and Office of Milk Industry Order 57-3. Area 2 remains unchanged and is that part of the State known as the south shore area. It includes the parts of Atlantic and Cape May counties that border the Atlantic Ocean. Area 3 includes the counties of Mercer, Burlington, Camden, Gloucester, Salem, Cumberland and those parts of Atlantic, Cape May and Ocean counties not included in Areas 1 and 2.

Regulation F-22, which governs the number of wholesale and retail deliveries of milk that may be made per week was amended. The amendment merely changed the original regulation in order that the terms based on the various milk marketing areas of the State would conform to the three new areas rather than the original five areas. This regulation has been appealed to the Appellate Division of the Superior Court.

Regulation H-8, effective July 24, 1957, made it necessary for any licensee soliciting a wholesale account, not previously served by the licensee, to submit on forms provided by this office the intent to serve the new account

60 days in advance of the proposed serving date. The wholesale accounts referred to include restaurants, bakeries, hotels, and others where milk is consumed on the premises.

APPEALS

A formal hearing had been held by the director in the matter of O'Dowd's Dairy for failure to pay farmers properly. The director had assessed a penalty of $50 and costs; and in addition, this dairy was ordered to pay all of its producers at least the minimum price for milk delivered during February, 1957, the period during which the discrepancies occurred. Failure to comply with this decision within 30 days would result in revocation of license. O'Dowd's Dairy appealed this case to the Appellate Division of the Superior Court, and on March 23, 1958, the Deputy Attorney General appeared at Newark in this matter. The Court granted a stay and ordered that the amount due producers be deposited in escrow with the attorney for the appellant. To date, the decision has not been rendered by the Court.

An appeal was filed by Hamilton Farms, Inc., in March, 1958, against Regulation F-22 which provides for the number of wholesale and retail deliveries of milk which may be made during any one week in the various marketing areas of the State. The Court granted an injunction against the enforcement of this regulation, but only insofar as it concerns this company. This matter is also pending at the time of this report.

LEGAL OPINIONS

A formal opinion was rendered by the Office of the Attorney General stating that the director may fix retail prices in Area 1 which is that part of New Jersey included in the Federal Milk Marketing Order 27. Wholesale prices paid to producers in that area are fixed by Federal order.

BUREAU OF AUDITING

The functions of the Bureau of Auditing are to maintain dealer relations within the industry and to audit monthly reports submitted by the dealers showing the utilization of milk in the State. The report furnished by each licensed dealer gives the production, importation and sales of milk in each classification. These reports are used to prepare monthly and annual data. This information is supplied to the United States Department of Agriculture for use in its releases and to milk industry organizations. During the fiscal year, an average of about 275 dealers' reports were audited monthly.

The Bureau of Auditing also determines whether or not producers in New Jersey have been paid the proper prices per hundredweight for their milk. Audits of monthly reports disclosed that a total of $3,361.50 was underpaid during this year. This does not include producers under Federal

Orders 27 and 61. Correspondence on this matter indicates that producers were paid $3,020.75 of the above amount, and negotiations are pending for the balance.

A new intensified program of field auditing has been inaugurated during this fiscal period. During the year, 128 field audits were made. Alleged violations were disclosed in some cases. Based on the findings of these audits, licensees involved were cited for hearings and penalized accordingly.

Credit regulations are handled by this Bureau to ascertain that before a subdealer changes his source of supply, his bills have been paid in full to the dealer from whom he had been purchasing milk and milk products. This information is derived from forms filed with this Office. Where there is any question of outstanding debt or the possibility of an illegal offer being made to obtain the account, a conference is held by the director, with all parties involved in attendance. A total of 51 application forms to change source of supply were received from subdealers. Of these, 26 were granted permission to change and one was denied. The others were withdrawn before the expiration of the 60-day waiting period.

BUREAU OF LICENSING

All licenses are issued on a fiscal year basis beginning July 1 and must be renewed each year. All new applicants must appear in person for an interview. Applications are reviewed at meetings with the auditing, investigation and administration chiefs. All licenses, regardless of the date of issuance, expire on June 30. License fees paid by dealers are based on the quantity of milk sold; subdealer fees are based on the number of milk routes operated at $15.00 per route; and store fees are $5.00 for each store.

Applications for renewal of licenses must be handled during the period April 1 to July 1. Because of the amount of work involved, additional help is provided each year during this season by members of other bureaus. The following table shows in detail the number of applications processed and licenses issued for the year July 1, 1957 to June 30, 1958, as compared with the previous year.

Type of License	1957-58	1956-57	Change
Dealers, Processors, Producer-dealers, Subdealers and Manufacturers	2,318	2,474	—156
Stores	12,260	12,930	—670
Butterfat testers	395	366	+ 29
Weighers and samplers	389	369	+ 20
Permits to purchase	147	159	— 12

It is believed that the great decrease in the number of store licenses was caused by the increase in the store license fee from $1.00 to $5.00. This was the first full licensing period during which this increase was in effect.

The total revenue received during the fiscal year 1957-58 from licensing was $184,763.50, as compared with $109,271.01 received during the previous year, 1956-57. A State law providing for an increase in fees, which was approved December 26, 1956, accounts for the increase in revenue.

Many producer-dealers and some small handlers discontinued their businesses during this year as a result of the Federal milk marketing order in northern New Jersey.

The State Auditor's office completed an audit of the records of this Office and made certain recommendations regarding the licensing system. The method of issuing store licenses has been revised to provide cross reference files which will facilitate checking fees received with licenses issued. However, the new system was not inaugurated until the end of the fiscal year covered by this report.

BUREAU OF INVESTIGATIONS AND ENFORCEMENT

A total of 6,305 contacts was made by investigators. These calls included dealers, producer-dealers, subdealers, producers, stores, consumers, school boards and others. They were made to investigate alleged violations and complaints, and to obtain applications from unlicensed stores.

As a result of these investigations, 192 informal hearings and 23 formal hearings were scheduled. Of these, 174 informal hearings were held and 18 were excused. Six formal hearings were held and nine were pending at the end of the fiscal year. Also, eight of the formal hearings were changed to informal hearings.

The violations consisted generally of failure to file the required monthly affidavit forms; distribution of free merchandise or services; selling at prices below the fixed minimums; and failure to maintain proper records and submit reports. Failure to pay penalties assessed at informal hearings held during the previous year was also a cause for hearing.

Three of the formal hearings were in the matter of handlers who failed to file the required reports with the Market Administrator of Federal Order 27. These handlers were warned and costs were assessed. Other formal hearings resulted in one revocation of license and one denial of license. In one case, a penalty was imposed and appealed to the Appellate Division of the Superior Court. The last case is explained in further detail in the section of this report entitled "Appeals."

The total penalties assessed as the result of the hearings amounts to $14,315.00. Penalties paid during this fiscal year amounted to $17,020.00, part of which includes a balance carried from the previous year.

Creamery inspectors made 883 visits to creameries to check the butterfat tests of milk to determine whether or not producers had received proper payment based on butterfat content of milk.

In addition, 97 farms were contacted. Fresh samples of milk were taken at 30 of these farms to test butterfat content. The balance of farms were

visited to check the agitation in new bulk holding tanks to see that the mixture is uniform in all parts of each tank. The number of producers using the bulk tanks rather than the can method is gradually increasing as there are now 775 bulk tanks in use in New Jersey as compared to 634 last year.

During the fiscal year, 4,210 pieces of glassware were calibrated for use by the industry in testing milk for butterfat content. The fees received for this work amounted to $206.90.

This Bureau handles the forms submitted by wholesale accounts giving notice of intention to change source of supply. Forms are sent out in each case to ascertain whether there is any money owed to the present supplier and also if any illegal offer has been made by the new supplier to acquire the account. Forms were received from 1,136 wholesale accounts and, of these, 661 were given approval to change. The balance were either denied or the requests withdrawn.

BUREAU OF MILK ECONOMICS

Information pertaining to producers, producer prices and production may be found in Tables 1 through 6, inclusive. Information concerning sales of milk and milk products may be found in Table 7, while information pertaining to imports and exports of milk and milk products is contained in Tables 8 and 9.

During the fiscal year 1957-58, producers and producer-dealers produced a total of 1,093,367,221 pounds of milk. Total production for the fiscal year 1957-58 was 2.4 per cent greater than in the fiscal year 1956-57 and 1.6 per cent less than in the fiscal year 1955-56.

Milk production increased 6.8 per cent in the North Jersey area, while in South Jersey, total production decreased 10.3 per cent. These data, with comparisons, are shown in Table 1.

During the same period, New Jersey dairy farmers, exclusive of producer-dealers, realized a gross income of greater than 57 million dollars from milk delivered to handlers. This was an increase of more than 3.1 million dollars over the gross income producers received from milk delivered in the previous fiscal year. The average gross income per farm for the 12-month period was $17,096.11 or $1,748.22 greater than for the previous fiscal year.

Although the gross income received for milk delivered by producers increased more than 11 per cent in North Jersey, and declined more than 8 per cent in South Jersey, the average gross income per farm in South Jersey was more than $200.00 greater than in North Jersey. In the fiscal year 1956-57, however, the average gross income for milk delivered by producers in South Jersey exceeded the same average gross income in North Jersey by more than $1,000.00. It is apparent that North Jersey producers have made real gains in equalizing their gross income with the gross income

received by South Jersey producers. These data, with comparisons, are shown in Tables 2 to 4, inclusive.

New Jersey dairy farmers selling milk to handlers regulated by the Office of Milk Industry continued to increase their price advantage over producers selling milk to handlers regulated by Federal Orders 61 and 27. In the fiscal year 1957-58, New Jersey dairy farmers delivering milk to plants regulated by the Office of Milk Industry received an average monthly price of $5.915 per hundredweight while dairymen delivering milk to Federal Orders 61 and 27 plants received an average price of $4.821 and $4.687 per hundredweight, respectively. In the previous fiscal year, the New Jersey price exceeded the Federal Orders 61 and 27 prices by 44 cents and 69 cents per hundredweight, respectively. These data, with monthly comparisons, are shown in Table 5.

One indication that marketing conditions were more favorable in the fiscal year 1957-58 than in the previous fiscal year is that the number of producers discontinuing milk production during 1957-58 declined by nearly 38 per cent. In the fiscal year 1956-57, 298 producers discontinued milk production, while in the fiscal year just completed, 187 milk producers found it necessary to discontinue milk production. These data, with monthly comparisons, are shown in Table 6.

Total sales of fluid milk in New Jersey during the fiscal year 1957-58 exceeded 812 million quarts. This represented increases of 1.3 and 3.1 per cent over the fiscal years 1956-57 and 1955-56, respectively. The increase in total fluid sales, however, was centered in North Jersey, where sales increased nearly 4 per cent over the previous fiscal year. In South Jersey sales declined nearly 8 per cent under the fiscal year 1956-57.

While fluid sales increased, cream sales in New Jersey declined 1.4 per cent from fiscal 1956-57. However, the decrease in cream sales was concentrated in North Jersey. Handlers operating in South Jersey increased their sales by 4 per cent over the previous fiscal year. These data, with comparisons, are shown in Table 7.

New Jersey producers exported less milk in the fiscal year 1957-58 than in previous years. Exports of New Jersey milk were 5.0 and 16.7 per cent less in 1957-58 than in 1956-57 and 1955-56, respectively.

Imports of milk also declined on a statewide basis. North Jersey handlers imported 9.1 and 6.6 per cent less milk in 1957-58 than in the fiscal years 1956-57 and 1955-56, respectively. However, imports of milk in South Jersey in 1957-58 were 5.6 and 12.2 per cent higher than in previous fiscal years of 1956-57 and 1955-56, respectively.

Cream imports also declined on a statewide basis; the drop in cream imports was 3.8 per cent under the amount imported in the fiscal year 1956-57. Here, again, the decline was only in the cream imported into North Jersey; 4.3 and 7.5 per cent less cream was imported for sales in North Jersey than in the previous fiscal years of 1956-57 and 1955-56, respectively. South

Jersey handlers increased their imports of cream by nearly 4 per cent over the previous year. Data concerning exports and imports of milk and cream may be found in Tables 8 and 9.

TABLE 1

PRODUCTION OF MILK AS REPORTED BY DEALERS AND PRODUCER-DEALERS IN NEW JERSEY (POUNDS)
1957-1958

	North Jersey	South Jersey	New Jersey Total
1957			
July	64,059,938	22,242,517	86,302,455
August	65,101,649	19,762,884	84,864,533
September	63,793,003	19,837,426	83,630,429
October	68,307,454	21,361,458	89,668,912
November	66,432,868	20,252,365	86,685,233
December	70,826,503	20,640,817	91,467,320
1958			
January	73,381,583	20,921,629	94,303,212
February	67,170,140	18,952,856	86,122,996
March	77,222,191	21,295,501	98,517,692
April	75,788,828	21,032,798	96,821,626
May	81,858,846	22,376,539	104,235,385
June	71,764,365	18,983,063	90,747,428
Yearly total	845,707,368	247,659,853	1,093,367,221
Monthly average	70,475,614	20,638,321	91,113,394
Total 1956-1957	791,772,941	276,121,297	1,067,894,238
Per cent increase or decrease 1957-1958 compared to 1956-1957	+6.8	—10.3	+2.4

TABLE 2

NUMBER OF PRODUCERS, TOTAL AMOUNT OF MILK DELIVERED, TOTAL AMOUNT OF MONEY PAID AND AVERAGE PRICE PER MONTH, NORTH JERSEY, FISCAL YEAR 1957-1958, BY MONTHS

	Number of Producers	Total Amount of Milk	Total Amount of Money	Price/ Cwt.
1957				
July	2,490	59,773,000	$3,088,046.81	$5.17
August	2,581	61,084,073	3,410,975.44	5.58
September	2,568	60,019,807	3,569,121.25	5.95
October	2,568	64,154,176	3,870,239.21	6.03
November	2,556	62,364,912	3,817,435.59	6.12
December	2,545	66,671,145	3,975,288.78	5.96
1958				
January	2,540	69,167,131	3,880,527.60	5.61
February	2,534	63,207,245	3,494,755.77	5.53
March	2,499	72,752,561	3,785,111.38	5.20
April	2,483	71,241,701	3,510,523.05	4.93
May	2,495	77,351,474	3,548,001.20	4.59
June	2,490	67,662,755	3,143,236.65	4.65
Total	30,349	795,449,980	$43,093,262.73	$65.32
Average	2,529	66,287,498	3,591,105.23	5.44
Average 1956-1957 totals	2,572	738,524,508	38,717,332.07	5.26
Per cent increase or decrease 1957-1958 compared to 1956-1957	—1.7	+7.7	+11.3	+3.4

TABLE 3

NUMBER OF PRODUCERS, TOTAL AMOUNT OF MILK DELIVERED, TOTAL AMOUNT OF MONEY PAID AND AVERAGE PRICE PER MONTH, SOUTH JERSEY, FISCAL YEAR 1957-1958, BY MONTHS

	Number of Producers	Total Amount of Milk	Total Amount of Money	Price/ Cwt.
1957				
July	918	21,315,925	$1,244,307.83	$5.84
August	829	18,984,496	1,102,255.62	5.81
September	834	19,054,359	1,118,333.37	5.87
October	826	20,593,738	1,276,281.99	6.20
November	816	19,524,422	1,231,367.24	6.31
December	813	19,865,509	1,243,514.84	6.26
1958				
January	809	20,116,110	1,246,653.82	6.20
February	806	18,239,317	1,128,775.83	6.19
March	802	20,498,498	1,243,094.32	6.06
April	790	20,252,284	1,149,646.97	5.68
May	788	21,560,889	1,135,363.22	5.27
June	759	18,288,231	973,636.13	5.32
Total	9,790	238,293,778	$14,093,231.18	$71.01
Average	816	19,857,815	1,174,435.93	5.92
Average 1956-1957 totals	950	264,504,433	15,337,935.24	5.81
Per cent increase or decrease 1957-1958 compared to 1956-1957	—14.1	—9.9	—8.1	+1.9

TABLE 4

NUMBER OF PRODUCERS, TOTAL AMOUNT OF MILK DELIVERED, TOTAL AMOUNT OF MONEY PAID AND AVERAGE PRICE PER MONTH, NEW JERSEY, (ENTIRE STATE), FISCAL YEAR 1957-1958, BY MONTHS

	Number of Producers	Total Amount of Milk	Total Amount of Money	Price/ Cwt.
1957				
July	3,408	81,088,925	$4,332,354.64	$5.34
August	3,410	80,068,569	4,513,231.06	5.64
September	3,402	79,074,166	4,687,454.62	5.93
October	3,394	84,747,914	5,146,521.20	6.07
November	3,372	81,889,334	5,048,802.83	6.17
December	3,358	86,536,654	5,218,803.62	6.03
1958				
January	3,349	89,283,241	5,127,181.42	5.74
February	3,340	81,446,562	4,623,531.60	5.68
March	3,301	93,251,059	5,028,205.70	5.39
April	3,273	91,493,985	4,660,170.02	5.09
May	3,283	98,912,363	4,683,364.42	4.73
June	3,249	85,950,986	4,116,872.80	4.79
Total	40,139	1,033,743,758	$57,186,493.93	$66.60
Average	3,345	86,145,313	4,765,541.16	5.55
Average 1956-1957 totals	3,522	1,003,028,940	54,055,267.30	5.40
Per cent increase or decrease 1957-1958 compared to 1956-1957	—5.0	+3.1	+5.8	+2.8

TABLE 5

COMPARISON OF PRICES PAID TO PRODUCERS BY HANDLERS REGULATED BY NEW JERSEY OFFICE OF MILK INDUSTRY WITH PRICES PAID TO PRODUCERS UNDER FEDERAL ORDERS 61 AND 27, FOR 3.5 PER CENT MILK, FISCAL YEAR 1957-1958, BY MONTHS

Month	Blend Prices Paid Producers — N. J. Handlers[1]	Order 61[2]	Order 27[3]	Amount New Jersey Price Exceeded — Order 61	Order 27
1957					
July	$5.59	$4.723	$4.185	$0.867	$1.405
August	5.76	4.782	4.876	.978	.884
September	5.82	4.925	5.226	.895	.594
October	6.15	5.154	5.266	.996	.884
November	6.26	5.175	5.356	1.085	.904
December	6.20	5.122	5.126	1.078	1.074
1958					
January	6.20	4.796	4.866	1.404	1.334
February	6.30	4.86	4.786	1.440	1.514
March	6.19	4.79	4.496	1.400	1.694
April	5.80	4.57	4.186	1.230	1.614
May	5.32	4.44	3.946	.88	1.374
June	5.39	4.52	3.926	.87	1.464
Total	$70.98	$57.857	$56.241	$13.123	$14.739
Average	5.915	4.821	4.687	1.094	1.228

[1] Average price paid New Jersey producers for Grade B milk by New Jersey handlers not regulated by either Federal Order 61 or Federal Order 27.
[2] Blend prices paid producers by Order 61 handlers converted to a 3.5% butterfat basis.
[3] Blend prices paid producers by Order 27 handlers at the 61-70 mile zone.

TABLE 6

NUMBER OF PRODUCERS TRANSFERRING THEIR SUPPLY OF FLUID MILK FROM ONE HANDLER TO ANOTHER, NUMBER OF NEW PRODUCERS, NUMBER OF PRODUCERS DISCONTINUING MILK PRODUCTION, NEW JERSEY, FISCAL YEAR, 1957-1958, BY MONTHS

Month	Producers Transferring Their Supply of Fluid Milk	New Producers	Producers Discontinuing Milk Production
1957			
July	18	0	16
August	20	4	0
September	24	1	8
October	22	3	8
November	6	1	22
December	15	0	14
1958			
January	11	2	9
February	12	2	9
March	5	2	39
April	15	0	28
May	27	2	0
June	15	0	34
Total	190	17	187

TABLE 7

SALES OF MILK AND CREAM AS REPORTED BY HANDLERS, NEW JERSEY, FISCAL YEAR 1957-1958, BY MONTHS[1]

1957	Milk (Quarts)			Cream (Quarts)		
	North Jersey	South Jersey	N. J. Total	North Jersey	South Jersey	N. J. Total
July	53,535,793	17,059,818	70,595,611	8,678,825	4,662,809	13,341,634
Aug.	55,652,296	15,962,275	71,614,571	8,655,400	2,034,481	10,689,881
Sept.	54,980,736	13,423,849	68,404,585	7,646,143	1,398,754	9,044,897
Oct.	56,605,636	13,584,376	70,190,012	7,619,689	1,165,999	8,785,688
Nov.	53,274,820	13,318,836	66,593,656	8,266,155	1,271,652	9,537,807
Dec.	54,363,950	12,903,228	67,267,178	9,226,465	1,350,838	10,577,303
1958						
Jan.	54,747,449	12,964,339	67,711,788	7,435,475	1,163,011	8,598,486
Feb.	49,133,049	12,601,697	61,734,746	7,040,193	1,049,324	8,089,517
Mar.	54,371,033	13,685,582	68,056,615	7,468,577	1,262,597	8,731,174
April	52,593,228	13,835,224	66,428,452	8,218,673	1,485,231	9,703,904
May	54,555,886	14,463,822	69,019,708	8,736,754	1,651,588	10,388,342
June	51,092,641	13,855,895	64,948,536	9,702,299	1,709,682	11,411,981
Total	644,906,517	167,658,941	812,565,458	98,694,648	20,205,966	118,900,614
Average	53,742,210	13,971,578	67,713,788	8,224,554	1,683,831	9,908,385
Totals 1956-57	620,785,386	181,722,096	802,507,482	101,217,927	19,430,463	120,648,410
Per cent increase or decrease 1957-1958 compared to 1956-1957	+3.9	—7.7	+1.3	—2.5	+4.0	—1.4

[1] Cream equals Fluid Milk Equivalent.

TABLE 8

CREAM[1] IMPORTED FOR USE IN NEW JERSEY, FISCAL YEAR 1957-1958, BY MONTHS (POUNDS)

1957	North Jersey	South Jersey	Entire State
July	25,235,612	2,684,000	27,919,612
August	21,531,490	2,705,489	24,236,979
September	18,078,656	1,628,257	19,706,913
October	15,711,771	1,083,411	16,795,182
November	16,282,608	1,052,418	17,335,026
December	19,514,060	1,423,356	20,937,416
1958			
January	14,930,223	1,212,955	16,143,178
February	13,326,543	1,158,263	14,484,806
March	16,078,938	1,506,513	17,585,451
April	17,435,020	1,751,884	19,186,904
May	20,357,809	2,015,041	22,372,850
June	22,872,461	2,478,194	25,350,655
Total	221,355,191	20,699,781	242,054,172
Average	18,446,266	1,724,982	20,171,181
Total 1956-1957	231,219,339	20,386,601	251,605,940
Per cent increase or decrease 1957-1958 compared to 1956-1957	—4.3	+1.5	—3.8

[1] Fluid Milk Equivalent pounds.

TABLE 9

SCHEDULE OF NEW JERSEY PRODUCTION EXPORTED AND IMPORTS OF MILK FOR NEW JERSEY USE, FISCAL YEAR 1957-1958, BY MONTHS (POUNDS)

	New Jersey Producers Milk Exported			Milk Imported		
	North Jersey	South Jersey	Entire State	North Jersey	South Jersey	Entire State
1957						
July	19,098,761	1,464,098	20,562,859	79,398,845	17,762,749	96,161,594
Aug.	18,035,683	1,587,681	19,623,364	78,402,260	18,389,412	96,791,672
Sept.	16,981,697	1,302,591	18,284,288	81,044,125	13,654,233	94,698,358
Oct.	20,055,535	1,528,024	21,583,559	82,265,662	10,774,543	93,040,205
Nov.	21,563,455	1,434,580	22,998,035	77,269,764	10,914,081	88,183,845
Dec.	23,014,370	1,513,703	24,528,073	67,452,047	11,131,078	78,583,125
1958						
Jan.	23,427,539	1,651,320	25,078,859	69,361,582	10,069,659	79,431,241
Feb.	19,476,053	1,229,529	20,705,582	67,573,518	11,834,147	79,407,665
Mar.	21,484,399	1,591,632	23,076,031	63,562,920	12,916,541	76,479,461
April	21,342,989	1,718,282	23,061,271	71,144,778	12,844,723	83,989,501
May	24,808,711	1,943,428	26,752,139	71,979,908	13,185,149	85,165,057
June	20,804,974	1,487,704	22,292,678	70,457,262	15,187,054	85,644,316
Total	250,094,166	18,452,572	268,546,738	879,912,671	158,663,369	1,037,576,040
Average	20,841,181	1,537,714	22,378,895	73,326,056	13,221,947	86,464,670
Totals 1956-1957	262,674,936	19,199,804	282,674,740	967,723,848	149,769,665	1,117,493,513
Per cent increase or decrease 1957-1958 as compared with 1956-1957	—4.8	—3.9	—5.0	—9.1	+5.6	—7.2

Bureau of Licensing and Bonding

It is the function of this Bureau to discharge the responsibilities of the Department as stated in the Milk Dealers' Licensing and Bonding Act, the Produce Dealers' Licensing and Bonding Act, the Cattle Dealers' Licensing Act and the Disposal Plant Operators' Licensing Act.

During the year legislation was enacted which required the licensing of garbage-feeding hog farms. The applications for these licenses are being received by this Bureau which issues licenses after the farms have been inspected and approved by personnel of the Division of Animal Industry.

Taxes imposed by the Poultry Products Promotion Council and Tax Act and the White Potato Industry Promotion and Tax Act are being collected by this Bureau.

Milk Dealers' Licensing and Bonding Act

Licenses to purchase milk and cream from New Jersey producers were granted to 134 dealers during the fiscal year. Before such a license is granted, the applicant is required to file a bond based on the volume of his anticipated purchases. A total of $4,480,500 in such bonds was provided in support of these licenses, consisting of surety bonds and U. S. Government securities. No claims were filed against these bonds during the licensing year.

Produce Dealers' Licensing and Bonding Act

Dealers licensed under this act include those who purchase fruits, vegetables, eggs and live poultry from New Jersey producers. Licenses were issued to 617 such dealers this year. Each dealer is required to provide a bond in support of his license, the size of the bond depending on the dollar value of commodities purchased and the promptness with which payment is made. A total of $2,575,000 in bonds was filed in support of the 617 licenses issued.

Complaints were received against 22 dealers, most involving small amounts which were settled without the filing of formal claims against the bonds of the licensees. Formal claims were filed against five bonds. Two were subsequently paid by the dealers involved. One claim for $3,360.62 was paid by the surety company which provided the bond. Two claims remained unsettled when this report was written and will almost certainly have to be paid by the surety companies involved. These claims total $5,154.06.

CATTLE DEALERS' LICENSING ACT

During the period July 1, 1957 to June 30, 1958, licenses were issued to 148 cattle dealers, 17 less than during the previous year. The dealers who discontinued business were mostly small dealers operating with limited capital who were unable to extend credit to potential buyers. Applicants for these licenses are not required to provide bonds, their practices being regulated by the threat of revocation of license. There were very few complaints against licensed dealers. These arose from failure to keep adequate records so that individual animals could be traced, which is sometimes necessary when a disease outbreak occurs.

DISPOSAL PLANT OPERATORS' LICENSING ACT

Licenses were issued to 23 operators who transport or receive the bodies of dead animals or parts thereof in the State. No complaints were received.

This law is in need of a general revision so that the types of operators requiring licenses are clearly defined.

POULTRY PRODUCTS PROMOTION COUNCIL AND TAX ACT

A tax of one cent per hundred pounds was imposed by this act on all poultry feed used in New Jersey. The first period for which the tax was payable was July 1, 1957 to December 31, 1957. During this period $86,750.03 was collected from 337 sources consisting mostly of feed dealers and a few farmers who paid the tax directly on feed produced on their own farms.

WHITE POTATO INDUSTRY PROMOTION AND TAX ACT

This act imposes a tax of five cents per hundred pounds on all white seed potatoes planted in New Jersey, the proceeds to be used to promote the sale of New Jersey-produced white potatoes. The act became effective October 2, 1957, with the tax becoming due on or before February 1 on all seed received during the period July 1 to December 31 and by August 1 on all seed received during the period January 1 to June 30.

Only a small proportion of the seed used is delivered to farmers in the fall, so only $646.85 was collected at the end of the first taxing period. It is estimated that this tax will yield approximately $15,000 per year.

GARBAGE-FEEDING HOG FARM LICENSING ACT

This act required that all garbage-feeding hog farms be licensed on or before January 1, 1958. In order to obtain a license the farm operator had to meet requirements designed to control contagious and infectious swine diseases, including the cooking of all garbage used as swine feed.

Applications for these licenses are submitted to this Bureau. Personnel of the Division of Animal Industry then inspect the premises and practices of the applicant and approve or disprove the application. When all the requirements have been met, the license is issued by this Bureau.

Licenses had been issued to 255 garbage-feeding hog farms by June 30, 1958.

Report of the New Jersey Crop Reporting Service

GORDON G. BUTLER, *Agricultural Statistician in Charge*

Since January 1, 1955, the New Jersey Crop Reporting Service has been operated as a cooperative project of the New Jersey and the United States Departments of Agriculture. This joint endeavor was continued during the past fiscal year. By working as a cooperative unit of both departments, the service was carried on with a maximum of economy and efficiency. Such an arrangement avoids duplication of effort and eliminates the possibility of conflicting reports. As usual, Federal funds provide the basic program of crop and livestock estimates for New Jersey as a whole. Such estimates at the State level are comparable with those made for other states and for the United States. The use of State funds makes it possible to collect, prepare and publish more detailed information on farm products of special importance to the farmers of New Jersey. One of the most important of these special reports is the publication of county estimates for crops and livestock which would not be possible under the basic Federal program.

CONTINUING REPORTS

The work of collecting and disseminating agricultural statistics is one of the oldest programs of both the Federal and State Departments of Agriculture. Over the years, the work has been enlarged, revised and modernized to reflect the various changes that have taken place in agriculture during the past century. During the fiscal year, the cooperative State-Federal program has been expanded and adapted to meet local needs as far as possible. A total of 138 reports, covering 25 different phases of farming, was issued. Mailing lists for such reports range from 200 names for some of the specialized crops to nearly 5,000 names for the general crop and livestock reports for New Jersey. The monthly crop report was issued throughout the year. This release includes data on the monthly production of eggs and milk, in-season forecasts of the acreage, yield and production of grains, soybeans, hays, potatoes, sweet potatoes, and the production of fruits. A monthly report on prices received by New Jersey farmers was also issued. In addition, the price report includes monthly prices paid for feeds and hays, as well as egg-feed, broiler-feed, farm chicken-feed and milk-feed ratios.

By the use of matched funds, the Crop Reporting Service was able to issue special reports in season for tree fruits, potatoes, vegetables for market and processing, and blueberries and cranberries. At less frequent intervals reports were issued for grain stocks on farms, livestock inventories, pig crops, turkeys and honey. These various reports are mailed without charge to anyone who requests them.

CROP REPORTERS

Most of the basic information shown in the crop and livestock statistical reports is obtained from voluntary crop and livestock reporters. Approximately 7,500 farmers serve in the capacity of voluntary reporters and receive, during the year, one or more of 40 different series of questionnaires. Some report monthly, while others report only once or twice a year, depending upon the information needed. The Department of Agriculture deeply appreciates the work of these public-spirited citizens and their efforts to provide basic data for the use and benefit of all New Jersey agriculture. These reporters serve without pay. By reporting voluntarily by mail, they make it possible to issue timely reports at a minimum of expense.

SPECIAL REPORTS AND SURVEYS

The Agricultural Marketing Act of 1946 authorized Federal funds for matching State funds in marketing service work, including the collection and dissemination of additional basic statistics. During the past year, matched funds were used for several projects.

Although most of the work on the revised edition of "New Jersey Agricultural Statistics" was completed during the previous fiscal year, its publication and distribution to all interested parties was carried on during part of the past fiscal year. This publication was very similar to that published in 1955, but was enlarged and brought up to date. The main purpose was to bring together in one publication the various statistical material issued by the Crop Reporting Service so as to be easily accessible to the user. Like the former publication, it includes county estimates for which there is always a continuing demand by agricultural leaders and handlers of farm products and agricultural supplies.

Field work on the enumerative survey of the apple and peach industry of the State was completed during the fiscal year. This special survey was conducted in response to demands from the fruit growers, who asked that data on the number of trees by age and variety be collected as well as information on production, marketing methods, containers and storage. The work of tabulating and summarizing this statistical material has now been completed, and it will be available in circular form during the next fiscal year.

During the fall months of 1957, several meetings were held with the flower growers of the State. At these meetings, the growers asked that an enumerative survey of their industry be conducted by the Department of Agriculture. Field work on the survey was carried on during the winter months of 1958 by inspectors of the Division of Plant Industry. The Crop Reporting Service designed the schedule used, and is responsible for the tabulation, summarization and publication of the material obtained. This

survey will provide the flower growing industry of the State with such data as: facilities and employees of the industry; cut flowers grown in greenhouse and other structures; cut flowers grown out of doors; finished plants; young plants and cuttings for growing on; bulbs, corms and tubers; and also data on wholesale outlets with their locations. The material is being tabulated and summarized and a report will be issued during the next fiscal year.

In cooperation with the New Jersey Poultry Products Promotion Council and at the request of the poultry meat growers of the State, the Crop Reporting Service made an enumerative survey of this branch of the poultry industry. Field work was conducted during the winter and spring months of 1958. Tabulation of the material gathered is being done by machine, in cooperation with the IBM Service Bureau. Summarization and publication of the data are expected early in the coming fiscal year. The purpose of the survey was to establish the economic importance of this part of the poultry industry, as well as to collect and publish various statistical tables on the volume, price and value of the various types of meat birds grown and marketed by New Jersey growers.

Rural Advisory Committee

The Rural Advisory Committee appointed by Governor Meyner has made much progress during the fiscal year in carrying out its assignment of studying social and economic problems facing New Jersey's rural areas.

A study program of rural problems was prepared with the help of a consultant. Rural planning and zoning were determined to be major problems that required immediate attention. An executive director was engaged in October to supervise the program. The executive director and his staff function as a unit of the Department of Agriculture.

A study of the less urbanized counties and municipalities was conducted by the committee staff. It was determined after consideration of changes in land use, industrial and residential development, population changes, and local interest in the program, that a number of municipalities offered opportunity for rural planning studies. The four areas finally selected for study are under varying degrees of pressure from industrial and residential development. In all of them, local people had a favorable interest in rural planning.

The areas and their basic characteristics are as follows:

(1) A rural area under no urban pressure in South Jersey.
Greenwich and Stow Creek Townships, Cumberland County.

(2) A rural area in southern New Jersey under moderate to intense urban pressure.
Washington Township, Gloucester County.

(3) A rural area in North Jersey under little urban pressure.
Franklin Township, Hunterdon County.

(4) A rural area in North Jersey under moderate to intense urban pressures.
Manalapan Township, Monmouth County.

Pilot planning study programs were begun in these five rural municipalities. The studies are designed to stimulate local planning efforts and to encourage the use of new and better planning techniques suitable for rural areas. Rutgers Planning Service, Rutgers University, is providing technical assistance in this program. Funds for the study have been made available by the Legislature.

The results of the rural planning studies will be made available to the communities participating for such use as they may desire. Other communities interested in rural planning may adapt the methods used for their own municipalities. Many problems inherent in rural planning will be brought into sharp focus for discussion and possible methods of solution.

A report entitled *Rural Advisory Study Program for 1958* was prepared, describing in detail the rural planning pilot studies being conducted in the five rural townships listed above. Studies concerning the effects of taxation policy and use of legal instruments, such as zoning, in determining land use patterns were proposed as being necessary in New Jersey and nationally. These proposals are under consideration for study by a national foundation in cooperation with the New Jersey Rural Advisory Committee.

Urban pressures continue to be unusually great in many areas of the State particularly in Bergen, Morris, Union, Somerset, Middlesex, Monmouth, Mercer, Burlington, Camden and Gloucester counties. In these areas much rural land is being converted to residential and industrial uses. Through publicity and education, the Rural Advisory Committee has attempted to prevent unnecessary rural-urban conflicts during the transition from rural to suburban communities.

Emphasis has been placed on rural problems, such as property taxation, assessment practices, water supply, highway locations, and related matters affecting agriculture and rural communities. Coordination with other State agencies has been developed to seek their help in minimizing the problems of rural areas as they adjust to changing conditions in New Jersey.

Many individual and group inquiries were answered concerning specific problems in rural areas. Talks on rural problems were presented to farm organizations, service clubs and other interested groups. Through the cooperation of the Division of Information, publicity for the program was secured through radio and releases to local newspapers throughout the State.

The executive director spent three weeks in California where he studied the status of rural planning and zoning. A report entitled *Rural Planning and Zoning Progress in the State of California,* was distributed to county agricultural extension agents, State and local planning officials, and others interested in improved rural planning and zoning in New Jersey.

The New Jersey Junior Breeders' Fund

During the fiscal year 1957-58 a total of 155 loans amounting to $16,723.55 was made by the New Jersey Junior Breeders' Fund. This was an increase of $1,837.85 over the $14,885.90 loaned the previous year. The increase was due primarily to a larger number of steer and sheep loans as indicated by the following comparison of the last three years.

Type of Loan	Number of Loans			Amount Loaned		
	1957-58	1956-57	1955-56	1957-58	1956-57	1955-56
Agricultural loan fund	23	16	16	$869.40	$885.57	$866.25
Beef	49	26	31	7,034.15	3,463.83	4,134.96
Dairy	69	75	66	8,005.00	9,742.50	8,159.72
Poultry	..	2	3	.....	154.00	157.00
Sheep	14	10	7	815.00	640.00	445.00
Swine	..	..	..	.....	.....	.....
Total	155	129	123	$16,723.55	$14,885.90	$13,762.93

Charges against the emergency fund for livestock losses incurred by members totaled $1,446.00 for the year. These losses were four ewes and 11 dairy heifers. Five of these dairy animals were non-breeders.

Earnings from interest charged on loans provided all members with subscriptions to breed journals, and awards at the following events:

Flemington State 4-H Dairy Show	$145.00
Cumberland County 4-H Dairy Show	75.00
State FFA Livestock Show	140.00
4-H Baby Beef Show	140.00
	$500.00

The New Jersey Agricultural Society continued its awards to members of the New Jersey Junior Breeders Association. These awards were for the best-fitted animal in each breed at the Flemington State 4-H Dairy Show and Cumberland County 4-H Dairy Show, and to highest producers on 4-H Meritorious Milk Production Records.

The Frelinghuysen Memorial Awards recognizing members whose dairy animals made the highest milk production records in the 4-H and vocational agriculture programs were again presented during Farmers Week. The Garden State Publishing Company also continued to provide subscriptions to *New Jersey Farm and Garden* for all members of the fund.

During the 37 years which the New Jersey Junior Breeders' Fund has been available to rural youth of New Jersey, more than 4,250 loans in excess of $366,000 have been transacted. The response to this program has well demonstrated the place which the fund has in 4-H club programs and in the work of vocational agriculture students.

TOTAL AMOUNT LOANED BY COUNTIES

County	Loaned 1957-58	Total Loans Since 1921
Atlantic	$1,965.75	$8,163.69
Bergen	200.00	1,281.80
Burlington	31.86	20,067.21
Camden	.....	2,264.94
Cape May	425.54	3,602.97
Cumberland	50.00	12,074.33
Essex	.....	885.30
Gloucester	775.00	10,860.86
Hudson	.....	.....
Hunterdon	1,050.00	28,669.61
Mercer	900.00	36,058.35
Middlesex	1,257.00	43,152.63
Monmouth	1,630.00	33,968.11
Morris	96.00	8,205.00
Ocean	610.00	5,372.48
Passaic	1,212.00	1,928.25
Salem	417.60	33,428.76
Somerset	1,386.00	21,796.00
Sussex	3,301.80	60,685.87
Union	.....	200.00
Warren	1,415.00	33,232.23
Total	$16,723.55	$365,898.39

Official Proceedings of the Forty-third Annual State Agricultural Convention

The forty-third annual State Agricultural Convention was held in the Assembly Chamber of the State Capitol in Trenton, on Tuesday, January 28, 1958. The meeting was called to order at 9:30 A. M. by George H. Combs, president of the State Board of Agriculture. The invocation was offered by the Reverend Canon Edwin W. Tucker, Rector, St. Matthews Episcopal Church, Pennington.

The roll of delegates was called by President Combs as follows:

Delegates of the State Agricultural Convention

From County Boards of Agriculture

Name	Address	Term	County
Louis J. Sanguinetti	Minotola	2 years	Atlantic
Joseph Lamonaca	Hammonton	1 year	Atlantic
Steffen Olsen	Westwood	1 year	Bergen
Everett L. Conklin	East Rutherford	1 year	Bergen
Clement B. Lewis	Riverton	2 years	Burlington
Barclay H. Allen	Mt. Holly	1 year	Burlington
Mrs. Ernest C. Bell	Bellmawr	2 years	Camden
Samuel C. DeCou	Haddonfield	1 year	Camden
Lester Germanio	Belleplain	2 years	Cape May
Russell Taylor	Cape May	1 year	Cape May
Samuel W. Ewing	Greenwich	2 years	Cumberland
Louis D. Schaible	Shiloh	1 year	Cumberland
William Crane	West Caldwell	2 years	Essex
George F. Meyer	Caldwell	1 year	Essex
Joseph Maccarone	Swedesboro	2 years	Gloucester
Leslie Richards	Sewell	1 year	Gloucester
Albert Schenone	Union City	2 years	Hudson
Henry A. Marselle	Weehawken	1 year	Hudson
Harold B. Everitt	Flemington	2 years	Hunterdon
Fred H. Totten	Ringoes	1 year	Hunterdon
William Kendall	Hightstown	1 year	Mercer
John W. Tindall	Princeton Junction	1 year	Mercer
George R. Parker, Jr.	Plainsboro	1 year	Middlesex
Alex Dembeck, Jr.	New Brunswick	2 years	Middlesex
William Schlechtweg	Freehold	2 years	Monmouth
Walter W. Lott	Freehold	1 year	Monmouth
Harold O. Farrand	Parsippany	2 years	Morris
Jerry Suk	Denville	1 year	Morris
Fred E. Scammell	South Toms River	2 years	Ocean
Reginald V. Page	Toms River	1 year	Ocean
Peter Hamersma	Clifton	2 years	Passaic
Ernest Hausamann	Paterson	1 year	Passaic
Laurence C. Broomell	Woodstown	2 years	Salem
Samuel Crystal	Bridgeton	1 year	Salem
Gilbert I. Runyon	Skillman	2 years	Somerset
David W. Amerman	Neshanic	1 year	Somerset
Herman Kleindienst	Newton	2 years	Sussex
Thomas E. Inslee	Newton	1 year	Sussex
Edward C. Schaffernoth	Scotch Plains	2 years	Union
Wilfred Haines	Union	1 year	Union
Edgar V. Woolf	Asbury	2 years	Warren
Henry Douma	Hackettstown	1 year	Warren

From Pomona Granges

Name	Address	Term	County
Martin Decker	Hammonton	1 year	Atlantic
John Clauss	Fair Lawn	1 year	Bergen-Passaic
C. Harold Joyce	Medford	2 years	Burlington
Reuben H. Dobbs	Marlton	1 year	Camden
Allan McClain	Green Creek	2 years	Cape May
Everett Hazen	Millington	1 year	Central District
Robert P. Wheaton	Bridgeton	2 years	Cumberland
Russell McClure	Sewell	1 year	Gloucester
John T. Hudnett	Flemington	1 year	Hunterdon
Wilbert T. Overhalt	Titusville	1 year	Mercer
J. V. S. DuMont	Somerville	1 year	Middlesex-Somerset
Howard P. Clayton	Freehold	2 years	Monmouth
Arthur Y. Jarman	Monroeville	1 year	Salem
John P. Cowan	Newton	1 year	Sussex
Alfred F. Baylor	Columbia	1 year	Warren

From Other Organizations

American Cranberry Growers' Association—Edward V. Lipman, New Brunswick, 1 year; Hobart R. Gardner, Indian Mills, 1 year.

Jersey Chick Association—H. Roberts Rapp, Farmingdale, 1 year; John Krokos, Milmay, 1 year.

New Jersey Association of Nurserymen—Klaas DeWilde, Shiloh, 2 years; George F. Runge, Elizabeth, 1 year.

New Jersey State Florists' Association, Inc.—August Bosenberg, New Brunswick, 1 year; George H. Masson, Jr., Yardville, 1 year.

New Jersey State Grange—Preston B. Cole, Stewartsville, 1 year; H. Milton Flitcraft, Woodstown, 1 year.

New Jersey State Horticultural Society—C. William Haines, Sr., Masonville, 2 years; Clarence H. Steelman, Sr., Princeton, 1 year.

New Jersey State Poultry Association—C. T. Darby, Somerville, 1 year; A. C. Schlott, Milford, 1 year.

United Milk Producers of New Jersey—Benjamin Hart, Pennington, 1 year; Thomas L. Lawrence, Hamburg, 1 year.

Blueberry Cooperative Association—W. A. Jarvis, Pemberton, 1 year.

Cooperative Growers' Association, Inc.—J. Cresswell Stuart, Beverly, 1 year.

E. B. Voorhees Agricultural Society—H. Malcolm Adams, Franklin Park, 1 year.

New Jersey Holstein-Friesian Cooperative Association, Inc.—Charles Kirby, Harrisonville, 1 year.

New Jersey Agricultural Experiment Station—Tunis Denise, Freehold, 1 year.

New Jersey Beekeepers Association—C. F. Peterson, Pitman, 1 year.

New Jersey College of Agriculture—William H. Martin, New Brunswick, 1 year.

New Jersey Field Crop Improvement Cooperative Association—George Stevens, Asbury Park, 1 year.

New Jersey Guernsey Breeders' Association, Inc.—William M. Nulton, Jr., New Brunswick, 1 year.

New Jersey State Potato Association—Albert Punk, Imlaystown, 1 year.

Cooperative Marketing Associations in New Jersey, Inc.—William J. Lauderdale, Lambertville, 1 year.

APPOINTMENT OF COMMITTEES

The following committees were appointed by President Combs:

NOMINATING COMMITTEE FOR MEMBERS OF THE STATE BOARD OF AGRICULTURE

Clement B. Lewis, Chairman	Burlington County Board of Agriculture
Louis J. Sanguinetti, Vice Chairman	Atlantic County Board of Agriculture
John Clauss	Bergen-Passaic Pomona Grange
Everett L. Conklin	Bergen County Board of Agriculture
John P. Cowan	Sussex County Pomona Grange
Samuel C. DeCou	Camden County Board of Agriculture
Henry Douma	Warren County Board of Agriculture
Samuel W. Ewing	Cumberland County Board of Agriculture
Charles Kirby	New Jersey Holstein-Friesian Cooperative Association, Inc.
William J. Lauderdale	Cooperative Marketing Associations in New Jersey, Inc.
Allan McClain	Cape May County Pomona Grange
George R. Parker, Jr.	Middlesex County Board of Agriculture
H. Roberts Rapp	Jersey Chick Association
George F. Runge	New Jersey Association of Nurserymen
Gilbert I. Runyon	Somerset County Board of Agriculture
John W. Tindall	Mercer County Board of Agriculture

NOMINATING COMMITTEE FOR MEMBER OF FISH AND GAME COUNCIL

Samuel Crystal, Chairman	Salem County Board of Agriculture
Reuben H. Dobbs	Camden County Pomona Grange
H. Milton Flitcraft	New Jersey State Grange
C. Harold Joyce	Burlington County Pomona Grange
John Krokos	Jersey Chick Association
Leslie Richards	Gloucester County Board of Agriculture
William Schlechtweg	Monmouth County Board of Agriculture

COMMITTEE ON RESOLUTIONS

Martin Decker, Chairman	Atlantic County Pomona Grange
George F. Meyer	Essex County Board of Agriculture
Harold B. Everitt	Hunterdon County Board of Agriculture
Harold O. Farrand	Morris County Board of Agriculture
Hobart R. Gardner	American Cranberry Growers' Association
Benjamin Hart	United Milk Producers of New Jersey
Ernest Hausamann	Passaic County Board of Agriculture
J. Cresswell Stuart	Cooperative Growers' Association, Inc.

COMMITTEE ON CREDENTIALS

Lester Germanio, Chairman	Cape May County Board of Agriculture
Herman Kleindienst	Sussex County Board of Agriculture
Walter W. Lott	Monmouth County Board of Agriculture
Albert Punk	New Jersey State Potato Association
Robert P. Wheaton	Cumberland County Pomona Grange

COMMITTEE TO WAIT ON THE GOVERNOR

Tunis Denise, Chairman	New Jersey Agricultural Experiment Station
Alfred F. Baylor	Warren County Pomona Grange
Hon. C. William Haines	New Jersey State Horticultural Society
Dr. William H. Martin	New Jersey College of Agriculture
Edgar V. Woolf	Warren County Board of Agriculture

REPORT OF COMMITTEE ON CREDENTIALS

The credentials committee examined the certificates of delegates and reported them in order.

ELECTION OF MEMBERS OF THE STATE BOARD OF AGRICULTURE

The chairman of the nominating committee placed the names of Leslie M. Black, Hunterdon County, representing poultry, and Alvin W. String of Gloucester County, representing dairy, in nomination for membership on the State Board of Agriculture. Reginald V. Page, representing poultry from Ocean County, and Azariah Frey, dairyman from Warren County, were nominated and duly seconded from the floor. Upon motion made and duly seconded, it was voted the nominations be closed. Since there were more than two candidates, President Combs declared a written ballot was in order. The result of the vote was as follows: Black, 62 votes; String, 43 votes; Frey, 37 votes; and Page, 20 votes. Majority rule was met with 81 ballots being cast and 41 equaling a majority. President Combs then declared Mr. Black and Mr. String elected for recommendations to the Governor for a four-year period beginning July 1, 1958.

ELECTION OF A MEMBER OF THE FISH AND GAME COUNCIL

The chairman of the nominating committee for membership on the Fish and Game Council of the Department of Conservation and Economic Development placed in nomination the name of Lawrence Bohm of Eldora, Cape May County, for a second four-year term. There being no further nominations, the nominations were closed. Mr. Bohm was unanimously elected for recommendation to the Governor for a four-year term beginning April 1, 1958.

CITATIONS

Citations for distinguished service to agriculture were awarded to the following: Clifford T. Darby, of Somerville; Herman C. Demme, of Sewell; Amos F. Dixon, of Stillwater; and Joseph English, of Mays Landing.

The citations, read by Secretary of Agriculture Phillip Alampi, were as follows:

CITATION OF CLIFFORD T. DARBY

You have played a most important role in raising the poultry industry to its present top-ranking position among New Jersey's agricultural enterprises. One of the first in the nation to recognize the value of selective breeding as a means of improving egg production and quality, you have succeeded in developing an outstanding strain of birds, widely used in commercial poultry flocks in this State and, indeed, throughout the world.

Your layers have made exceptional records, often placing first in nation-wide competition. Wide and well-deserved recognition has been given your ability and perseverance as a breeder.

By your example, you have encouraged others to institute breeding programs and better management practices, to the constant improvement of our poultry population. Your advice and guidance have been sought frequently by both beginners and veteran poultrymen, and you have always given freely of your time and counsel.

In addition, you have devoted your many talents and abilities to the betterment of the farm and civic organizations of our State and of your local area.

Your career has been a long and useful one, exemplifying the highest standards of your chosen field, and it is with deep appreciation that we present to you this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

CITATION OF HERMAN C. DEMME

For forty years you have been an outstanding figure in New Jersey's poultry industry, contributing generously of your talent toward the advancement of your chosen field. Today you are one of the nation's foremost poultrymen.

As a pioneer you early recognized the importance of breeding, nutrition and disease control as essentials, in addition to skill and good husbandry. You demonstrated these practices on your own farm, thus encouraging countless others by your example.

You have filled with distinction many posts of great responsibility in State, regional and national organizations, guiding this new industry to its present high rank. Because of your broad vision, progressive thinking, sound judgment, and sincere interest, your views and your voice are respected throughout the nation.

No personal inconvenience or sacrifice has ever dulled your zeal to advance the agricultural interests of your adopted State. We recall with pride your term of service as a member and as president of this Board, when progressive programs affecting all branches of our agriculture were initiated.

As an expression of our gratitude and as a tribute to your career, we award to you this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

CITATION OF AMOS F. DIXON

Few men can claim the degree of distinction in a single area of human endeavor which you have achieved in each of three different fields. Your accomplishments as an engineer and executive in industry, and later as a practical farmer and dairyman, have been equally noteworthy. In the realm of government and public service, your record has also been outstanding.

New Jersey is proud that you chose this State to pursue your career in agriculture and has benefited greatly from your decision. In the relatively brief period that you have conducted your dairy enterprise here, you have worked unstintingly for the welfare of your fellow farmers.

Your objective approach to problems, your keen mind, your untiring energy, and your unique qualities of leadership have contributed much to the countless local, county and State farm organizations to which you have devoted so much time.

As a member of the Legislature, you labored diligently and effectively toward the advancement of our agriculture. Also, you have given freely of your great talents in aiding civic groups toward the accomplishment of their goals.

For these and many other notable achievements, we congratulate you and take pride in presenting this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

CITATION OF JOSEPH ENGLISH

At an age when many seek retirement and devote themselves to their yesteryears, you continue to serve with distinction the farm and rural interests of your County and State.

Few of those assembled here to honor you are aware of your pioneer efforts to establish the Extension Service in your County in 1914; of your forty-plus years of service to the Atlantic County Board of Agriculture; of your loyal support of the State Board of Agriculture and your frequent attendance at this Convention as a delegate.

During the crisis of the depression years and again as we faced the national emergency of World War II, you assumed the responsibility for many burdens concerned with the agricultural programs of State and Federal agencies.

You have given freely of your time and talents in the service of countless organizations and causes concerned with the welfare of two generations of farmers. Both as a good citizen and neighbor, you have responded to every call to serve your community and church. All of these have won for you wide commendation as well as the gratitude and regard of your fellow farmers.

In recognition of your exemplary career, the State Board of Agriculture awards to you this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

REPORT OF THE COMMITTEE ON RESOLUTIONS

The following resolutions, presented by Martin Decker and reported favorably by the committee, were adopted by the State Agricultural Convention:

WHEREAS, During the past four years New Jersey's Chief Executive, Governor Robert B. Meyner, has demonstrated a genuine interest in the agricultural welfare of the Garden State by his willingness to confer with leaders on constructive programs and to lend his cooperation in the development of sound approaches to our problems; and

WHEREAS, He is just now entering upon a new term of office by virtue of his reelection through the free voting process which is characteristic of democracies; therefore be it

Resolved, That this delegate body assembled for its annual Agricultural Convention on this 28th day of January, 1958, commend Governor Robert B. Meyner for his interest in the agricultural economy of the State, as well as for his appearances before this Convention now and in years past, and that we extend our best wishes for these continued valued relationships in the years ahead; and be it

Further Resolved, That we request our Secretary of Agriculture, The Honorable Phillip Alampi, to acquaint Governor Meyner with our sentiments by sending him a copy of this resolution.

WHEREAS, New Jersey is experiencing continued industrial and residential development, as well as a migration of population from the cities into the suburban and rural areas; and

WHEREAS, Many industrial plants are locating on rural sites and their employees are establishing homes in rural communities; and

WHEREAS, The impact of this rather sudden shift has imposed many serious problems on local municipalities and counties; and

WHEREAS, Governor Robert B. Meyner has recognized this situation by the appointment of the Rural Advisory Committee in the Department of Agriculture; and

WHEREAS, That Committee has initiated a program of study of rural problems resulting from the impact of urbanization into our rural areas; therefore be it

Resolved, That Governor Meyner be commended for his continued interest in rural adjustments and that the Department of Agriculture be provided with sufficient funds to proceed with a thorough study of rural areas so definite recommendations can be made to help rural communities, faced with this problem.

WHEREAS, Planning is essential to orderly growth and development of both counties and municipalities throughout New Jersey; and

WHEREAS, Planning boards are being organized at both county and municipal levels; and

WHEREAS, Such planning boards are authorized to plan and zone land areas so as to determine the future use of such areas; and

WHEREAS, Much of the land so regulated is devoted to farming and related rural enterprises; therefore be it

Resolved, That all farm organizations request their members to take a more active part in planning and zoning activities in their communities, and that they seek fair representation on planning boards for agricultural interests.

WHEREAS, Planning to be effective in New Jersey municipalities and counties must be coordinated with a master plan for the entire State; and

WHEREAS, The State Master Plan has not been revised since 1951 due to lack of sufficient funds and personnel; therefore be it

Resolved, That all farm organizations support a State Master Plan and request the Legislature to appropriate sufficient funds to renew and complete the work on this Plan so that county and municipal planning boards will have a State plan to guide them in planning their own areas.

WHEREAS, New Jersey is a great industrial State, and the land is increasingly in demand for purposes of housing the people working in industry; and

WHEREAS, The greatly increased costs of education and other municipal services have been a result of this urbanization; and

WHEREAS, The revenues from State taxes have limited the amount of money available for State school aid, causing the burden of raising additional revenues to fall on the real property tax; and

WHEREAS, Farmers as large land owners are paying an unfair share of school and other municipal costs in proportion to services rendered; and

WHEREAS, A survey of farm groups by the New Jersey Farm Bureau has indicated these groups have adopted policies demanding action to prevent confiscatory taxation of farmland; and

WHEREAS, In some counties of the State, assessors assess farmland on a value which the land may have at some future time rather than assessing the land on the basis of its present use; therefore be it

Resolved, That the State Agricultural Convention here assembled does favor a new broad-base tax, such as a retail sales tax, state income tax, or other tax to be used for the purposes of increasing State aid to education and decreasing the amount required for education from real property; and be it

Further Resolved, That steps be taken to insure the standard assessing of farmland on a basis of its use rather than its potential value for some hypothetical future use; and be it

Further Resolved, That copies of this resolution be sent to the Governor and members of the Legislature.

WHEREAS, The eradication of the gypsy moth is being rapidly achieved in Michigan, Pennsylvania and New Jersey, by large scale aircraft spraying with one pound of DDT in one gallon of solution per acre; and

WHEREAS, This measure has proven effective, safe and economically feasible as compared with previously accepted measures; and

WHEREAS, The elimination of the gypsy moth will bring great benefits to forests and shade and orchard trees and to industry which must suffer regulation to prevent spread of the pest from infested areas; and therefore be it

Resolved, That the New Jersey State Agricultural Convention at its annual meeting on January 28, 1958, at Trenton, New Jersey, urges the governments of those states where the gypsy moth is known to be present to give every possible support to the continuance of the program, financed by Federal and State governments, aimed at the complete eradication of the gypsy moth from the United States; and be it

Further Resolved, That copies of this resolution be forwarded to the Governors of the States of New York, Connecticut, Massachusetts, Rhode Island, Vermont, New Hampshire and Maine and to the Secretary of Agriculture of the United States.

WHEREAS, Extensive damage to farm crops and property by the deer population of the State is increasing alarmingly, with little redress for the farmer; and

WHEREAS, This situation is brought about by a constantly growing deer population as a result of protecting doe deer at all times; therefore be it

Resolved, That we join with the New Jersey State Grange and the New Jersey Farm Bureau in urging the New Jersey Fish and Game Council to alleviate this undue hardship of farm crop and property damage by consenting to the plea now made for several years of establishing an open season, statewide, for the killing of doe deer in 1958.

WHEREAS, The Agricultural College of Rutgers University, the State University of New Jersey, has long suffered a need for additional buildings to provide the necessary facilities for adequate research and education in fields of agriculture, all of which redound to the benefit of our agricultural economy and to the credit of our University; and

WHEREAS, Through the favorable consideration and action of Governor Meyner and the Legislature sufficient appropriations were made to provide for the expansion of the poultry and horticultural buildings to proportions whereby these divisions of agriculture, until now the most needy on the campus, can now function more freely and render services which were not heretofore possible; therefore be it

Resolved, That we laud the Governor and the Legislature and others who furthered this progressive action for their recognition of the need for such expansion and their willingness to make available the necessary funds.

WHEREAS, County Boards of Agriculture reach far back into the operation of organized agriculture and were among the original groups specified in the Agricultural Law of 1916 to participate in the annual convention to choose two members for the State Board of Agriculture; therefore be it

Resolved, That we commend Secretary of Agriculture Alampi for his efforts to establish a closer liaison between the County Boards and the State Board of Agriculture, and for his plan, initiated this year, of formulating among all delegates to this Agricultural Convention a greater consciousness of the responsibilities which they and their organizations have in the affairs of this Convention and thereby in the general functioning of the Department of Agriculture.

Resolved, That we welcome as participants in Farmers Week two organizations holding meetings here for the first time, namely, the Thoroughbred Horse Breeders' Association of New Jersey and the New Jersey Pony Breeders and Owners Association, Inc., and wish them the benefits from their conferences which so many of the other participating organizations enjoy through exchange of information and ideas for the improvement of their respective fields of operation.

WHEREAS, Since our last assembly, God in His infinite wisdom has chosen to call from our midst a number of our friends and leaders in their respective fields of endeavor, among them being Dr. Willard H. Allen, our beloved Secretary of Agriculture for eighteen years and one of agriculture's greatest friends; Lester Collins, a former president of the State Board of Agriculture, rich in wisdom and a counsellor wherever sound advice was needed; Elmer H. Wene, a past president of the State Board of Agriculture, former Congressman, and poultry leader; Dr. Fred R. Beaudette, of Rutgers University, a nationally known figure in the realm of poultry diseases; P. Wendall Beideman and William H. Clark, both former members of the State Board of Agriculture; Joseph F. Hauck, of Rutgers University, known in many areas of New Jersey for his interest in better marketing; Charles H. Gould, for years the highly respected county agricultural agent of Camden County; and Owen E. Kiser, State Supervisor of Agricultural Education, who devoted his life to the education and encouragement of young men interested in farming; and

WHEREAS, The passing of these friends has occasioned sorrow, yet sorrow that is mitigated by the remembrance of their dedicated service to others; therefore be it

Resolved, That we, their associates for a few or many years, deem it fitting and proper to pay tribute to their memories by pausing in our proceedings to observe a moment of silence; and be it

Further Resolved, That the bereaved families be apprised of the feeling of this annual Agricultural Convention at Trenton, New Jersey, this 28th day of January, 1958.