STATE OF NEW JERSEY
DEPARTMENT OF AGRICULTURE
W. H. ALLEN, *Secretary*

Twenty-seventh Annual Report

OF THE

New Jersey State Department of Agriculture

July 1, 1941 — June 30, 1942

Trenton, N. J., December, 1942

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STATE OF NEW JERSEY
DEPARTMENT OF AGRICULTURE

W. H. ALLEN, *Secretary*

TRENTON

December 1, 1942.

To 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 Twenty-seventh Annual Report of the New Jersey Department of Agriculture, for the fiscal year ended June 30, 1942.

Respectfully yours,

W. H. Allen

TWENTY-SEVENTH ANNUAL REPORT OF THE NEW JERSEY STATE DEPARTMENT OF AGRICULTURE

July 1, 1941 to June 30, 1942

Report of the Secretary of Agriculture

W. H. ALLEN

From the standpoint of value of agricultural crops grown, the year covered by this report has been an outstanding one. Both weather and prices were favorable for most of the major crops in the state, and were responsible for an unusually good year for production records and gross returns to our farmers, regardless of the fact that during most of the period the farmers operated under wartime conditions. It is fortunate that the year has been a successful one as it has resulted in the payment of debts and the meeting of mortgage payments and has placed our farmers in a position where they can make an all-out contribution to the war effort, their part being the production of food. Naturally, there have been a great many problems associated with farming during the past twelve months.

The most severe problem facing our farmers has been the shortage of labor. This has been due in part to the demand from nearby war industries for manpower. The attractive prices which they were able to pay made it impossible for farmers to compete under normal price levels. As a result, the normal number of workers on New Jersey farms has been materially reduced.

Secondly, and particularly important from the standpoint of our family-sized farms, the Selective Service and voluntary enlistment in the armed forces on the part of the younger members of the family also reduced materially the number of persons engaged on New Jersey farms during the past year. Naturally this resulted in long hours for those who stayed on the farm, for during the year approximately the same acreage of crops was planted and harvested and the same number of livestock kept as during the previous year.

Another factor that has militated for unfavorable conditions for agriculture during the past year has been the inability of farmers to get the usual amount of machinery and labor-saving devices associated with farming in this state. In addition, scarcity of supplies such as spray equipment, fertilizer, materials and feed have tended to discourage a greater number of units of production, which no doubt would have occurred had more favorable conditions existed. During the first year of the second world

war, one of the principal reasons why New Jersey's farm production was so successful was the fact that farming in this state is largely in the hands of owner-management, which makes possible the necessary adjustments to continue even under adverse conditions.

Another major reason why our New Jersey farmers could continue in a normal way is the fact that most of them are identified with farmer-owned markets which are under the supervision of the State Department of Agriculture, and assure farmers of the state an attractive market for the products which they grow. Probably no group of farmers in any other state are as fortunate as those in New Jersey in that the bulk of their marketing is done through farmer-owned cooperatives, which assures them of a market and a return of practically a full price for goods produced.

Just as the year has been a successful and busy one for the farmers, it has also been a year of greater service for the Department of Agriculture. The department has suffered the loss of a great number of its staff through enlistment in the armed forces, it being the policy of the State Board of Agriculture not to claim exemptions for those who desire to enter the armed services or to join industries where they feel they will be able to be of greater use. However, this has resulted in placing greater responsibility and more work on the members of the staff who have stayed with the department. Also, there has been a demand upon the personnel of the department for many committee assignments in the interests of the war effort. Curtailment in the use of tires and gasoline has resulted in using other means of carrying out services to the farmers, making possible a saving of nearly 25 per cent in the use of departmental automobiles during the past year.

The effect of the many new federal agencies upon the agriculture of the state has been great. Many rulings, directives and price ceilings have been established which have not worked to the best interests of our agriculture. Today, much of the acreage of farm crops produced in this state is due to the quotas and goals set by the federal government. Also, in many instances, prices which the farmer received for his products are either set or influenced by government action.

It is interesting to note the trends that are taking place in New Jersey agriculture, which very likely will influence materially the farming of the state for the coming years. The dairy industry appears to be centering and growing in size in Sussex, Warren and Hunterdon counties, while in the other counties of the state the cows kept on farms are becoming fewer in number. No doubt this is due to the location of many dealer plants in the above-named counties, while in the other counties of the state there is a tendency for dealers to reduce the amount of milk purchased, depending upon production from out of the state to fill the consumer requirements in South Jersey. Also, it can be stated that there are fewer farmers who are depending upon dairies as a source of income. On the other hand, this has not reduced the number of cows kept in the state, for those who are continuing in the dairy business are keeping larger herds. The factor which is

causing this trend is the sanitary requirements of the municipal health authorities. Dairymen find that it requires a considerable increase in overhead to install many of the practices demanded in the production of milk for their particular municipality.

The poultry industry is the fastest growing phase of agriculture in the state. Each year finds more farmers looking to poultry operations as a major source of farm income. The factors that are affecting this situation are the sound cooperative marketing operations, owned and controlled by the farmers, and the fact that there are few federal or local restrictions or regulations which would tend to restrict the poultry development in the state. Lastly, the development of poultry on a farm can be financed more easily than many other types of agriculture and the state is particularly adapted to poultry keeping because of the demand for fresh eggs in our nearby cities.

Through its seed certification work, the department has done much to direct the production of tomato and potato operations in this state. Each year a greater acreage in the state is devoted to the production of certified seed, particularly tomatoes and potatoes, and, recently, field crops such as corn and soy beans. The establishment of sound canning operations in the state, quick freezing plants and, during the past year, dehydration operations, has resulted in an expansion of vegetable production, the farmers no longer depending entirely upon the fresh market as a means of selling their crops.

The Department of Agriculture has cooperated with the New Jersey Council and local farm organizations in promoting the sale of farm products through periods when the crops were about to be marketed. During the past fiscal year, New Jersey farmers devoted more than $35,000 to advertising their products to the people of the state. This, with careful packaging and identification of the products, has done much to keep New Jersey crops before the public when they are in need of a market. It is only right to pay tribute to the many retail marketing organizations, chain store operators and public utility organizations for their cooperation with this department and with the New Jersey Council in creating a demand for and furthering the selling of New Jersey farm products through periods of the year when surpluses and low prices would have worked to the disadvantage of the farmer and the consumer.

The department has also cooperated with the recently established State Commission on Student Service in lending every means to the commission in outlining a policy and program, which resulted in the commission being of considerable service to the farmers in filling some of their labor needs.

BUREAU OF ANIMAL INDUSTRY

The continuation of the program to eliminate tuberculosis in the dairy herds of New Jersey remains one of the important projects of the department. More than 16,000 farms were visited and the tuberculin tests were made on

a total of more than 209,000 head of cattle during the year. In all, 258,877 individual tuberculin tests were made by the Bureau of Animal Industry and 871 reactors were moved from the dairy herds of the state. This is an infection amounting to 0.34 per cent. This is the second year that this amount of infection has been found in the herds of the state and indicates approximately the amount that can be anticipated from year to year as it is highly improbable that the percentage of reactors will fall to zero.

It is interesting to note that imported dairy cattle, although free from tuberculosis on arriving in the state, when tested after exposure during the first year in New Jersey resulted in several reactors amounting to 1.6 per cent infection. Tests made of young stock raised in New Jersey amounted to only .42 of one percent reaction. This is one of several reasons why the department has always stressed the raising of young stock as a part of sound dairy farm management.

The state paid $27,642.56 in indemnities during the year as its share in the cost of seeing that the milk produced in New Jersey is from tuberculosis-free cattle. This amount of money, and the amount paid in indemnities by the United States government, plus the salvage value of the reactors, returns to the owners an average of $111.43. It can be estimated that it costs the farmer approximately $50 more than he received to replace these animals in the herd. It can be expected that the cost to the state for carrying on this worthy project will continue to be near the figure spent last year in controlling this dreaded disease. However, weighing the value of the project in the interest of the public, it can be stated that the cost is justified.

In the interest of public health, the department has been engaged in the control and eradication of Bang's disease in the dairy herds of the state. The department is attempting to carry on its program in a manner which will result in the minimum cost to the state and also to the farmers cooperating. For this reason the program consists of four plans. If the farmer selects Plan One or Plan Two as the most practical for his conditions, he is indemnified for his losses.

The number of accredited Bang's-free herds in the state is now 335, as compared with 259 a year ago. The high cost of replacements, shortage of labor and farming under wartime restrictions have all tended to prevent a more rapid acceptance of the project by farmers in the state. There are 1,158 dairy farms in New Jersey cooperating with the department in controlling and eradicating Bang's disease in their herds. In these herds there are 24,383 animals under supervision.

Under Plans Three and Four of the program, farmers are not indemnified for reactors to the blood test. Under these programs, calves are permitted to be immunized through vaccination, and it is thought that this phase of controlling Bang's disease in the dairy herds of New Jersey will be more popular inasmuch as it does not call for eliminating animals found to react to the blood test. The program as outlined in the control of Bang's disease by the department will be the least expensive from the standpoint

of the state and the farmer. However, it will require a number of years to accomplish the result desired, namely, accreditation of all herds producing milk for human consumption. The state is particularly concerned over farmers who are producing milk which is sold in its natural state and is not subjected to pasteurization, and is working with them as the first aim in the Bang's disease control program of the department.

The third most important project in the interests of the dairy industry of the state is the cooperative control and treatment of infectious mastitis. During the past year, the disease control laboratory of the department conducted bacteriological examinations of samples of milk, sent to the department by veterinarians employed by dairymen throughout the state, to identify the type of infectious organism affecting dairy herds. Recommendations have been made to the dairyman through his veterinarian as to the procedure which can be followed to control the spread of the disease through the use of preventative measures and treatment by use of commercial products which have proved satisfactory in the control of mastitis.

A major project, continued by the department, is the control of diseases of poultry, consisting principally of control of pullorum. This disease continues to be of greatest concern to the breeder and hatcheryman, taking as is does an annual toll running into thousands of dollars through chick losses in the early stage of brooding.

An innovation in the program of the department has been the education of poultrymen in the method of detecting reactors to the agglutination test without the need for assistance from the department staff. This has made for popularizing the control of pullorum disease in poultry, has reduced the expense to the poultrymen and materially lessened the trouble and time necessary to identify breeders in the farmers' flocks having the pullorum disease. Besides cooperating with Rutgers University in developing a school for teaching flock-testing agents, capable of doing the work, the department has, when necessary, sent out representatives and made field tests for farmers who prefer this extra service to depending upon making the tests themselves.

During the past year, more than 77,000 birds were tested by representatives of the department. It was found that the reaction in these birds ran about 1.3 per cent, which can be considered about the average infection found in the usual poultry flock kept under farm conditions in New Jersey. It is estimated that the flock-testing agents tested 205,000 birds. The reaction found by these men amounts to 1.5 per cent.

There is an ever-increasing demand made upon the animal disease laboratory of the department by farmers, particularly in performing post mortem examinations of livestock and poultry. We are very happy to see this use made of the laboratory by the farmers as it is a clear indication of a worthwhile service, and shows as well that our farmers are becoming more conscious of the importance of having careful analyses made and recommendations based upon laboratory findings.

BUREAU OF MARKETS

The success of New Jersey agriculture, to a large degree, is based upon the excellent marketing facilities within the state. This is not only true of the present but is likely to be of ever-increasing importance through the war period and during post-war farming in New Jersey. Fortunately for the farmers of the state the principal markets are cooperative enterprises owned and directed by them.

The most recent marketing developments in New Jersey are the sixteen produce and poultry and egg auctions, eleven devoted to the sale of fruits and vegetables and five to the marketing of poultry and eggs. It is estimated that approximately half the farmers of the state use the marketing facilities of these auctions for the sale of their products. The produce auctions sold more than $4,000,000 worth of fruits and vegetables during the past year. The value of the poultry auctions in dollar sales was even greater. It has been estimated that more than a third of all the eggs produced in the state are sold through these auctions, and during the past year the volume of egg sales increased 20 per cent and poultry sales a little less than 15 per cent.

The Department of Agriculture is particularly pleased with the success of these marketing activities inasmuch as it was responsible for sponsoring and developing these auctions through the years.

Last year a new auction was started, specializing in the sale of livestock. This auction is located at Hackettstown and during its first year did more than a half million dollars' worth of business. It was exceedingly successful and particularly popular since its location afforded a market for livestock from the general farms of Warren and Sussex counties.

Completing the marketing facilities, especially for produce, are the large farmer-owned and directed city markets, the three most important being at Newark, Paterson and Atlantic City.

Producing food crops for processing has always loomed as an important enterprise on New Jersey farms. These crops go to canneries and freezing plants where State Department of Agriculture inspectors grade the loads in the interests of the farmers and the cannery in order to establish the basis on which the farmer is to be paid. The two important crops inspected and graded are asparagus and tomatoes. More than 30,000,000 pounds of asparagus were graded by the inspectors at the seven plants which use the service of the department. Eight canneries use the department service in establishing grades of tomatoes. Over 200,000 tons of tomatoes were inspected and graded. This has been one of the best years for the tomato growers. Nearly double the gross income per acre was obtained by the growers, due principally to ideal weather and excellent yields.

Inspection and grading of farm products by department inspectors for carload and interstate shipments becomes more popular each year and the department receives greater demands for this service. Although the service is less than ten years old, it has grown more than 300 per cent and at the

present time nearly 1,500 cars of apples, potatoes and sweet potatoes have been sold under the state grades.

Each year the department program of inspecting dairy farms and dealer plants in the promotion of New Jersey-produced milk meets with favor. At the present time 49 dealers, marketing more than 100,000 quarts of milk daily, are under the grade program. This is an increase of more than 10 per cent over the previous year.

A service rendered to the trade by this department has been a series of weekly reports, market reviews, special bulletins and circulars, giving all parties identified with the production and marketing of New Jersey farm products up-to-date information as to the availability and quality of products for sale and the prices established. This has made for intelligent and orderly marketing and the demand for these reports becomes greater each season.

In view of the fact that the marketing of the products of New Jersey farms is directly in the hands of the farmers of this state, to a large degree, it can be expected that the policies and programs to promote the sale of New Jersey farm products will continue to be of direct interest to the various marketing enterprises. The department supervisors of markets have always received excellent cooperation from the directors of the various markets and, as a result, it has been possible to develop programs of publicity and advertising in the interest of moving crops to market at satisfactory prices. Especially is this important during periods of high production. As a result, favorable returns have been experienced where otherwise prices would have been too low to justify farmers harvesting their crops. During the past year, special campaigns were carried on with various farm markets in promoting the sale of milk, eggs, asparagus, peaches, apples and blueberries. These efforts to create sales have been successful, and during the year most of the cooperating market organizations and farmer groups each contributed several thousands of dollars for this type of work.

BUREAU OF PLANT INDUSTRY

Our seed certification projects, which are of direct benefit to New Jersey growers, and which are concerned with strains of high yielding and disease free stock, have been continued at former levels. This work, which involves grain, tomato seed and seed potatoes, has been continued, in part, with the cooperation of the State Potato Association and the Agricultural Experiment Station.

Regulatory work involving the Japanese beetle, gipsy moth and Dutch elm disease, and nursery and bee inspection has been carried on in a greatly curtailed manner owing to war necessities, but with the idea of enabling growers and shippers to utilize markets beyond the borders of quarantined areas and to protect the state from invasions of pests.

The colonization of the Japanese beetle-infested portions of the state with the nematode parasite has been completed, and some attention is being given

to the production of parasites of several insects that are injurious to agriculture and forestry.

Statistical studies were concerned with labor, feed, fertilizer and seed prices, refrigerated warehouse space, the output of New Jersey canning factories, quantities of farm products sold on auction markets, and related subjects. In these times there is a constant demand on the part of war agencies and agricultural organizations for definite information on production and prices.

Mention should also be made of the department's cost of living and retail food price indices. With the present increase in the cost of living and with Federal regulation of prices, public interest in these subjects is high. A definite service is being given by the department's regular publications on these two topics and our cost of living index in particular is being widely used by management and labor.

LICENSING AND BONDING

The Department of Agriculture is entrusted with the enforcement of Article 1, Chapter 12, Title 4 of the Revised Statutes (1937), more commonly known as the Milk Dealers' Licensing and Bonding Act; Article 2, Chapter 11, Title 4, the Produce Dealers' Licensing and Bonding Act; and Article 1, Chapter 11, Title 4, the Cattle Dealers' Licensing Act.

MILK DEALERS' LAW

Toward the end of the 1940-41 fiscal year and the beginning of the 1941-42 licensing year there existed confusion in the minds of our licensees and others closely connected with this work as to whether or not they should apply for new licenses effective July 1, 1941—June 30, 1942 due to the expiration of the Milk Control Board Statute on June 30, 1941. Although there was a bill pending in the Legislature at this time for the continuation of the work of the Milk Control Board, it did not become a law until about July 14th and many persons were under the impression that licenses would not be required should that bill fail to be enacted into a law.

In order that it might be made clear to those affected by our Act that licenses to purchase milk from producers would be required regardless of whether or not there was a Milk Control Board, we explained to all the delinquents that they should comply immediately because our Act was not affected in any way by the passage or failure of passage of the Milk Control Board bill then pending in the Legislature. These notices, together with publicity in the newspapers throughout the state when the Milk Control Board Bill became a law, produced the desired results.

The milk industry began to feel the effects of the war long before our declaration of war on December 8, 1941. As we had been steadily increasing the amount of manufactured goods for export to the countries which were engaged in war since September 3, 1939, the additional demand for skilled

and unskilled labor had been drawing workers from the farms to the cities. This resulted in a shortage in the amount of labor available to the farmers.

The dairymen throughout the country were asked by the Government to increase production, and the New Jersey farmers were anxious to comply as part of their patriotic duty. With a scarcity of experienced farm labor, increased costs in the production of milk due to rises in prices to the producers for feeds, fertilizers, cattle and increased wages to the farm help obtainable, the dairymen are faced with a serious problem in their endeavor to meet the greater demand for their product in order that the armed forces, the public and our Allies may be adequately supplied.

The dealers, another important cog in the industry, are also faced with additional problems among which are increased wages, scarcity of labor, increase in the price of milk, and the difficulties in obtaining plant and other equipment so essential in the handling and distribution of milk and its products.

During the year two of our licensees went into receivership; three dealers were penalized for operating without licenses; one hearing was held due to the dealer refusing to pay his producers in full.

Claims filed with us amounted to approximately $18,673.80.

Licenses were issued to 280 dealers who filed bonds totalling $1,744,500.00.

NUMBER OF LICENSEES UNDER MILK DEALERS' LAW

County		Licenses Issued	Bonds Filed	Amount of Bonds
Atlantic		2	2	$40,000.00
Bergen		11	10	95,100.00
Burlington		20	20	96,800.00
Camden		9	8	45,000.00
Cape May		2	1	1,000.00
Cumberland		20	20	54,800.00
Essex		12	12	122,400.00
Gloucester		12	12	17,800.00
Hudson		2	1	4,000.00
Hunterdon		10	9	153,000.00
Mercer		25	25	95,300.00
Middlesex		19	19	110,400.00
Monmouth		24	24	83,900.00
Morris		31	27	85,300.00
Ocean		3	3	7,000.00
Passaic		17	17	82,000.00
Salem		11	8	18,700.00
Somerset		17	17	73,800.00
Sussex		3	3	52,500.00
Union		10	10	52,700.00
Warren		10	10	68,000.00
Out-of-State		10	10	385,000.00
Totals		280	268	$1,744,500.00
Totals:	1941-42	280	268	1,744,500.00
	1940-41	285	271	1,507,400.00
	1939-40	298	276	1,254,200.00
	1938-39	301	269	1,183,900.00
	1937-38	310	265	1,095,400.00

PRODUCE DEALERS' LAW

It was expected that with our entry into the war a decided increase in the number of new dealers would result, but such has not been the case to date. Various reasons have been given for this lack of interest on the part of those who might have entered the business, the most common being to the effect that with so many jobs available at good wages in war industries the incentive to start in the produce business is lacking. Futhermore, considerable capital is required to get started and carry on the business until such time that sources of supply and outlets can be built up. The number of states having supervision over the dealers has increased as a result of losses sustained by producers and dealers in previous years due to financially unsound, irresponsible and inexperienced dealers entering the business. The risk of failure has also been a factor in keeping down the number of new dealers.

The State of Florida enacted a Produce Dealers' Licensing and Bonding Act during 1941-42 to take effect July 1, 1942, and thus another state has been added to the growing list of states having this type of legislation.

For the past several years the value of bonds filed each year has totalled over nine hundred thousand dollars, but it was not until this year that we had on file over a million dollars in bonds for the protection of New Jersey produce farmers, or in other words, not since the pre-depression years has so much protection been afforded our farmers under this Statute. Previous to the 1933-34 licensing year bonds of this type were comparatively easy to procure, but due to the financial losses sustained by the surety companies under the various type of bonds written during the years immediately preceding 1933-34, greater caution has been taken before executing bonds of this type ever since that date.

Owing to the refusal on the part of two of our licensees to pay all their producers in full it was necessary to schedule hearings in both instances in order that the complaints might be properly settled.

Claims filed during this license period amounted to approximately $8,258.11, all of which claims have been liquidated in full either by the dealers themselves or by their bonding companies.

Licenses were issued to 335 dealers who filed bonds totalling $1,005,000.00.

NUMBER OF LICENSEES UNDER PRODUCE DEALERS' LAW

County	Licenses Issued	Bonds Filed	Amount of Bonds
Atlantic	32	32	$96,000.00
Burlington	6	6	18,000.00
Camden	5	5	15,000.00
Cumberland	40	40	120,000.00
Essex	41	41	123,000.00
Gloucester	32	32	96,000.00
Hudson	4	4	12,000.00
Hunterdon	1	1	3,000.00
Mercer	10	10	30,000.00
Middlesex	5	5	15,000.00
Monmouth	24	24	72,000.00
Passaic	12	12	36,000.00
Salem	11	11	33,000.00
Somerset	1	1	3,000.00
Union	1	1	3,000.00
Warren	3	3	9,000.00
Out-of-State	107	107	321,000.00
Totals	335	335	$1,005,000.00

Totals:	1941-42	335	335	$1,005,000.00
	1940-41	332	332	996,000.00
	1939-40	314	314	942,000.00
	1938-39	312	312	936,000.00
	1937-38	321	321	963,000.00

CATTLE DEALERS' LAW

The cattle dealers have not been exempt from the effects of the war for along with other problems in the conduct of their business they have been compelled to pay much higher prices for the basic commodity in which they deal—dairy cows. This being the case they are required to carry a greater amount of working capital at all times in order to stay in business. Futhermore, the supply of dairy cows available to them has greatly diminished, for with better prices being paid to producers for milk in the several states from which most of our dairy animals are imported, there is a reluctance on the part of the farmers in those states to sell their dairy cows.

We have been informed by some of our licensees that they have handled very few dairy animals during the latter part of this fiscal year, and although it has been customary for them to handle dairy animals almost exclusively in the past, if they are to continue in business they may be compelled to change to dealing in other kinds of livestock or handle cows and calves for slaughter. Others expect to discontinue business for the duration of the war and take up some other line of work in the meantime.

Each year we receive complaints concerning cattle deals in which the farmers feel that they have been unfairly treated, but in most cases the difficulties have been adjusted between the dealers and the farmers directly concerned so that in only six instances was it necessary for the department to require the dealers to make satisfactory adjustments.

Only one hearing was held which case had to do with the improper use of eartag by a dealer, and after the department had presented its testimony at the hearing, the dealer through his attorney admitted his guilt. The dealer paid the penalty in settlement of this violation as provided by the Act.

Licenses were issued to 207 dealers.

NUMBER OF LICENSEES UNDER CATTLE DEALERS' LAW

County	Licenses Issued
Bergen	3
Burlington	14
Camden	3
Cape May	6
Cumberland	12
Essex	12
Gloucester	9
Hudson	2
Hunterdon	16
Mercer	7
Middlesex	3
Monmouth	10
Morris	16
Ocean	4
Passaic	13
Salem	20
Somerset	11
Sussex	22
Union	7
Warren	13
Out-of-State	4
Total	207

Totals:	1941-42	207
	1940-41	205
	1939-40	207
	1938-39	207
	1937-38	205

AGRICULTURAL WEEK

Coming soon after America's declaration of war, New Jersey's annual Agricultural Week, held in Trenton January 27-30, 1942, reflected a grim realization of the monumental task that would be confronting farmers beginning with the next crop season. A large number of livestock and commodity organizations held meetings through the several days following the annual convention to elect two members to the State Board of Agriculture, in all of which the general theme was that of determining agriculture's contribution to the war effort.

The New Jersey Farm Show, long an outstanding event of Agricultural Week, was cancelled when the War Department closed all Armories for other than military use immediately after the attack on Pearl Harbor. In view of the fact that some sixty exhibitors had made plans for this exposition,

a quick survey of other possible show sites in or near the city was made, but none had sufficient merit as to size, location and other factors to warrant their consideration. Efforts were made to maintain at least the competitive farm products displays, but these too were cancelled when it was felt inadvisable to stage them apart from the usual points of congregation.

PUBLICITY AND PUBLICATIONS

Through the press and radio, information on activities and regulations of the Department of Agriculture and reports containing data useful to farmers, was issued during the year. The department was thus able to acquaint farmers and consumers with timely agricultural facts and to call attention to services and facilities available for their guidance and help.

The "Farm Service News," prepared for farmers and containing general agricultural information, was continued on a bi-monthly basis.

Throughout the year, exhibits of the department's work were staged at conventions, agricultural meetings and the state and two county fairs.

Following is a list of the printed publications issued during the past fiscal year:

Circular No. 330—Apple Trees in Burlington and Gloucester Counties, New Jersey.

Circular No. 331—Dealers Licensed Under the Milk Dealers' Licensing and Bonding Act; Produce Dealers' Licensing and Bonding Act; Cattle Dealers' Licensing Act.

Circular No. 332—County Boards of Agriculture and State Agricultural Organizations for 1942.

Circular No. 333—Fresh Eggs.

Circular No. 334—New Jersey Prices of Hired Farm Labor, Feedstuffs, Fertilizer Materials and Seeds and Their Index Numbers, 1910-1941.

Circular No. 335—The Fruit and Vegetable Auction Markets of New Jersey.

Circular No. 336—Facts and Figures on New Jersey Fruits and Vegetables.

Handbook—Official Grades for New Jersey Fruits and Vegetables.

Handbook—Official Grades for Raw and Pasteurized Milk and Cream.

Handbook—The Breeding Flocks and Hatcheries Under Official Supervision in New Jersey, 1942.

Folder —Drink New Jersey Premium Milk.

Twenty-sixth Annual Report of the New Jersey Department of Agriculture, 1940-1941.

Agricultural Week Programs, Women's Agricultural Week Programs, Farm Week Chaff.

Six issues of bi-monthly publication Farm Service News.

COOPERATION WITH NEW JERSEY COUNCIL

The New Jersey Council provided an allotment of funds, amounting to approximately $24,000, for the promotion of New Jersey agricultural products. For the fourth consecutive year this fund was disbursed under the supervision of the Department of Agriculture in cooperation with the commodity organizations concerned, each of which appropriated private funds to match those allotted by the New Jersey Council.

Under this plan cooperative advertising projects were conducted with the New Jersey Association of Nurserymen, New Jersey Official Grade Milk Dealers Association, Tri-County Cooperative Auction Market Association, Jersey Chick Association, New Jersey Poultry and Egg Cooperative Association, New Jersey Asparagus Growers Association, Swedesboro Asparagus Growers Association, Jersey Fruit Cooperative Association, Blueberry Cooperative Association, Cooperative Marketing Associations in New Jersey, Inc., Newark Farmers' Market, New Jersey Field Crop Improvement Association, New Jersey Peach Council, and New Jersey Turkey Growers Association.

THE NEW JERSEY JUNIOR BREEDERS' FUND

In the period from July 1, 1941, to June 30, 1942, there were 117 loans made, totaling $7,065.86, a slight increase over the previous fiscal year. Dairy, beef cattle, swine and turkey loans showed increases, while loans for the purchase of chickens dropped about 40 per cent. There was a total of $10,754.39 outstanding at the close of the fiscal year.

The calf emergency fund failed to maintain itself, losses on account of deaths of animals exceeding the emergency fee payments by a total of $96.10. The swine emergency account likewise showed a loss of $16.25. No losses in the poultry project occurred and the poultry emergency account showed a gain of $11.00. Delinquent accounts totaled less than the amount previously set aside in the reserve for bad debts, no additional allotment to the reserve was necessary and a net profit of $117.06 was shown at the close of the year, bringing the undivided profits balance at the close of the year to $182.32. Another factor entering into the fact that the year closed with a profit was the elimination of cash awards at the New Jersey State Fair. Fewer losses than usual on account of deaths of animals provided another contributing factor.

Production certificates were awarded at the Dairy Banquet during Agricultural Week in January. The number of certificates dropped from 73 last year to only 34 this year.

The Baby Beef Show and Sale was held at the Trenton Fair Grounds during Agricultural Week. There were 46 entries winning cash awards totaling $200, donated by the State Chamber of Commerce. Special awards included a trip to the National Club Congress, provided by the Aberdeen Angus Association, a fitting and showmanship trophy, the trophy for the best record in story and a trophy for the greatest improvement over the previous year. A calf was provided by the Great Atlantic and Pacific Tea Company to be awarded to the owner of the grand champion. The top price was 41 cents a pound and the average was approximately 17 cents per pound.

Only minor changes were made in the by-laws of the fund during the year, these relating chiefly to poultry loans. Provision was made for a health examination by the Bureau of Animal Industry of all milking animals purchased through the fund.

A complete record of both the livestock loans and agricultural loans that were made each year since the fund was established follows:

LIVESTOCK LOANS

Fiscal Year	Dairy Loans		Beef Cattle		Pig Loans		Chicken Loans		Turkey Loans		Total Livestock Loans	
	No.	*Amount*	*No.*	*Amount*	*No.*	*Amount*	*No.*	*Amount*	*No.*	*Amount*	*No.*	*Amount*
1920-21	30	$2,815.00	..	...	..	...	..	...	..	...	30	$2,815.00
1921-22	92	7,985.00	..	...	16	$1,074.98	16	$824.25	..	...	124	9,884.23
1922-23	81	6,365.00	..	...	21	1,267.25	13	636.25	..	...	115	8,268.50
1923-24	96	8,670.00	..	...	10	409.50	14	932.00	..	...	120	10,011.50
1924-25	81	7,065.00	..	...	26	1,320.00	17	1,183.50	..	...	124	9,568.50
1925-26	71	6,639.50	..	...	25	1,684.30	32	1,563.10	..	...	128	9,886.90
1926-27	83	7,444.00	..	...	19	1,240.00	28	1,112.50	..	...	130	9,796.50
1927-28	54	4,644.00	..	...	10	620.00	31	890.70	..	...	95	6,154.70
1928-29	55	4,960.00	..	...	13	805.00	15	680.65	..	...	83	6,445.65
1929-30	37	3,317.50	..	...	15	876.00	17	692.20	..	...	69	4,885.70
1930-31	38	3,467.50	..	...	12	769.00	7	308.00	..	...	57	4,544.50
1931-32	38	2,875.00	..	...	8	415.00	9	394.00	..	...	55	3,684.00
1932-33	24	1,820.00	..	...	10	426.75	8	323.00	..	...	42	2,569.75
1933-34	30	2,310.00	..	...	9	295.00	24	940.43	..	...	63	3,545.43
1934-35	46	4,169.00	..	...	3	110.00	23	1,174.49	..	...	72	5,453.49
1935-36	26	2,050.00	..	...	5	297.00	18	797.85	..	...	49	3,144.85
1936-37	32	2,905.00	..	...	14	941.00	21	894.40	..	...	67	4,740.40
1937-38	43	4,366.00	..	...	8	492.50	29	1,614.82	2	$30.00	82	6,503.32
1938-39	45	3,740.00	21	$1,050.00	28	1,377.00	27	1,243.14	5	156.10	126	7,566.24
1939-40	36	3,680.00	35	2,012.20	9	303.00	44	2,012.92	5	201.00	129	8,209.12
1940-41	34	2,503.50	40	2,309.10	3	110.00	32	1,265.90	2	55.20	111	6,243.70
1941-42	40	3,127.00	43	2,754.48	10	295.50	21	735.38	3	153.50	117	7,065.86
Totals	1,112	$96,918.00	139	$8,125.78	274	$15,128.78	446	$20,219.48	17	$595.80	1,988	$140,987.84

AGRICULTURAL LOANS*

Fiscal Year	Poultry Feed Loans		Pig Feed Loans		Agricultural Product Loans		Miscellaneous Loans		Total Agricultural Loans	
	No.	*Amount*	*No.*	*Amount*	*No.*	*Amount*	*No.*	*Amount*	*No.*	*Amount*
1934-35	3	$38.38	..	...	..	...	..	...	3	$38.38
1935-36	..	...	..	...	..	...	..	...	..	...
1936-37	6	63.70	..	...	..	...	..	...	6	63.70
1937-38	11	239.74	3	$36.50	..	...	..	...	14	276.24
1938-39	22	423.72	5	27.32	9	$128.43	..	...	36	579.47
1939-40	40	599.02	3	129.43	7	199.08	1	$8.02	51	935.55
1940-41	29	506.63	..	...	6	240.26	..	...	35	746.89
1941-42	2	160.70	..	...	3	104.85	..	...	5	265.55
Totals	113	$2,031.89	11	$193.25	25	$672.62	1	$8.02	150	$2,905.78

*The number of agricultural loans shown represents actual loans made, rather than number of borrowers, as in most cases more than one loan was made to a single borrower.

AMOUNT LOANED BY COUNTIES TO DATE

County	Amount
Atlantic	...
Bergen	$75.00
Burlington	11,504.71
Camden	...
Cape May	938.75
Cumberland	7,600.63
Essex	335.95
Gloucester	3,617.30
Hudson	...
Hunterdon	8,724.81
Mercer	23,309.16
Middlesex	17,015.59
Monmouth	11,161.85
Morris	5,279.00
Ocean	2,356.00
Passaic	166.25
Salem	20,745.46
Somerset	5,476.90
Sussex	12,933.68
Union	...
Warren	12,652.58
Total	$143,893.62

Report of the Bureau of Animal Industry

DR. R. A. HENDERSHOTT, *Chief*

TUBERCULOSIS ERADICATION

During the past year, the trend toward the maintenance of more dairy animals in fewer herds has continued. This may be accounted for by the pickup in industry which has held forth better opportunity for a livelihood during recent years, and the acceleration of this condition during the past six months.

Currently, there are 16,174 herds consisting of a total of 209,027 head of cattle under state and federal cooperative supervision for the eradication of bovine tuberculosis. These figures represent a decrease of 521 herds and an increase of 804 head of cattle as compared with the situation one year ago or on June 30, 1941.

Initial tests were made on 1,248 herds of 6,775 cattle and 30 or .42 per cent of the cattle reacted. The percentage of reactors found in out-of-state cattle, added to herds under supervision during the 1940-1941 fiscal year, was 1.66. Of 10,692 cattle tested, 178 reacted.

During 1940-1941, indemnity was paid for 830 reactors, 48 of which were registered and 782 grade animals. In the past year, indemnity was paid for 726 reactors, 45 of which were registered and 681, grade animals.

All cattle residing in the state have been subjected to a test for tuberculosis during the past year and, as is customary, all herds in which reactors were found have been retested several times to insure the removal of all incipient cases of the disease.

In all, 258,877 individual tuberculin tests have been conducted, resulting in 871 reactors or .34 per cent infection.

For comparison a table showing the number of herds, animals, tests conducted and per cent of reactors for the preceding ten years is set forth on the following page.

Science has explained the manner in which infection gains entrance into the mammary gland and use has been made of this information in the procedure recommended to control the spread of the disease, namely, the washing of udders, hands and milking machines between cows.

Until the last year or two, no effective method of driving the above-named infections from the udder had been found. Today several products are being commercially manufactured which, when introduced into the milk cistern are capable, in about 60 per cent of the cases, of destroying the most common form of streptococcal infection, namely, streptococcus agalactiae. These agents are of absolutely no value in the battle against other types of infection.

Since these treatments are worthy in cases of agalactiae infection, it is obviously necessary that as a prelude to intelligent treatment, one must be accurately appraised of the bacterial infections with which the udder is involved.

During the past year, the bureau laboratory has offered to conduct bacteriologic examination of quarter samples of milk sent to us by veterinarians employed by dairymen to assist them in the control and treatment of infectious mastitis.

The program now offered to all state dairy farmers who are sincere in their endeavor to control this costly disease has been placed in operation in 12 of the 13 state institutional herds and is proving its worth. Equipment and, more particularly, supplies and chemicals needed for this service are now on order in sufficient quantities to permit us to answer the increasing demand for this service.

Year	Herds	Animals	Tests	Number Reactors	Per Cent Reactors
1931-1932	12,218	152,187	136,021	2,259	1.66
1932-1933	15,880	163,692	151,073	3,090	2.04
1933-1934	18,939	184,343	168,380	3,223	1.94
1934-1935	19,687	193,178	204,745	2,398	1.17
1935-1936	19,718	196,672	188,690	1,302	.69
1936-1937	18,823	196,774	207,126	1,489	.72
1937-1938	18,185	199,474	232,917	1,235	.53
1938-1939	17,725	202,001	232,818	1,261	.54
1939-1940	17,364	206,187	247,108	959	.39
1940-1941	16,695	208,223	253,012	825	.33
1941-1942	16,174	209,027	258,877	871	.34

Following is the total amount received by dairymen and breeders during the 1941-1942 fiscal year for 726 reactors condemned and slaughtered as a result of the tuberculin test:

Amount received from salvage of reactors	$41,006.48
Amount paid by the State of New Jersey in indemnity	27,642.56
Amount paid by the United States Government in indemnity	12,251.15
Total returns to the owners	$80,900.19
Average return per head to the owner	$ 111.43

A year ago we reported on the employment of a new test for tuberculosis which we were confident would assist us materially in freeing our herds of latent and incipient infection. We have continued to apply this test during the past year insofar as time and equipment have permitted. Due, however, to the induction of some of our laboratory help into the armed forces, the difficulty encountered in obtaining the manufacture of necessary field equipment and the restrictions placed upon travel, we have not been able to test as many herds by the new method as was originally planned.

At the present time we are training female technicians to assist in the necessary laboratory work and hope to be able to increase the number of herds surveyed during the coming year.

Technical papers covering the diagnosis of tuberculosis by the hematological method were presented to the two national veterinary associations as well as to several state associations during the past year and were enthusiastically received.

Our work is now being checked by research workers in the Middle West but has not yet been published.

Following is a summary by months of the average net returns to the owner for salvage of tuberculous reactors sold in New Jersey as compared with those sold in competition on the New York City Stock Yards:

	July	August	September	October	November	December
New Jersey	$49.96	$44.89	$57.41	$48.66	$43.86	$47.98
New York	43.88	49.75	44.29	44.48	39.39	43.20
	January	February	March	April	May	June
New Jersey	$57.77	$59.73	$60.54	$54.66	$56.96	$57.96
New York	In a letter dated March 3, 1942, Mr. E. H. Culver, our representative at the Jersey City Stockyard, advised that New York State reactor reports cannot be obtained due to the fact that they will not be published until the paper shortage is over.					

The amount of state indemnity paid during this fiscal year for reactors condemned increased from an average of $36.28 for the fiscal year, 1940-1941, to $38.08 for 1941-1942. During the year, 26,905 cattle were imported as compared with 29,650 during the previous year.

The following summary indicates the amount of state indemnity paid for reactors resulting from the tuberculin test during the year ending June 30, 1942.

Class of Cattle	Number of Animals	Amount Paid
Registered animals	45	$ 2,902.25
Grade animals	681	24,740.31
Registered and Grade	726	$27,642.56

Average State Indemnity Paid Per Head:

Registered animal	$64.49
Grade animal	35.33
Registered and Grade	38.08

The following summary indicates the amount of salvage received by owners for reactors resulting from the tuberculin test during the year ending June 30, 1942.

Class of Cattle	Number of Animals	Amount Paid
Registered animals	45	$ 2,691.86
Grade animals	681	38,314.62
Registered and Grade	726	$41,006.48

Average Salvage Received Per Head:

Registered animal	$59.82
Grade animal	56.26
Registered and Grade	56.48

The following summary indicates the amount of federal indemnity paid for reactors resulting from the tuberculin test during the year ending June 30, 1942.

Class of Cattle	Number of Animals	Amount Paid
Registered animals	45	$ 1,450.71
Grade animals	681	11,918.62
Registered and Grade	726	$13,369.33

Average Federal Indemnity Paid Per Head:

Registered animal	$32.24
Grade animal	17.50
Registered and Grade	18.42

The following summary shows the total amount received by owners of condemned animals.

Total amount received by owners for reactors (sum of salvage, federal and state indemnity)	$80,900.19
Average amount received per head by owners for reactors	$111.43

TOTAL STATE INDEMNITY PAID BY COUNTIES

July 1, 1941 to June 30, 1942

Atlantic	$ ....
Bergen	358.63
Burlington	4,003.90
Camden	19.67
Cape May	27.34
Cumberland	74.02
Essex	2,397.01
Gloucester	15.76
Hudson	...
Hunterdon	1,247.22
Mercer	713.35
Middlesex	587.06
Monmouth	1,045.04
Morris	3,606.02
Ocean	175.02
Passaic	108.02
Salem	956.90
Somerset	1,055.26
Sussex	7,800.83
Union	1,242.14
Warren	2,209.37
State	$27,642.56

TOTAL STATE INDEMNITY PAID BY COUNTIES, FROM THE BEGINNING OF ACCREDITED HERD WORK IN 1916 TO JUNE 30, 1942

Atlantic	$ 8,579.46
Bergen	33,822.93
Burlington	329,038.02
Camden	14,090.03
Cape May	10,847.14
Cumberland	75,870.16
Essex	38,602.93
Gloucester	63,559.17
Hudson	4,455.78
Hunterdon	343,007.49
Mercer	179,283.82
Middlesex	76,927.38
Monmouth	127,682.69
Morris	134,809.28
Ocean	30,735.42
Passaic	33,314.94
Salem	354,976.96
Somerset	218,349.47
Sussex	957,514.24
Union	38,868.20
Warren	370,767.91
State	$3,445,103.42

HERDS AND CATTLE UNDER STATE AND FEDERAL SUPERVISION

June 30, 1942

County	Herds Under Supervision	Herds Fully Accredited	*No. of Cattle Under Supervision, 6/30/42* P.B.	Grades	Total	*No. of Cattle Fully Accredited, 6/30/42* P.B.	Grades	Total
Atlantic	239	204	1	544	545	1	500	501
Bergen	222	215	177	2,504	2,681	170	2,263	2,433
Burlington	1,160	1,041	1,259	21,160	22,419	1,235	19,763	20,998
Camden	317	290	317	1,480	1,797	311	1,426	1,737
Cape May	192	169	64	729	793	62	619	681
Cumberland	1,129	1,006	429	6,965	7,394	387	6,553	6,940
Essex	127	117	202	2,104	2,306	202	1,865	2,067
Gloucester	1,032	846	736	4,894	5,630	721	4,654	5,375
Hudson	14	14	...	103	103	...	103	103
Hunterdon	2,088	1,923	2,454	24,964	27,418	2,265	23,499	25,764
Mercer	836	732	1,147	9,178	10,325	976	7,361	8,337
Middlesex	1,081	978	816	6,825	7,641	814	4,576	5,390
Monmouth	1,382	1,157	1,620	8,528	10,148	1,348	8,037	9,385
Morris	947	793	2,124	11,018	13,142	2,100	10,104	12,204
Ocean	291	255	6	1,490	1,496	4	1,351	1,355
Passaic	204	186	112	2,536	2,648	45	2,476	2,521
Salem	1,263	1,109	678	15,911	16,589	667	15,882	16,549
Somerset	1,089	960	2,679	9,726	12,405	2,578	8,989	11,567
Sussex	1,177	955	2,418	33,311	35,729	1,995	26,250	28,245
Union	199	183	72	3,492	3,564	66	2,255	2,321
Warren	1,185	1,060	1,545	22,709	24,254	1,235	21,027	22,262
State	16,174	14,193	18,856	190,171	209,027	17,182	169,553	186,735

INFECTED HERD RECORD

County	No. of Infected Herds in New Jersey, 6/30/42	No. of Cattle in Infected Herds, 6/30/42	No. of Reactors Disclosed in Infected Herds 7/1/41 to 6/30/42
Atlantic	1	1	..
Bergen	7	313	26
Burlington	22	803	104
Camden	..	..	1
Cape May	..	..	2
Cumberland	2	31	2
Essex	3	264	98
Gloucester	6	160	9
Hudson	..	..	..
Hunterdon	14	460	38
Mercer	16	833	23
Middlesex	12	672	41
Monmouth	14	283	23
Morris	12	587	80
Ocean	4	63	8
Passaic	1	18	12
Salem	22	659	54
Somerset	26	532	44
Sussex	64	2,756	242
Union	1	1,171	2
Warren	34	1,230	62
State	261	10,836	871

INITIAL TESTS MADE AND REACTORS RESULTING, BY COUNTIES

July 1, 1941 to June 30, 1942

County	Number of Herds Tested	*Animals Tested*		*Animals Reacting*		*Percentage Reacting*		Total Animals Tested	Total Animals Reacting	Per Cent of Total Reacting
		Registered	Grade	Registered	Grade	Registered	Grade			
Atlantic	2	...	2	...	...	...	...	2	...	...
Bergen	21	1	62	...	...	...	...	63	...	...
Burlington	77	5	575	...	...	...	...	580	...	...
Camden	22	6	42	...	1	...	238	48	1	2.08
Cape May	22	2	107	...	...	...	...	109	...	...
Cumberland	94	5	240	...	2	...	.83	245	2	.82
Essex	8	...	120	...	3	...	2.50	120	3	2.50
Gloucester	102	9	224	...	3	...	1.34	233	3	1.29
Hudson	...	...	...	...	...	...	...	...	...	...
Hunterdon	141	61	931	...	2	...	.21	992	2	.20
Mercer	74	72	376	...	2	...	.53	448	2	.45
Middlesex	86	4	143	...	1	...	.70	147	1	.68
Monmouth	114	108	344	...	2	...	.58	452	2	.44
Morris	71	13	458	...	2	...	.44	471	2	.42
Ocean	34	...	65	...	...	...	...	65	...	...
Passaic	14	...	23	...	...	...	...	23	...	...
Salem	92	6	492	...	...	...	...	498	...	...
Somerset	96	17	676	...	3	...	.44	693	3	.43
Sussex	90	87	1,141	...	8	...	.70	1,228	8	.65
Union	12	...	41	...	...	...	...	41	...	...
Warren	76	7	713	...	1	...	.14	720	1	.14
State	1,248	403	6,775	...	30	...	.44	7,178	30	.42

CATTLE TESTED IN NEW JERSEY UNDER THE ACCREDITED HERD PLAN BY VETERINARIANS ON THE STAFF OF THE STATE DEPARTMENT OF AGRICULTURE

July 1, 1941 to June 30, 1942

	INITIAL TESTS					*HERD ADDITION TESTS*					*OTHER TESTS*				
		Tested		*Reactors*			*Tested*		*Reactors*			*Tested*		*Reactors*	
1941	Lots	Reg.	Gr.	Reg.	Gr.	Lots	Reg.	Gr.	Reg.	Gr.	Lots	Reg.	Gr.	Reg.	Gr.
July	21	14	95	..	..	..	..	4	..	4	269	511	3,588	..	2
August	21	3	64	..	..	..	..	12	..	5	130	178	2,894	..	5
September	33	..	123	..	3	1	..	67	..	5	343	245	5,399	..	16
October	24	..	201	..	..	..	9	33	..	..	210	257	2,462	..	13
November	34	1	265	..	..	2	8	7	8	1	563	1,237	9,251	..	3
December	28	1	254	..	1	2	1	57	..	5	208	152	3,224	3	47
1942															
January	24	30	165	..	..	1	..	13	..	2	245	164	7,116	2	34
February	20	..	54	..	..	1	1	11	1	2	312	236	3,372	2	19
March	24	..	72	..	2	..	..	2	..	..	238	171	3,173	..	6
April	39	64	250	..	..	3	..	161	..	..	362	1,937	7,912	..	16
May	34	..	96	..	..	..	..	9	..	6	383	500	4,637	1	14
June	26	6	85	..	1	2	..	10	..	7	375	489	4,938	..	41
Totals	328	119	1,724	..	7	12	19	386	9	37	3,638	6,077	57,966	8	216
Percentage of Reactors				..	.40				47.37	9.59				.13	.37
Average Percentage				.38					11.36					.35	

CATTLE TESTED IN NEW JERSEY UNDER THE ACCREDITED HERD PLAN BY VETERINARIANS ON THE STAFF OF THE UNITED STATES DEPARTMENT OF AGRICULTURE

July 1, 1941 to June 30, 1942

	INITIAL TESTS					*HERD ADDITION TESTS*					*OTHER TESTS*				
		Tested		*Reactors*			*Tested*		*Reactors*			*Tested*		*Reactors*	
1941	Lots	Reg.	Gr.	Reg.	Gr.	Lots	Reg.	Gr.	Reg.	Gr.	Lots	Reg.	Gr.	Reg.	Gr.
July	9	..	17	..	..	..	..	42	..	..	85	239	340	..	17
August	9	..	11	..	..	5	..	15	..	..	74	16	248	..	..
September	16	33	62	..	..	..	..	75	..	..	108	2	575	..	..
October	1	..	26	..	..	..	..	143	..	..	30	..	961	..	..
November	..	..	..	..	..	..	..	71	..	2	19	..	2,381	..	..
December	..	..	..	..	..	..	..	25	..	..	16	15	579	..	10
1942															
January	3	..	5	..	..	..	..	33	..	..	23	29	411	..	..
February	3	..	4	..	..	..	4	27	..	..	71	23	379	..	..
March	1	..	1	..	..	1	4	68	..	1	67	356	503	..	4
April	6	..	15	..	..	..	3	110	..	..	49	43	814	..	..
May	2	..	14	..	..	..	..	128	..	1	79	56	2,986	..	10
June	13	2	28	..	..	..	..	87	..	..	168	256	444	..	4
Totals	63	35	183	..	..	6	11	824	..	4	789	1,035	10,621	..	45
Percentage of Reactors				..	..				..	.49				..	.42
Average Percentage				..					.48					.39	

CATTLE TESTED IN NEW JERSEY UNDER THE ACCREDITED HERD PLAN BY VETERINARIANS ACCREDITED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE

July 1, 1941 to June 30, 1942

	INITIAL TESTS					*HERD ADDITION TESTS*					*OTHER TESTS*				
		Tested		*Reactors*			*Tested*		*Reactors*			*Tested*		*Reactors*	
1941	Lots	Reg.	Gr.	Reg.	Gr.	Lots	Reg.	Gr.	Reg.	Gr.	Lots	Reg.	Gr.	Reg.	Gr.
July	40	2	89	..	..	38	37	368	..	3	679	827	6,437	..	15
August	37	4	188	..	1	28	10	167	..	13	525	252	6,054	..	4
September	64	1	497	..	3	20	2	422	..	9	802	917	12,554	..	20
October	60	11	559	..	5	28	8	889	..	8	1,014	933	14,390	1	24
November	43	24	351	..	1	41	19	896	1	11	959	1,915	16,845	10	60
December	68	10	274	..	1	29	29	509	..	11	870	1,560	11,770	..	19
1942															
January	82	48	400	..	2	58	13	797	..	13	1,023	1,247	12,584	..	45
February	69	9	335	..	1	49	16	989	1	11	1,062	2,224	16,590	5	53
March	76	44	527	..	3	20	11	470	..	8	943	794	13,845	1	24
April	147	77	1,014	..	3	35	44	944	1	11	1,545	2,647	23,038	4	48
May	87	13	297	..	1	28	21	360	..	3	726	873	7,518	2	36
June	84	6	337	..	2	29	32	395	..	7	1,003	902	10,596	..	40
Totals	857	249	4,868	..	23	403	242	7,206	3	108	11,151	15,091	152,221	23	388
Percentage of Reactors				..	.47				1.24	1.50				.15	.25
Average Percentage				.45					1.49					.25	

SUMMARY OF CATTLE TESTED UNDER ACCREDITED HERD PLAN

July 1, 1941 to June 30, 1942

	Registered Animals	Grade Animals	Totals
INITIAL TESTS			
Tested	403	6,775	7,178
Reacted	...	30	30
Percentage of Reactors .42			
HERD ADDITION TESTS			
Tested	272	8,416	8,688
Reacted	12	149	161
Percentage of Reactors 1.85			
OTHER TESTS			
Tested	22,203	220,808	243,011
Reacted	31	649	680
Percentage of Reactors .28			
TOTALS			
Tested			258,877
Reacted			871
Percentage of Reactors			.34
Percentage of Reactors Based on Cattle Population			.42

FIVE YEAR SUMMARY BY COUNTIES SHOWING PER CENT OF INFECTION FOUND ANNUALLY BASED ON TESTS MADE AND ON THE CATTLE POPULATION

County	July, 1941 to June, 1942					July, 1940 to June, 1941				
	No. Animals Under Supervision	No. Animals Reacting	Per Cent Reaction on Total Cattle Population	No. Tests Made	Per Cent Reaction on Tests Made	No. Animals Under Supervision	No. Animals Reacting	Per Cent Reaction on Total Cattle Population	No. Tests Made	Per Cent Reaction on Tests Made
Atlantic	545	..	..	176	..	543	5	.92	549	.91
Bergen	2,681	26	.97	5,068	.51	2,940	21	.71	4,428	.47
Burlington	22,419	104	.46	28,831	.36	22,219	146	.66	28,326	.52
Camden	1,797	1	.06	1,459	.07	1,725	3	.17	2,134	.14
Cape May	793	2	.25	861	.23	772	..	..	828	..
Cumberland	7,394	2	.03	6,868	.03	7,058	14	.20	6,854	.20
Essex	2,306	98	4.25	4,302	2.28	2,281	26	1.14	2,668	.97
Gloucester	5,630	9	.16	5,940	.15	5,550	7	.13	6,272	.11
Hudson	103	..	..	103	..	113	..	..	150	..
Hunterdon	27,418	38	.14	30,482	.12	27,378	116	.42	28,861	.40
Mercer	10,325	23	.22	10,244	.22	9,970	18	.18	13,822	.13
Middlesex	7,641	41	.54	11,831	.35	7,783	25	.32	12,005	.21
Monmouth	10,148	23	.23	10,974	.21	9,813	32	.33	13,757	.23
Morris	13,142	80	.61	16,063	.50	13,147	118	.90	16,526	.71
Ocean	1,496	8	.53	1,977	.40	1,630	3	.18	1,629	.18
Passaic	2,648	12	.45	5,982	.20	2,714	18	.66	3,588	.50
Salem	16,589	54	.33	21,762	.25	16,448	77	.47	21,301	.36
Somerset	12,405	44	.35	13,588	.32	11,957	44	.37	13,327	.33
Sussex	35,729	242	.68	47,783	.51	35,660	270	.76	55,419	.49
Union	3,564	2	.06	6,913	.03	3,679	19	.52	7,345	.26
Warren	24,254	62	.26	27,670	.22	24,843	66	.27	31,202	.21
State	209,027	871	.42	258,877	.34	208,223	1,028	.49	270,991	.38

FIVE YEAR SUMMARY BY COUNTIES SHOWING PER CENT OF INFECTION FOUND ANNUALLY BASED ON TESTS MADE AND ON THE CATTLE POPULATION—(*Continued*)

County	July, 1939 to June, 1940					July, 1938 to June, 1939				
	No. Animals Under Supervision	No. Animals Reacting	Per Cent Reaction on Total Cattle Population	No. Tests Made	Per Cent Reaction on Tests Made	No. Animals Under Supervision	No. Animals Reacting	Per Cent Reaction on Total Cattle Population	No. Tests Made	Per Cent Reaction on Tests Made
Atlantic	537	6	1.12	818	.73	542	1	.18	308	.32
Bergen	2,892	16	.55	3,897	.41	2,924	13	.44	3,869	.34
Burlington	22,508	100	.44	25,776	.39	22,202	93	.42	26,280	.35
Camden	1,726	6	.35	1,748	.34	1,680	7	.42	2,067	.34
Cape May	889	..	..	932	..	963	8	.83	1,270	.63
Cumberland	6,738	7	.10	5,449	.13	6,728	18	.27	7,705	.23
Essex	2,209	3	.14	3,556	.08	2,098	9	.43	4,538	.20
Gloucester	5,725	12	.21	5,741	.21	5,423	15	.28	6,243	.24
Hudson	120	1	.83	122	.82	134	..	..	330	..
Hunterdon	27,454	98	.36	31,026	.32	27,016	89	.33	28,854	.31
Mercer	9,570	30	.31	14,087	.21	9,479	42	.44	13,459	.31
Middlesex	7,931	32	.40	11,107	.29	8,046	58	.72	12,597	.46
Monmouth	9,603	84	.87	12,206	.69	9,670	137	1.42	11,446	1.20
Morris	12,627	22	.17	14,907	.15	12,469	57	.46	13,142	.43
Ocean	1,655	14	.85	1,899	.74	1,655	18	1.08	1,768	1.02
Passaic	2,739	6	.22	3,565	.17	2,736	14	.51	4,086	.34
Salem	16,323	100	.61	21,939	.46	15,832	228	1.44	22,459	1.02
Somerset	11,997	34	.28	13,569	.25	12,025	65	.54	13,137	.49
Sussex	34,601	360	1.04	49,407	.73	33,211	399	1.20	41,666	.96
Union	3,446	57	1.65	7,495	.76	3,446	23	.67	7,189	.32
Warren	24,897	102	.41	31,446	.32	23,722	123	.52	25,681	.48
State	206,187	1,090	.53	260,692	.42	202,001	1,417	.70	248,094	.57

FIVE YEAR SUMMARY BY COUNTIES SHOWING PER CENT OF INFECTION FOUND ANNUALLY BASED ON TESTS MADE AND ON THE CATTLE POPULATION—(*Continued*)

July, 1937 to June, 1938

County	No. Animals Under Supervision	No. Animals Reacting	Per Cent Reaction on Total Cattle Population	No. Tests Made	Per Cent Reaction on Tests Made
Atlantic	529	8	1.51	838	.95
Bergen	3,009	12	.40	3,503	.34
Burlington	21,851	81	.37	26,365	.31
Camden	1,619	2	.12	1,915	.10
Cape May	993	5	.50	953	.52
Cumberland	6,967	46	.66	9,811	.47
Essex	2,236	17	.76	5,019	.34
Gloucester	5,416	24	.44	5,713	.42
Hudson	129	1	.77	139	.72
Hunterdon	26,304	161	.61	28,114	.57
Mercer	9,454	43	.45	11,983	.36
Middlesex	8,175	48	.59	11,694	.41
Monmouth	9,421	105	1.11	11,380	.92
Morris	12,064	50	.41	12,127	.41
Ocean	1,683	43	2.55	2,221	1.94
Passaic	2,806	6	.21	3,470	.17
Salem	15,422	202	1.31	22,325	.90
Somerset	11,860	50	.42	14,286	.35
Sussex	32,769	394	1.20	45,997	.86
Union	3,547	11	.31	6,486	.17
Warren	23,220	119	.51	28,686	.41
State	199,474	1,428	.72	253,025	.56

INSHIPPED CATTLE

We have continued to retest inshipped cattle for Bang's disease. It is to be noted that there is a substantial increase in the total number of cattle tested for this fiscal year. Of 2,138 lots, totaling 26,230 cattle tested, 181 or .69 per cent gave a positve reaction to the agglutination test. The shipper is offered the choice of consigning reactors to slaughter or returning them to the state of origin, provided such procedure receives the approval of the livestock sanitary officer of that state. In the majority of cases the owner elects to consign to slaughter in New Jersey.

We are proud of the fact that in no instance where health charts were approved by the Department of Agriculture for the shipment of cattle interstate, have we received complaints from either purchasers or livestock sanitary officials that animals so consigned were found to be infected with any transmissable disease or found to react to either the tuberculin or Bang's test.

Such a record is of importance to the breeder in New Jersey because it lends encouragement to out-of-state buyers who are interested in some of the superior purebred animals being grown within this state.

RECORD OF BLOOD TESTS ON INSHIPPED ANIMALS RELEASED

July 1, 1941 to June 30, 1942

State of Origin	No. Lots	No. Cattle	No. Reactors
Canada	347	4,226	38
Connecticut	11	94	..
Delaware	13	70	..
Florida	1	24	..
Georgia	2	39	..
Illinois	8	30	..
Indiana	24	499	1
Iowa	2	2	..
Kansas	1	4	..
Maine	2	7	..
Maryland	177	1,066	12
Massachusetts	11	22	..
Michigan	123	2,671	15
Minnesota	6	111	..
Nebraska	1	1	..
New York	525	4,316	52
North Carolina	10	59	..
Ohio	113	2,456	33
Pennsylvania	362	2,727	17
Rhode Island	2	3	..
South Carolina	2	7	..
Tennessee	3	54	..
Vermont	4	19	..
Virginia	41	399	..
West Virginia	2	5	..
Wisconsin	345	7,319	13
Totals	2,138	26,230	181

Percentage of Reactors .69

Following is a summary by months of the cattle shipped into New Jersey, those condemned on tuberculin test and those shipped out of the state during the year ending June, 1942:

Month	Number of Cattle Shipped into New Jersey	Number of Cattle Condemned on Tuberculin Test	Number of Cattle Shipped out of New Jersey
July	2,307	41	54
August	2,684	28	67
September	3,229	56	55
October	2,852	51	98
November	3,129	97	94
December	2,372	97	62
January	1,798	98	69
February	1,759	95	75
March	1,401	49	110
April	1,111	83	61
May	1,686	74	132
June	2,577	102	31
Totals	26,905	871	908

Following is a comparison of the number of cattle shipped into New Jersey during the past five years:

1937-1938	1938-1939	1939-1940	1940-1941	1941-1942
27,338	25,968	26,040	29,650	26,905

IMPORT CATTLE RECEIVED FROM VARIOUS STATES FOR DAIRY AND BREEDING PURPOSES, 1941-1942

Origin	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Totals
Athenia (Quarantine)	...	...	...	...	...	...	...	...	...	...	...	...	...
Canada	165	318	296	426	382	434	464	299	223	238	326	655	4,226
Connecticut	1	...	...	6	2	78	1	5	...	1	...	1	95
Delaware	...	11	10	2	...	...	...	10	...	...	27	10	70
Florida	...	...	...	...	...	...	...	...	...	...	24	...	24
Georgia	...	...	39	...	...	...	...	...	...	...	...	...	39
Illinois	...	...	...	...	...	...	9	2	1	...	...	18	30
Indiana	86	22	81	22	23	22	32	30	59	52	48	22	499
Iowa	...	...	...	...	...	2	...	...	...	...	1	...	3
Kansas	...	4	...	...	...	...	...	...	...	...	...	...	4
Kentucky	...	...	...	...	...	...	...	...	...	...	...	...	...
Lancaster Yards	120	9	50	...	124	...	...	...	...	...	...	...	303
Maine	...	...	...	...	3	...	...	...	4	...	...	...	7
Maryland	135	82	115	108	113	48	60	56	35	25	102	189	1,068
Massachusetts	...	6	...	2	2	2	3	...	...	1	...	7	23
Michigan	222	280	312	388	339	209	192	152	60	63	206	249	2,672
Minnesota	...	...	26	...	22	...	27	...	21	15	...	...	111
Mississippi	...	...	...	...	...	...	...	...	...	...	...	...	...
Missouri	...	...	...	...	...	...	...	...	...	...	...	...	...
Nebraska	...	...	...	...	...	...	...	...	...	...	1	...	1
New Hampshire	...	...	...	...	...	...	...	...	...	...	...	...	...
New Mexico	...	...	...	...	...	...	56	55	110	...	...	...	221
New York	261	412	480	427	466	430	295	366	306	292	222	367	4,324
North Carolina	...	...	...	12	21	23	2	...	...	...	...	1	59
Ohio	279	439	337	282	319	256	70	94	82	85	96	160	2,499
Oklahoma	...	...	...	...	...	...	...	...	...	...	...	...	...
Pennsylvania	276	258	305	300	173	152	166	237	138	176	184	408	2,773
Rhode Island	...	...	3	...	...	...	...	...	...	...	...	...	3
South Carolina	...	...	...	...	...	...	2	5	...	...	...	...	7
South Dakota	...	...	...	...	...	...	...	...	...	...	...	...	...
Tennessee	...	...	16	...	...	...	38	...	...	...	...	...	54
Texas	...	...	...	...	...	...	...	...	...	...	...	41	41
Vermont	...	...	14	...	1	...	...	...	...	4	...	...	19
Virginia	57	64	60	53	45	17	1	21	20	17	...	50	405
Washington	...	...	...	...	...	...	...	...	...	...	...	...	...
West Virginia	...	...	...	...	...	1	...	...	...	...	...	4	5
Wisconsin	705	779	1,085	824	1,094	698	380	427	342	142	449	395	7,320
Totals	2,307	2,684	3,229	2,852	3,129	2,372	1,798	1,759	1,401	1,111	1,686	2,577	26,905

CATTLE SHIPPED OUT OF THE STATE DURING THE FISCAL YEAR 1941-1942

Month	Number of Lots From Herds Under Supervision	Number of Animals From Herds Under Supervision
July	25	54
August	17	67
September	21	55
October	36	98
November	30	94
December	21	62
January	18	69
February	11	75
March	37	110
April	18	61
May	97	132
June	25	31
Totals	356	908

LIVESTOCK AUCTION SALES MARKETS

Veterinary supervision of the Harris Sales Company Auction Market was continued throughout the year. The results of this work for the year follow.

Number of Cattle Checked	Number of Cattle Tuberculin Tested	Number of Cattle Ear Punched for Slaughter	Number of Cattle Bled for Bang's Test
24	Inshipped cattle 1,286 Local cattle 807	140	8 Inshipped cattle

Number of Swine Treated		
Single	Double	Total
276	1,637	1,913

TOTAL SALES REPORTED AT HARRIS SALES COMPANY AUCTION MARKET

July 1, 1941 to June 30, 1942

Cows	Calves	Pigs	Horses	Sheep	Poultry	Goats	Ducks
3,912	8,567	8,342	1,411	4,362	349	294	53

Dogs	Turkeys	Geese	Bulls	Guineas	Lambs
8	1	4	648	22	224

It is regrettable that we are not authorized by law to compel all livestock markets to be supervised by the Department of Agriculture.

The transfer of livestock ownership through the medium of auction markets has proved to be a potent means of detecting livestock diseases throughout the entire country. While from the dairy standpoint most animals consigned to auction markets are sold for and, in the main, do go for immediate slaughter, many swine, chickens, horses and goats find new homes through this exchange market. Strict veterinary inspection for the health of animals and the maintenance of sanitary standards at such markets is certainly desirable and much-needed.

TOTAL SALES BY MONTHS OF LIVESTOCK SOLD AT THE JERSEY CITY STOCK YARDS

July 1, 1941 to June 30, 1942

Month	Calves	Sheep	Cows	Bulls	Hogs	Steers	Totals
July	6,353	20,386	2,569	1,163	751	626	31,848
August	8,789	14,133	2,788	936	1,010	622	28,278
September	13,539	17,740	2,582	659	409	2,207	37,136
October	10,416	14,739	3,888	773	677	2,609	33,102
November	5,520	11,179	3,233	337	520	1,329	22,118
December	5,668	5,473	3,931	395	562	466	16,495
January	6,585	572	3,847	622	526	800	12,952
February	2,086	1,395	3,156	359	1,180	313	8,489
March	2,742	1,238	3,599	547	488	362	8,976
April	2,670	888	3,374	709	1,569	1,093	10,303
May	4,259	885	2,374	554	808	343	9,223
June	7,971	6,870	2,617	659	966	66	19,149
Totals	76,598	95,498	37,958	7,713	9,466	10,836	238,069

BANG'S DISEASE

During the past fiscal year, much interest has been manifested in the control and eradication of Bang's disease. Under the cooperative state-federal plan, owners of reactors under our Plan I and Plan II agreements were indemnified for their losses. For the fiscal year, indemnity was paid to herd owners on 973 reactors with a total value of $33,939.26.

The area test program was adopted in Atlantic and Cape May counties. This was brought about as the result of a request, and in cooperation with the county agricultural agents.

During the month of October, 1941, the area test program was started in Cape May County, at which time 157 herds comprising 540 animals were tested, with nine reactors resulting, or 1.67 per cent infection.

In November, 1941, the area test plan was started in Atlantic County. Initial tests were made on 241 herds comprising 467 cattle. Thirteen or 2.78 per cent gave a positive reaction to the agglutination test. The reaction obtained in these counties was markedly below that estimated.

Due to the present tire and gasoline shortages, difficulty has been encountered in rendering a service such as we desire. Also, many of our trained laboratory technicians have been called to the armed forces and it has been difficult to obtain replacements.

The number of fully accredited Bang's disease-free herds in the state on June 30, 1942, was 335, as compared with 259 on June 30, 1941.

Blood tests have also been conducted on animals in which the permitted use of Strain 19, Brucella Abortus vaccine has been used. For the fiscal year, 8,813 tests have been conducted on these animals. In addition, 1,691 tests of goats have been made, nine tests of horses, 20 tests of swine, 73 tests for milk whey titre, four tests of deer, 98 tests of 4-H Club animals, 20 porcine tests and three tests of dogs.

Private practitioners have submitted 992 samples from herds not under supervision for the control of Bang's disease, and 109 tests have been conducted on animals residing out of the state.

During the year, a total of 199 herds comprising 4,870 animals were informatively tested for Bang's disease. Of this number 606 or 12.44 per cent gave a positive reaction, 152 or 3.12 per cent gave a highly suspicious reaction, 410 or 8.42 per cent gave a slightly suspicious reaction and 3,702 or 76.02 per cent gave a negative reaction.

While the increase in the number of herds placed under supervision has not been phenomenal, it has been quite constant. Complete understanding following investigation of all conditions having a bearing on control has been had before placing any new herd under supervision.

Calfhood immunization, while being advocated under certain circumstances, has been receiving more critical study by many dairymen before they subscribe to its use. We, too, are continuing our study of this adjunct to control and still have much to learn about it. During the past year, we have seen two instances of failure upon the part of the vaccine to be protective and believe we are, through these cases, in a much better position to recommend procedure which will avoid in a large measure a repetition of such failure following the use of Strain 19.

HERDS AND ANIMALS UNDER SUPERVISION FOR THE ERADICATION OF BANG'S DISEASE AND HERDS AND ANIMALS ACCREDITED AS BEING FREE OF IT, BY COUNTIES

June 30, 1942

County	Number of Herds Under Supervision	Number of Animals Under Supervision	Number of Herds Fully Accredited	Number of Animals in Herds Fully Accredited
Atlantic	253	508	..	..
Bergen	8	238	7	225
Burlington	30	1,390	18	662
Camden	19	278	10	176
Cape May	192	722	9	136
Cumberland	88	1,268	17	494
Essex	5	325	2	13
Gloucester	40	892	18	407
Hudson	..	..	..	..
Hunterdon	48	1,942	26	912
Mercer	94	2,507	50	855
Middlesex	34	2,649	13	222
Monmouth	58	1,526	34	825
Morris	58	2,901	26	1,047
Ocean	2	2	1	1
Passaic	3	319	1	1
Salem	54	1,416	20	329
Somerset	128	3,490	70	1,949
Sussex	13	1,076	4	318
Union	6	64	2	17
Warren	25	870	7	139
State	1,158	24,383	335	8,728

RECORD BY COUNTIES OF THE NUMBER OF BANG'S REACTORS APPRAISED, THEIR APPRAISED VALUE, THE TOTAL AND AVERAGE AMOUNTS RECEIVED BY OWNERS FROM SALVAGE, STATE AND FEDERAL INDEMNITY

July 1941 to June 1942

County	*No. of Reactors Appraised*			*Appraised Value*			*Total Amount Paid to Owners (Salvage, State and Federal Indemnity)*			*Average Amount Paid Owners Per Head*		
	Reg.	Gr.	Totals	Reg.	Gr.	Totals	Reg.	Gr.	Totals	Reg.	Gr.	Totals
Atlantic	..	35	35	...	$ 3,775.00	$ 3,775.00	...	$ 3,416.24	$ 3,416.24	...	$106.66	$106.66
Bergen	..	..	..	...	...	...	...	...	...	...	...	...
Burlington	19	6	25	$ 2,965.00	715.00	3,680.00	$ 2,661.59	649.32	3,310.91	$140.08	108.22	132.44
Camden	..	..	..	...	...	...	...	...	...	...	...	...
Cape May	..	37	37	...	3,980.00	3,980.00	...	3,612.81	3,612.81	...	97.64	97.64
Cumberland	7	47	54	940.00	5,355.00	6,295.00	839.14	4,916.70	5,755.84	119.88	104.61	106.59
Essex	..	2	2	...	225.00	225.00	...	204.51	204.51	...	102.26	102.26
Gloucester	3	7	10	500.00	690.00	1,190.00	462.06	632.35	1,094.41	154.02	90.34	109.44
Hudson	..	..	..	...	...	...	...	...	...	...	...	...
Hunterdon	12	13	25	2,045.00	1,660.00	3,705.00	1,859.30	1,508.21	3,367.51	154.94	116.02	134.70
Mercer	28	89	117	4,630.00	10,485.00	15,115.00	4,182.76	9,694.95	13,877.71	149.38	108.93	118.61
Middlesex	54	184	238	8,635.00	21,920.00	30,555.00	7,774.88	20,183.89	27,958.77	143.98	109.70	117.47
Monmouth	14	24	38	2,235.00	3,130.00	5,365.00	2,035.79	2,868.26	4,904.05	145.41	119.51	129.05
Morris	44	67	111	8,060.00	7,835.00	15,895.00	7,111.04	7,034.14	14,145.18	161.61	104.99	127.43
Ocean	..	..	..	...	...	...	...	...	...	...	...	...
Passaic	..	1	1	...	80.00	80.00	...	75.83	75.83	...	75.83	75.83
Salem	6	97	103	965.00	11,220.00	12,185.00	866.63	10,400.54	11,267.17	144.44	107.22	109.39
Somerset	30	65	95	4,985.00	7,480.00	12,465.00	4,374.14	6,869.38	11,243.52	145.80	105.68	118.35
Sussex	16	2	18	2,380.00	240.00	2,620.00	2,085.02	209.07	2,294.09	130.31	104.54	127.45
Union	..	2	2	...	210.00	210.00	...	187.08	187.08	...	93.54	93.54
Warren	33	29	62	6,210.00	3,580.00	9,790.00	5,407.37	3,265.92	8,673.29	163.86	112.62	139.89
State	266	707	973	$44,550.00	$82,580.00	$127,130.00	$39,659.72	$75,729.20	$115,388.92	$149.10	$107.11	$118.59

RECORD BY COUNTIES OF THE NUMBER OF BANG'S REACTORS APPRAISED, THE AMOUNT OF SALVAGE RECEIVED AND THE STATE AND FEDERAL INDEMNITY PAID

July 1941 to June 1942

County	*No. of Reactors Appraised*			*Amount of Salvage Received*			*Amount of State Indemnity Paid*			*Amount of Federal Indemnity Paid*		
	Reg.	Gr.	Totals	Reg.	Gr.	Totals	Reg.	Gr.	Totals	Reg.	Gr.	Totals
Atlantic	..	35	35	...	$ 1,820.26	$ 1,820.26	...	$ 978.36	$ 978.36	...	$ 617.62	$ 617.62
Bergen	..	..	..	...	...	...	...	...	...	...	...	...
Burlington	19	6	25	$ 1,145.00	331.00	1,476.00	$ 910.00	192.00	1,102.00	$ 606.59	126.32	732.91
Camden	..	..	..	...	...	...	...	...	...	...	...	...
Cape May	..	37	37	...	1,917.04	1,917.04	...	1,031.47	1,031.47	...	664.30	664.30
Cumberland	7	47	54	335.06	2,736.72	3,071.78	302.47	1,315.29	1,617.76	201.61	864.69	1,066.30
Essex	..	2	2	...	113.08	113.08	...	55.96	55.96	...	35.47	35.47
Gloucester	3	7	10	272.52	344.25	616.77	113.73	172.87	286.60	75.81	115.23	191.04
Hudson	..	..	..	...	...	...	...	...	...	...	...	...
Hunterdon	12	13	25	931.18	914.64	1,845.82	556.91	372.66	929.57	371.21	220.91	592.12
Mercer	28	89	117	1,947.16	5,851.97	7,799.13	1,341.41	2,316.47	3,657.88	894.19	1,526.51	2,420.70
Middlesex	54	184	238	3,475.30	11,511.84	14,987.14	2,579.85	5,206.58	7,786.43	1,719.73	3,465.47	5,185.20
Monmouth	14	24	38	1,040.00	1,670.00	2,710.00	597.50	730.00	1,327.50	398.29	468.26	866.55
Morris	44	67	111	2,521.78	3,498.53	6,020.31	2,769.04	2,168.07	4,937.11	1,820.22	1,367.54	3,187.76
Ocean	..	..	..	...	...	...	...	...	...	...	...	...
Passaic	..	1	1	...	55.00	55.00	...	12.50	12.50	...	8.33	8.33
Salem	6	97	103	372.36	6,480.23	6,852.59	296.57	2,369.82	2,666.39	197.70	1,550.49	1,748.19
Somerset	30	65	95	1,561.28	3,963.49	5,524.77	1,711.84	1,759.46	3,471.30	1,101.02	1,146.43	2,247.45
Sussex	16	2	18	610.68	84.90	695.58	884.61	77.54	962.15	589.73	46.63	636.36
Union	..	2	2	...	72.50	72.50	...	68.75	68.75	...	45.83	45.83
Warren	33	29	62	1,849.71	1,845.01	3,694.72	2,180.10	867.43	3,047.53	1,377.56	553.48	1,931.04
State	266	707	973	$16,062.03	$43,210.46	$59,272.49	$14,244.03	$19,695.23	$33,939.26	$9,353.66	$12,823.51	$22,177.17

The following summary indicates the amount of state indemnity paid for reactors resulting from the Bang's test during the year ending June 30, 1942.

Class of Cattle	Number of Animals	Amount Paid
Registered animals	266	$14,244.03
Grade animals	707	19,695.23
Registered and Grade	973	$33,939.26

Average State Indemnity Paid Per Head:

Registered animal	$53.55
Grade animal	27.86
Registered and Grade	34.88

The following summary indicates the amount of salvage received by owners for reactors resulting from the Bang's test during the year ending June 30, 1942.

Class of Cattle	Number of Animals	Amount Paid
Registered animals	266	$16,062.03
Grade animals	707	43,210.46
Registered and Grade	973	$59,272.49

Average Salvage Received Per Head:

Registered animal	$60.38
Grade animal	61.12
Registered and Grade	60.92

The following summary indicates the amount of federal indemnity paid for reactors resulting from the Bang's test during the year ending June 30, 1942.

Class of Cattle	Number of Animals	Amount Paid
Registered animals	266	$ 9,353.66
Grade animals	707	12,823.51
Registered and Grade	973	$22,177.17

Average Federal Indemnity Paid Per Head:

Registered animal	$35.16
Grade animal	18.14
Registered and Grade	22.79

The following summary shows the total amount received by owners of condemned animals.

Total amount received by owners for reactors (Sum of salvage, federal and state indemnity)	$115,388.92
Average amount received per head by owners for Bang's reactors	$118.59

GOATS

We have continued to test for both tuberculin and Bang's disease herds of goats whose owners have made requests for such tests. Following is a

summary of the number of herds and animals under supervision and those fully accredited as free from both tuberculosis and Bang's disease, by counties:

	TUBERCULOSIS				*BANG'S DISEASE*			
	Under Supervision		*Fully Accredited*		*Under Supervision*		*Fully Accredited*	
County	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals
Atlantic	1	4	..	..	2	17	1	13
Bergen	5	27	9	66	14	116	8	60
Burlington	2	6	..	..	2	49	..	..
Camden	5	77	..	..	5	43	3	28
Cape May	..	..	..	..	..	..	..	..
Cumberland	1	1	3	28	4	50	2	44
Essex	1	1	4	22	4	20	2	5
Gloucester	10	79	1	2	11	64	2	7
Hudson	1	5	..	..	..	..	..	..
Hunterdon	5	28	3	112	6	130	3	116
Mercer	2	11	..	..	3	9	1	7
Middlesex	5	31	2	10	4	43	3	33
Monmouth	16	108	3	12	18	122	8	61
Morris	29	110	19	263	52	381	21	249
Ocean	..	..	..	..	1	3	..	..
Passaic	2	22	4	52	6	84	6	84
Salem	2	6	1	6	..	..	..	..
Somerset	7	180	1	6	7	144	1	6
Sussex	1	1	1	25	1	25	1	25
Union	2	11	4	52	4	47	4	47
Warren	5	33	..	..	5	30	2	9
State	102	741	55	656	149	1,377	68	794

RECORD OF BLOOD TESTS MADE ON GOATS UNDER SUPERVISION FOR BANG'S DISEASE, BY COUNTIES

July 1, 1941 to June 30, 1942

County	Number of Herds Tested	Number of Goats Tested
Atlantic	1	4
Bergen	2	6
Burlington	2	9
Camden	..	..
Cape May	..	..
Cumberland	1	6
Essex	1	1
Gloucester	6	40
Hudson	..	..
Hunterdon	1	5
Mercer	2	2
Middlesex	1	10
Monmouth	8	47
Morris	10	37
Ocean	1	3
Passaic	..	..
Salem	..	..
Somerset	3	125
Sussex	..	..
Union	..	..
Warren	3	28
State	42	323

MASTITIS CONTROL

Probably the most costly disease of dairy animals is infectious mastitis or garget. For years dairymen and livestock officials alike have been practically helpless in the treatment of this condition.

Mastitis or inflammation of the milk-secreting gland has been studied by research workers for a number of years and the agents causing infectious mastitis have been isolated and studied. We have known for some time that the majority of cases of subacute infectious mastitis resulted from an invasion of the udder by a germ called *streptococcus agalactia.* In fact, it has been generally stated that this organism alone is responsible for about 80 per cent of all cases of streptococcal infection of this gland. Other streptococci may at times be isolated from infected glands, notably, *streptococcus dysco-lactiae* and *streptococcus uberus.*

Other quite common offenders are the ordinary pus-producing organisms, the ones commonly isolated from boils and carbuncles in humans, namely, *staphlyococcus albus* and *staphlyococcus aureus.* Occasionally, too, a virulent hemolytic *staphlyococcus aureus* is found. Other micro-organisms which at times invade the udder are *B. Coli,* an organism common in the dung of all forms of mammals, and *Brucella Abortus.*

Infection of the udder by any or all of these organisms results in changes in the gland, often in so-called indurations or hard palpable areas.

For years veterinarians have been called upon to conduct physical examinations of milk secretion glands and have judged the value or health of the udder on the physical and chemical examination of the milk, plus manual examination to determine the amount and extent of induration or hardness of the gland. On the other hand, we have repeatedly observed acute infection occurring in the udder within a comparatively short time after the gland has been declared normal as the result of physical examination and in these cases have isolated the organism responsible for the inflammation.

PHYSICAL EXAMINATIONS

The examination of animals, approved for the production of New Jersey official grades of milk by the gross physical method in conformity with the standards set forth for this milk, has been carried on throughout the year.

For this work local licensed graduate veterinarians have been employed to examine those herds under the grade that reside in the territory usually served by these men.

This work is not to be confused with the much more profound program of critical bacteriological examination for the control and eradication of mastitis set forth elsewhere in this report. However, the bacteriological diagnostic service is readily available to all producers of milk.

Following is a summary of the examinations made during the year 1941-1942:

Month Made	Number of Herd Examinations	Number of Animals Examined	Number of Animals Condemned	Number of Animals Isolated	Number of Animals Passed
July	40	619	7	19	593
August	5	123	5	6	112
September	8	320	15	52	253
October	7	141	4	4	133
November	191	5,185	54	134	5,017
December	112	3,912	15	119	3,778
January	28	965	22	39	904
February	9	299	1	14	284
March	91	2,829	20	116	2,693
April	198	6,597	18	274	6,305
May	34	830	9	100	721
June	14	268	2	12	254
Totals	737	22,088	172	839	21,047

BLACKLEG

This disease, formerly seldom seen in New Jersey, made its appearance on three premises in Mercer and Somerset counties. In all instances valuable purebred breeding establishments were visited. The first instance occurred in the winter at the farm of Paul Beimesch near Penns Neck circle on the Brunswick Pike. At this farm several purebred Brown Swiss calves were afflicted and died. Prompt administration of blackleg vaccine held the disease in check.

The second case involved several purebred Guernsey calves on the farm of Joseph O'Brien at Harlingen. Again strict sanitary measures and treatment brought the desired results.

The third case occurred on the farm of A. W. Hoebler on the Princeton-Blawenburg Road near Blawenburg. In this instance two unbred heifers were lost before the disease was stopped.

This disease, quite common in the range states where it became well-established about 30 years ago, has been reported during the past five years in eastern Pennsylvania. How it gained entrance to farms in this state is not entirely clear. Control of the disease is not particularly difficult and losses can be held to a minimum when an early diagnosis is made. In each of the three outbreaks reported, two animals were lost before the disease was brought under control.

Experiences such as this tend to emphasize the importance of having a veterinary personnel, judiciously located throughout the dairy counties of New Jersey on the alert for infectious communicable diseases and armed with sufficient authority to act promptly to bring them under complete control.

POULTRY INSPECTION

We have continued to maintain a representative in Newark to inspect all poultry arriving in car and truckload lots at the poultry terminals in that area and during the year the shipments totaled 2,643 carloads. As

there are approximately 4,000 birds in a car, there were in the neighborhood of 10,572,000 birds inspected. Of this number about 87,084 birds were condemned as being unfit for human consumption and were immediately destroyed.

Following is a summary of the number of carlots of poultry received during the year and the points of origin of such consignments:

Month	Carlots Arriving Pennsylvania Railroad and Poultry Market, Newark
1941	
July	221
August	209
September	210
October	256
November	265
December	219
1942	
January	239
February	216
March	226
April	261
May	136
June	185
Total	2,643

A comparison of the number of carlots of poultry released monthly at the New Jersey and New York City terminals during the past fiscal year follows:

	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
New Jersey	221	209	210	256	265	219	239	216	226	261	136	185
New York	262	232	306	258	377	395	319	208	321	286	233	284

Total for New Jersey 2,643
Total for New York 3,481

POULTRY CONDEMNED AT POULTRY TERMINALS

July 1, 1941 to June 30, 1942

1941	Number of Birds Condemned	Approximate Weight in Pounds
July	6,793	27,000
August	6,780	27,120
September	6,814	27,200
October	10,499	41,996
November	7,608	47,294
December	8,399	44,824
1942		
January	5,937	23,788
February	10,092	40,270
March	9,686	38,650
April	7,464	29,856
May	3,087	12,060
June	3,925	19,720
Totals	87,084	379,778

CARLOTS OF POULTRY FROM VARIOUS STATES RELEASED AT POULTRY TERMINALS IN NEW JERSEY

July 1, 1941 to June 30, 1942

Origin	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Totals
Alabama	..	..	..	..	1	..	..	..	..	..	..	..	1
Connecticut	10	19	14	18	10	10	12	7	5	4	4	6	119
Delaware	54	50	46	54	52	56	70	68	80	89	46	51	716
Georgia	2	1	1	..	..	..	..	..	..	..	..	..	4
Indiana	15	14	18	23	18	14	8	6	5	4	4	6	135
Iowa	..	..	..	..	4	1	..	..	..	..	..	..	5
Kentucky	7	4	7	5	8	4	4	4	6	..	1	1	51
Maine	..	..	1	2	2	..	..	..	..	..	1	..	6
Maryland	14	10	11	11	11	10	13	10	17	20	6	2	135
Massachusetts	8	11	12	11	10	8	4	5	3	4	2	6	84
Mississippi	..	..	..	..	..	..	..	..	1	..	..	..	1
Missouri	..	..	..	..	..	..	..	..	2	..	..	..	2
Nebraska	..	..	..	..	..	..	..	..	..	..	..	..	..
New Hampshire	2	1	8	6	4	4	6	..	..	..	2	5	38
New Jersey	24	24	22	27	23	21	26	23	15	21	21	38	285
New York	12	11	13	15	12	16	14	12	17	21	12	16	171
North Carolina	8	4	6	5	8	5	12	16	17	27	4	5	117
Ohio	7	5	4	5	5	3	2	4	4	..	1	..	40
Pennsylvania	24	28	20	29	20	21	25	24	21	19	14	23	268
Rhode Island	..	2	5	6	7	4	3	4	2	3	1	2	39
South Carolina	..	..	..	..	..	..	..	..	..	..	..	..	..
South Dakota	5	4	4	8	25	10	6	4	4	5	1	4	80
Tennessee	6	4	2	2	12	5	3	5	4	4	1	..	48
Virginia	23	16	16	29	33	27	31	24	23	40	15	20	297
West Virginia	..	..	..	..	..	..	..	..	..	..	..	..	..
Washington, D. C.	..	..	..	..	..	..	..	..	..	..	..	..	..
North Dakota	..	1	..	..	..	..	..	..	..	..	..	..	1
Totals	221	209	210	256	265	219	239	216	226	261	136	185	2,643

PULLORUM DISEASE CONTROL

During the past year, a new departure in the program for the control of pullorum disease was inaugurated, namely, the approval of flock selecting and flock testing agents under the United States Poultry Improvement Plan.

Under this program several flock testing agents were approved for conducting the pullorum tests of flocks at three of the hatcheries in the state. These agents conducted the field test for pullorum disease under the supervision of this bureau and sent to the laboratory a representative number of samples from the flocks subjected to field test. Samples consigned to the laboratory are subjected to the tube agglutination test. In this manner a close check has been kept on the work of flock testing agents.

During August, a three-day school for flock testing and selecting agents was held at the Poultry Husbandry Department of Rutgers University and only members who successfully passed an examination, following a course of instruction given by Doctor Fred Beaudette and Professor W. C. Thompson, were approved for pullorum testing and flock selecting work under the program of the Department of Agriculture for the past year.

At times during the course of the testing season, agents of the bureau spend some time with the flock testing agents in the field and observe the type of work and the manner of judging reactions obtained in testing of birds by these agents.

During the past year, blood was drawn from 77,340 birds and they were field tested by bureau representatives. Of this number 1,065 or 1.38 per cent gave a positive reaction. In addition, 6,491 birds were bled for the tube method test alone and 166 or 2.56 per cent gave a positive reaction, making the total number of birds tested by bureau representatives by both field and tube method, 83,831, with 1,231 or 1.47 per cent giving a positive reaction.

Flock testing agents tested 205,645 birds by the field method; 3,133 or 1.52 per cent gave a positive reaction. Of this number, 9,080 were bled and the blood sent to the laboratory for check test.

NUMBER OF FOWLS BLOOD-TESTED BY BUREAU REPRESENTATIVES FOR PULLORUM DISEASE
NUMBER AND PERCENTAGE REACTING, BY COUNTIES

July 1, 1941 to June 30, 1942

County	Number of Fowl Tested in Field	Number Reacting	Per Cent Reacting	Number Fowl Tested in Laboratory	Number Reacting	Per Cent Reacting	Total Fowl Tested	Total Fowl Reacting	Per Cent Reacting
Atlantic	...	..	..	..	..	..	...	..	..
Bergen	2,850	10	.35	..	..	..	2,850	10	.35
Burlington	11,983	217	1.81	..	..	..	11,983	217	1.81
Camden	...	..	..	..	..	..	...	..	..
Cape May	809	8	.99	..	..	..	809	8	.99
Cumberland	3,604	66	1.83	..	..	..	3,604	66	1.83
Essex	...	..	..	..	..	..	...	..	..
Gloucester	9,566	83	.87	4	..	..	9,570	83	.87
Hudson	...	..	..	..	..	..	...	..	..
Hunterdon	1,269	18	1.42	38	..	..	1,307	18	1.38
Mercer	11,241	122	1.09	2,753	30	1.09	13,994	152	1.09
Middlesex	688	9	1.31	..	..	..	688	9	1.31
Monmouth	4,325	55	1.27	1,827	33	1.81	6,152	88	1.43
Morris	9,606	192	2.00	841	21	2.50	10,447	213	2.04
Ocean	3,590	48	1.34	610	61	10.00	4,200	109	2.60
Passaic	1,877	41	2.18	418	21	5.02	2,295	62	2.70
Salem	4,568	63	1.38	..	..	..	4,568	63	1.38
Somerset	5,481	115	2.10	..	..	..	5,481	115	2.10
Sussex	4,937	18	.36	..	..	..	4,937	18	.36
Union	...	..	..	..	..	..	...	..	..
Warren	946	..	..	..	..	..	946	..	..
State	77,340	1,065	1.38	6,491	166	2.56	83,831	1,231	1.47

HOGS INOCULATED AS A PROTECTION AGAINST CHOLERA INFECTION, BY MONTHS

July, 1941 to June, 1942

Vaccinations Made by Private Veterinarians

Month	Number of Hogs Given Single Treatment	Number of Hogs Given Double Treatment
July	..	900
August	2	734
September	4	231
October	1	400
November	..	469
December	..	518
January	2	104
February	7	282
March	..	357
April	..	489
May	17	974
June	..	613
Totals	33	6,071

HOGS INOCULATED AS A PROTECTION AGAINST CHOLERA INFECTION, BY COUNTIES

July, 1941 to June, 1942

Vaccinations Made by Private Veterinarians

County	Number of Hogs Given Single Treatment	Number of Hogs Given Double Treatment
Atlantic	..	426
Bergen	..	..
Burlington	..	59
Camden	..	123
Cape May	1	1,296
Cumberland	2	208
Essex	..	..
Gloucester	..	154
Hudson	..	..
Hunterdon	3	712
Mercer	..	388
Middlesex	2	553
Monmouth	..	1,267
Morris	..	378
Ocean	25	438
Passaic	..	..
Salem	..	..
Somerset	..	2
Sussex	..	..
Union	..	37
Warren	..	30
State	33	6,071

GLANDERS

We are happy to report that this once important disease of horses failed to make its appearance during the past year. With the rationing of tires and gasoline, it is expected that the horse will enjoy again a measure of the popularity that once was his. Our staff is hopeful that during the coming years we will be able to report again that there are no cases of glanders in this state.

ANTHRAX

During the past year, the bureau has continued to immunize all cattle residing in the anthrax area of the state, namely, Cumberland and Salem counties. At the same time, we have been on the alert to run down several cases of suspected anthrax.

Information reaching our desk indicates that anthrax has been encountered in nearby states in areas not previously visited by this disease. Investigations carried on in both Maryland and North Carolina point strongly to the introduction of the disease into these states through the medium of inadequately sterilized bone meal from Argentina.

As is customary, the annual vaccination of horse and cattle in Salem County was carried out this year in cooperation with the County Agricultural Agent. Eighty horses and 1156 cows were given protective inoculations of intradermal anthrax vaccine and no cases of anthrax were reported from this section.

INFECTIOUS ABORTION IN MARES

This disease of brood mares so prevalent a year ago in certain breeding establishments failed to put in an appearance this year. The fact that biological houses have discovered a satisfactory method of synthesizing estrin or amniotin, a product previously extracted from the urine of pregnant mares, has no doubt partly accounted for the non-appearance of this disease during the past 12 months. In purebred establishments, diseases of this nature are well controlled through the employment of excellent breeding hygiene.

ENCEPHALOMYELITIS

Probably as the result of the decrease in the incidence of encephalomyelitis in the state for the past two years, only 178 horses have been immunized as a protection against this disease, according to reports submitted to this office by private veterinarians.

The following summary indicates by counties the number of horses vaccinated this year.

Camden	9
Cape May	60
Cumberland	56
Gloucester	4
Ocean	49
State	178

No suspected cases have been reported this year. However, a study of the epidemiology of this disease points rather strongly toward a five to seven-year cycle. It is hoped that horse owners will assist in control of this fatal disease through the timely use of vaccine. Perhaps we need not have the cyclic appearance of this disease among horses in New Jersey. In this connection, it has been the habit to prepare timely news releases calling to the attention of horse owners the advisability of having their horses immunized against encephalomyelitis well in advance of the seasonal appearance of the disease.

For years we have expected the Western strain of this disease to make its appearance in New Jersey because our importers invariably introduce many horses each year from states where the Western virus disease has heretofore been quite prevalent. Recently it has come to my attention that one of the large biologic production houses in the East purchased 76 horses for experimental study of this virus disease and on test found that only 13 of this lot were susceptable to Western encephalomyelitis virus. Obviously many horses have had undetected mild cases of the Western disease and are therefore immune. Unfortunately, with the Eastern strain of virus the death loss is above 90 per cent, so it is natural that recovered cases of this disease are few indeed.

STALLION LICENSES

During the 1942 calendar year to date, $101.00 has been collected in fees for stallion licenses.

All stallions standing for public service in the state must be examined and licensed under the provisions of the law, and such examinations are made at the owner's request.

The following tables show the registration by breeds, as well as by counties:

STALLIONS LICENSED, BY BREEDS

July 1, 1941 to June 30, 1942

Breed	Number Licensed
Belgian (purebred)	2
Morgan (purebred)	3
Percheron (purebred)	7
Saddle (purebred)	3
Suffolk (purebred)	3
Thorobred (purebred)	12
Grades*	4
Total	34

*Includes Percherons and one of Spanish breed.

STALLIONS LICENSED, BY COUNTIES

July 1, 1941 to June 30, 1942

County	Number Licensed
Atlantic	..
Bergen	..
Burlington	1
Camden	3
Cape May	..
Cumberland	1
Essex	3
Gloucester	..
Hudson	..
Hunterdon	4
Mercer	2
Middlesex	..
Monmouth	10
Morris	1
Ocean	..
Passaic	..
Salem	5
Somerset	1
Sussex	..
Union	..
Warren	3
State	34

We are proud to report that the Bureau of Animal Industry has trained several men who are now serving the armed forces of our country in capacities along the line for which they were specifically trained. Their names and location are given:

Captain C. B. Johnston—Veterinary Corps—Fort Jay, Governor's Island, N. Y.
Corporal Edward McGlone—Veterinary Laboratory—39 Church Street, New York City
Private Walter Keller—Medical Corps
Private Frank Taylor—Veterinary Corps
1st Lieutenant Ralph Shaner—Veterinary Corps—Fort Monmouth, N. J.

WORK DONE IN THE BUREAU LABORATORY

In addition to conducting agglutination tests for Bang's disease on herds under supervision, on inshipped cattle, on calves in the experimental vaccination program and on other samples submitted for test, as well as testing for pullorum disease, the following work was performed in the laboratory of the bureau during the year.

BANG'S DISEASE

Samples received	107,384
Insufficient sera	64
Broken	36
Tests set	107,284
Tests read	106,894
Positive	2,527
Highly suspicious	879
Slightly suspicious	4,027
Hemolyzed	166
Contaminated	3
Negative	99,292
(87 Positive animals retested)	

INSHIPPED ANIMALS

Samples received	26,590
Insufficient sera	14
Broken	30
Tests set	26,546
Tests read	26,546
Positive	203
Hemolyzed	4
Negative	26,339

VACCINATED ANIMALS

Samples received	6,737
Insufficient sera	14
Broken	1
Tests set	6,722
Tests read	6,746
Positive	796
Highly suspicious	258
Slightly suspicious	805
Hemolyzed	29
Negative	4,858

PULLORUM DISEASE

Samples received	18,764
Insufficient sera	355
Broken	3
Tests set	18,406
Tests read	18,420
Positive	2,495
Suspicious	450
Hemolyzed	1,459
Contaminated	773
Negative	13,243

MILK SERA TEST

Samples received	75
Insufficient sera	3
Tests set	72
Tests read	72
Positive	1
Highly suspicious	3
Negative	68

HOTIS TEST (MASTITIS)

Samples received	5,292
Streptococci	1,290
Staphylococci	412
Coli	2
Unsatisfactory	5
Negative	3,583

DIRECT MICROSCOPIC EXAMINATION FOR MASTITIS

Number Animals	Number Samples	Number Quarter Samples	Number Composite Samples	Long Chain Strep.	Short Chain Strep.	Staphy.	Other Organisms	Leuco.	Contam.	Unsat.	Neg.
1,341	4,087	3,686	401	801	222	402	262	361	34	90	1,915

BACTERIOLOGICAL, MICROSCOPIC AND POST MORTEM EXAMINATION

Animal	No.	Material	Condition Suspected	Findings
Avian	28	Entire birds	S. Pullorum	Negative for S. Pullorum
Bovine	1	Liver and glands	Tubercle Bacilli	Unable to demonstrate acid fast bacteria.
Bovine	1	Liver	Tubercle Bacilli	Unable to demonstrate acid fast bacteria.
Equine	5	10 Cultures	Pathogenic Bacteria	No pathogenic bacteria demonstrated.
Avian	349	Pheasants	Tuberculosis	283 showed lesions of tuberculosis, 66 no visible lesion.
Avian	2	Pullorum Antigen	Routine check	Unfit for use in Pullorum testing.
Avian	4	Pullorum Antigen	Routine check	Satisfactory for Pullorum testing.
Bovine	1	Feces	Vibrio infection	Positive
Bovine	1	Feces	Toxicological examination	Negative to arsenic, mercury and lead.
Bovine	1	Ear	Anthrax	Unable to demonstrate Bacillus Anthracis.
Equine	1	Blood sample	Unknown	Streptococcus Varivans.
Bovine	518	1219 Blood smears	Tuberculosis	406 negative animals, 112 positive animals showing typical picture of Tuberculosis.

Animal	No.	Material	Condition Suspected	Findings
Avian	2	Entire birds	Cause of death	Botulism
Porcine	2	Liver, spleen, kidney and stomach	Metallic poisons	Negative metallic poisoning, suspicious of alkali poisoning.
Bovine	2	Semen	Morphology and Motility	One negative, one contaminated.
Equine	35	35 Blood smears	Infectious Anemia	35 negative
Equine	35	35 Blood smears	Infectious Anemia	2 positive on sedimentation rate test. 33 negative on sedimentation rate test.
Avian	10	Entire birds	Fowl Typhoid and S. Pullorum	Negative
Avian	2	Entire birds	Fowl Typhoid	Fowl Typhoid
Avian	5	Entire birds	S. Pullorum	Positive S. Pullorum
Bovine	2	Spleen and feces	Cause of death	Feces negative for parasitism. Spleen unsatisfactory for examination.
Avian	1	Entire bird	Cause of death	Suspicious of Fowl Typhoid
Porcine	2	Liver, spleen, kidney and blood	Cause of death	Hog Cholera
Avian	8	Entire birds	Infectious disease	Negative for infectious transmissible disease. Suspicious of Coryza and Leukemia.
Equine	1	Vaginal discharge	Cause of death	Non-infectious in character.
Bovine	4	Foetus	Brucella Abortus	Negative
Canine	1	Distemper Virus	Contamination	No contamination revealed
Porcine	1	Heart and spleen	Swine Erysipelas	Negative
Porcine	6	Entire animal	Cause of death	Hog Cholera
Avian	1	Liver and intestine	Cause of death	Leukemia
Bovine	2	Exudate from hock	Causative factor	Streptococci B. Subt.
Bovine	2 1	Placenta Bone meal	Brucella Abortus Anthrax	Negative Negative
Porcine	1	Entire animal	Nutritional deficiency	Iron deficiency
Equine	10	Vaginal swabs	Pathogenic organisms	Negative
Equine	4	Vaginal swabs	Pathogenic organisms	Reacted Streptococci
Bovine	1	Viscera	Cause of death	Tenative diagnosis Nephritis.

Animal	No.	Material	Condition Suspected	Findings
Avian	1	Entire bird	Cause of death	Ruptured ovaduct with Peritonitis.
Porcine	1	Entire animal	Cause of death	Negative for infectious disease. Gastric-enteritis. Moderate infestation of lung worms. Few ascarids.
	1	Sample of silage	Botulism	Negative for Botulism and other infectious disease.
Bovine	1	Lung, liver, spleen and heart.	Botulism or other infectious diseases.	Material unsatisfactory for examination.
Porcine	2	Entire animal	Infectious disease and deficiency	Negative for infectious disease and nutritional deficiency.
Equine	7	Cultures	Streptococci	Negative
Bovine	1	Muscle, liver and lung	Blackleg	Negative
Bovine	15	Vaginal discharge	Trichomoniasis	Negative
Porcine	1	Entire animal	Swine Erysipelas	Chronic swine Erysipelas.
Bovine	2	Muscle tissue	Blackleg	One positive for Blackleg One negative for Blackleg
Avian	3	Entire birds	Cause of death	Blackhead
Porcine	4	Entire animals	Cause of past losses	B. Dysenteriae
Porcine	1	Feces	Parasitic Ova	Adult Roundworms
Bovine	1	Muscle tissue	Cause of death	Examination revealed normal tissue.

Report of the Bureau of Markets

WARREN W. OLEY, *Chief*

The marketing of agricultural products is profoundly affected by the war. It is of greatest importance that food supplies be adequate, not only for home consumption but for our armed forces, and for our allies. This means that farmers must produce more, and it also means that the most economical means available must be used to distribute food so that the people are able to obtain it at a cost in line with earning power.

The war requires shifts in farm programs. The war demand, especially for army and allied country use, is for concentrated foods. For the country as a whole, this means producing more of the oil crops and livestock, the dairy and poultry products, which are rich in concentrated proteins. Greater quantities of fruits and vegetables for fresh consumption and for processing are needed. At the same time, the supply of feeds necessary to support the larger output of animal products must be maintained.

Our farm people are laboring under difficulties. Chief among these are the scarcity of labor needed for harvest purposes, transportation problems and shortages of needed farm supplies. The rubber shortage, and truck and parts replacement are problems that cannot be directly solved. Substitutions in materials and transportation methods must be made. It has taken some months for the people of this country, farmers included, to realize this. But as it becomes better realized, our farmers are taking steps wherever possible to devise ways and means, not only to produce more abundantly, but to get the food where it can be distributed with least effort, and in more direct channels.

In this state our farmers have been favored by weather conditions and good crops. Even under difficult labor conditions the harvesting and, in the case of canned goods, the processing of most vegetable crops have met or raised the records of recent years. The same situation is true of our dairy and poultry products.

In the entire country all-time production records are being set for milk, dairy and poultry products. Egg production in the United States has been running 16 per cent above a year ago, and considerably above the 13 per cent increase asked for by our government. Grain carryovers at the beginning of this year were the greatest our country has ever seen. These high production figures undoubtedly will cause many marketing changes in the future. When this war is over the surpluses, to a certain extent a problem now, will be needed to feed famished nations.

Mention has been made of the need for concentrated foods, especially for overseas shipments. The scarcity in ocean tonnage is being reflected in greater emphasis on the saving of shipping space through dehydration. This method of preserving and storing undoubtedly will outlive the war. One of our local problems will be to meet the dehydration program in the sale of fresh products. Our farms are close to the great consuming centers and people will always demand fresh products, but dehydration, when perfected, is bound to enter into our economic marketing problems as did frozen foods and years before, canned foods. Trade sources state that between 40 and 50 dehydrated foods will soon be on sale to domestic consumers. The list includes most fruits and vegetables, and other commodities not yet considered by the average housewife. Powdered milk will be used to a greater extent, and bakers, possibly hotels, and even housewives will be using more dried eggs. Egg-drying plants are being expanded to an annual capacity of 240,000,000 pounds compared with a 1941 production of 45,000,000 pounds, and only about 7,000,000 pounds in 1940. This situation is something to think about in this state, which relies on a market for food in the natural form.

And so, in developing this report of the Bureau of Markets we have endeavored to give the facts on accomplishments during the year, and we also have tried to keep in mind the effect of the war effort on our people. Some of the changes put into effect during the year were with the objective of some preparation for the future. Ours is a great industry. The methods of distribution now used must be kept in tune with the changes in the development of that industry.

CROPS AND MARKETS INFORMATION SERVICE

The crops and markets information service was conducted during the past year without any major changes. No new projects were undertaken, but some revisions were made to adjust the work to changing conditions. The scope of the service remained much the same as in preceding years. The chief work of the service consisted of issuing weekly summaries, which were of interest to all branches of agriculture. Daily information on fruits and vegetables was obtained in cooperation with the Agricultural Marketing Administration offices at New York and Philadelphia. Special services were rendered to the fruit and vegetable auctions, and also to the egg and poultry auctions. In addition, some work was continued to aid the farmers' markets of Newark and Paterson.

The fiscal year takes into consideration two crop growing seasons. Work during the first half of the year was in connection with the 1941 crop year, while the latter half was in conjunction with the 1942 crop year. During the active part of the season, when crops are moving to market in volume, most of the time of the employees of the service is spent in collecting and issuing current information. During the late fall and winter months, the

supervisor is engaged for the greater part of the time in writing summaries, or in special duties. During the past year, much time was spent in collecting facts and figures on the fruit and vegetable industry of New Jersey. The object of this study was to collect into one publication statistics on 53 crops, showing their relative importance and their shipping seasons. Toward the close of the year this material was prepared for printing, and will be referred to later in this report.

During the latter half of the fiscal year, wartime restrictions made it necessary to curtail travel somewhat, and more information is now being obtained by telephone and correspondence than previously. In this connection, close cooperation was continued with the managers of the produce auction markets, and also the managers of the farmers' markets of Newark and Paterson. Wartime needs of the military forces made it impossible to secure teletypewriters this spring for use in transmitting market quotations to the auction markets in the southern part of the state.

DAILY MARKET REPORTING

The system of obtaining and distributing daily market quotations was continued as in the past, whereby the facilities of the Agricultural Marketing Administration's offices at New York and Philadelphia were utilized. This method of securing these daily quotations is the most economical possible. A share of the salary of both men in charge of the two offices is paid by the State of New Jersey, and in return, these cooperative employees collect special information and data on New Jersey crops for our use throughout the active marketing season.

The New York office is used during the shipping season for early morning reports of important fruits and vegetables. Usually this type of report is started late in April, at the time asparagus harvesting is underway, and continues until killing frosts end the season. The daily prices and the general condition of the New York market is obtained each morning by telephone and relayed to the Cumberland County Agent's office at Bridgeton, where it is redistributed to the produce auction markets of that county, and to nearby markets in Atlantic County. In addition, it is also sent to the Swedesboro and Glassboro markets. During the 1941 season this information was relayed by teletype, but this spring it has been necessary to use the telephone, because of the inability to secure teletypewriters from the telephone company.

The Philadelphia office is used during the active white potato harvesting season as a source of shipment, destination and price information. The man in charge of the office secures this information from the transportation agencies and the trade, and forwards it to the Trenton office for redistribution to growers and shippers in this state. A complete report of the potato deal is included in this annual report.

WEEKLY MARKET SUMMARIES

As the service is now constituted, the program throughout the year includes the publication of two weekly summaries entitled "MARKET CONDITIONS" and the "WEEKLY MARKET REVIEW."

The "MARKET CONDITIONS" reports are issued in order that interested growers and shippers may have concise information concerning conditions of the crops in areas of other states competing for our markets, and concerning crop conditions in New Jersey and in the markets. It has been developed over a period of years so that today it is felt to be of considerable value to our residents. It is also looked upon by officials in other states as a valuable contribution, and the program has been copied to a certain extent by some other agencies.

During the past fiscal year a total of 158 such reports were issued. Each report is a separate report on one commodity. These included: white potatoes, 42; apples, 33; sweet potatoes, 26; peaches, 17; onions, eight; asparagus, eight; strawberries, eight; tomatoes, seven: lettuce, five, and spinach, four. The mailing list is made up by commodities so that persons receive only those reports in which they are interested. Some request all of the reports.

A study of the "MARKET CONDITIONS" reports gives some interesting highlights on conditions of various crops during the year. Briefly, they are summarized as follows:

Demand for potatoes during the first part of the 1941 season was slow, due to late harvesting in Virginia, and larger crops in Kansas and Missouri than in previous seasons. Later the market improved and in October prices were generally satisfactory. The sweet potato crop was injured by a period of dry weather during the fall, and yields were lighter than usual. Demand was only fair most of the season, because of much larger crops in Louisiana and Tennessee than the preceding year. Apples were dull at the beginning of the 1941-1942 deal, but the market improved steadily as the season advanced, and late varieties returned satisfactory prices to growers. Early varieties of peaches were likewise dull in 1941, due to a large Southern crop. Later in the season the market strengthened, and Elbertas and other late varieties moved very well. The percentage moving through local markets and on roadside stands was reported to be unusually heavy. Tomatoes were weak during the peak period, and government buying was necessary to aid the situation. Spring lettuce moved fairly well, but the fall crop was unusually light because of dry weather. Onions moved well, because of a very light crop in Texas during 1941. The price level for the 1942 crop was lower, as plantings in Texas this past spring were heavy. Some acreage in northern Texas was lost because of unfavorable weather, and this relieved the situation somewhat in South Jersey. Asparagus was rather slow during the 1942 season, with the acreage much larger than in any previous year. Competition from California and South Carolina was not severe, but lack of

open-market buying by the canneries during the first part of the deal was detrimental. Strawberries moved well all season, with competition light. Dry weather injured the crop somewhat.

The "WEEKLY MARKET REVIEW" was issued throughout the year. It continued as a brief summary of prices and volume for various agricultural commodities, including grains, feedstuffs, livestock and meats, poultry and eggs, and fruits and vegetables. This report gives the summary of all sales and prices on the poultry and egg auctions, and the Hackettstown Livestock Auction, and also gives a comparison of current prices with the corresponding week of a year previous.

A study of these reports shows that grains and feedstuffs were higher in price than the preceding year, with the war having its effect on the general situation. Production of eggs and poultry showed an increase during the year, and supplies at terminal markets and the country auctions were much heavier than the preceding year. Prices for both eggs and poultry were higher than in 1940-1941.

In response to a request from dairy farmers, the price of wheat, barley and soybeans was added to the review this past year. Due to the fact that it is difficult to obtain an accurate quotation on nearby grains, it was necessary to quote Western wheat and barley on the New York market, and soybeans on the Chicago market. While these quotations are not exactly indicative of the local market, they do give growers a basis on which to price their own offerings if they are selling, and it pictures the general trend of the market from week to week.

Many requests for these weekly summaries were received during the year. No attempt to solicit names for these reports is made. They are sent to those persons who ask for them. The mailing lists are revised as deemed necessary in order to remove names of persons no longer interested.

In addition to reports issued throughout the year, the service publishes during the active shipping season the "AUCTION NEWS," "NEW JERSEY FRESH PRODUCE" and "NEW JERSEY TRUCK CROP NEWS."

The "AUCTION NEWS" has now been published for several seasons during the period when produce is moving in volume at the shipping point auction markets. Cost of the special paper used for this report and all mailing costs are paid by the produce auction markets of the state. The purpose of the report is to advertise the auctions to the produce trade. The mailing list is made up largely of buyers, although the report is also sent to the boards of directors of the various markets. At the close of the year this report was going to approximately 800 produce buyers throughout the northeastern part of the country.

"NEW JERSEY FRESH PRODUCE" is the title of a brief report issued for the buyer patrons of the Newark and Paterson farmers' markets. The report is issued weekly for Newark, and twice a month for Paterson. The mailing list is kept at approximately 1,500 names. Most of these are jobbing and retail merchants in the metropolitan areas surrounding these two

important outlets. Part of the costs of this report, also, are paid by the two markets served.

The third seasonal report is entitled "NEW JERSEY TRUCK CROP NEWS." This report is issued in cooperation with the agricultural statistician's office of the United States Bureau of Agricultural Economics at Trenton. As stated in previous reports, the object of this bulletin is to give the growers of New Jersey an idea of the progress of crops in various sections of this state, and to give a short semi-monthly resume' of conditions in some of the competing areas. The mailing list for this report was approximately 1,000 names as the year closed. In addition to growers and dealers, it is mailed to marketing officials in other states. This report is mailed under the "franking privilege" as it is a federal cooperative project.

MISCELLANEOUS

During the latter part of the 1940-1941 season, a circular entitled "MARKETING SWEET POTATOES IN NEW JERSEY AND COMPETING STATES" was published. This bulletin was received from the printer in time to distribute it to leading growers and shippers of this important crop before the opening of the 1941 harvesting season. The object of this publication was to present a brief outline of changes that had taken place during the past few seasons in the leading commercial sweet potato producing areas of the United States, in order that the New Jersey grower might market his crop to the best advantage.

During the past winter, various facts and figures on the fresh fruit and vegetable industry of New Jersey were collected, and this material is now being printed. Information of a statistical nature was presented for 53 crops. These include: Tree fruits, five; small fruits, six; major vegetables, twenty, and minor vegetables, 22. The material is similar for each crop. It includes the estimated acreage, yield per acre and production, the commercial producing areas of the state, the approximate shipping season, the percentage of the crop shipped to specified dates, and the relative importance of various shipping point and terminal markets.

It is believed that this material gathered together into one booklet will be of value to large growers and dealers, as well as official agricultural agencies, who have need for statistical material many times, especially during the active harvesting season.

Several years ago, a calendar of marketing dates was prepared for the produce auctions, as a means of advertising the various markets. This calendar was revised and enlarged this past year, is now in the hands of the printer and will be distributed to the produce trade as soon as it is completed.

ANNUAL POTATO SUMMARY

As stated in the annual summary of the New Jersey potato season, the chief characteristics of the 1941 deal were as follows: the increased cost of production, due to higher prices for fertilizer and labor; the slow demand for potatoes during the first part of the harvesting period, which necessitated government purchases by the Surplus Marketing Administration during August and early September; the sharp and rapid improvement in the market late in September and October; the continuation of a longer-than-usual marketing period, which began three or four years ago; the continuation of the increasing use of the motor truck as the leading method of transportation; the shift of varieties, which saw the acreage of Katahdins and Chippewas exceed that of Cobblers; the continuation of high yields, although of a quality which was not as high as that of 1940; and, a general increase in farm prices of about 20 per cent over those secured the previous year.

Some of the acreage went into the ground at the usual time, but several growers reported that they did not complete operations until a later-than-normal period, because of a rainy spring. The total acreage grown for harvest was about 1,000 acres larger than that of 1940, with the estimate placing the total plantings at 56,000 acres, compared with 55,000 acres the preceding year, and 49,000 acres as the ten-year average acreage from 1930-1939.

In general, yields were not as high as the previous season, although certain areas reported that the commercial crop was somewhat bigger than 1940. Quality in some areas was good, but for the state as a whole it was not up to the very high standard of 1940. The estimated production, from the total crop, amounted to 10,360,000 bushels compared with a total of 10,285,000 bushels in 1940, and the ten-year average production of 8,262,000 bushels.

Harvesting of some of the earliest plantings began during the first week of July, but it was around July 15 before general digging commenced, as evidenced by the weekly reports of truck and rail movement. Increased movement continued throughout August, with peak movement occurring the past year around August 25-30. Heavy shipments continued during September and October, with at least 15 per cent of the crop remaining to be marketed by November 1. Reports from dealers indicated that between 5 to 10 per cent was left in growers' hands on December 1.

The largest part of the crop moved to market by truck. According to reports obtained from the federal government, the Surplus Marketing Administration and leading potato shippers in the central and southern areas of the state, a total of 12,641 carlot equivalents of potatoes was shipped this past season, between July 5 and December 27. Of this total, 68.5 per cent were shipped by truck. In addition, 20 per cent more were moved from the farm or dealer's warehouse to the piers, for shipment to market by boat. This movement should really be classed as truck movement, rather than rail,

as reported by the United States Department of Agriculture. If these two figures are added together, the total truck movement from country points amounted to approximately 88.5 per cent. Rail shipments for commercial outlets amounted to only 7.3 per cent, while the relief purchases totaled 4.2 per cent. The combined rail movement was 11.5 per cent. The following chart gives the movement by weeks and shows the very important part that truck and boat holds as a means of transportation of potatoes. One realized the change that must come in 1942 because of the curtailment of boat and truck transportation.

Distribution of the crops this past year closely followed the pattern of the previous few seasons. Due to the fact that such a large percentage of the crop was shipped by truck, it was impossible to obtain accurate destination figures. As usual, nearby states, such as Pennsylvania, New York, New England, and to a lesser extent, Ohio, formed the best markets during the early part of the deal. Later in the season, the South was the best outlet, with relatively heavy movement by boat reported to several ports in that part of the country. As usual, the export market formed an important outlet, with a large share of the 2,539 carlots reported by boat going to such countries as Cuba, Puerto Rico and parts of Central America.

Farm prices ranged around $1.00 per sack during the greater part of the harvesting period. During late July, this price was somewhat higher, with growers reporting sales at $1.05 to $1.15 per sack, depending on grade and quality. In August, the price dropped to $1.00 per sack during almost all of the month, and this price also prevailed during the greater part of September. In October, the market stiffened materially, and prices advanced to $1.25 to $1.50, with the average being close to $1.35 for the month. This strength held during November, and the remainder of the crop on hand during the early winter months also sold at rather steadily advancing prices.

WEEKLY SHIPMENTS OF NEW JERSEY POTATOES—1941

(Carlot Equivalents)

Week Ending	Rail		Boat	Truck (2)	Total
	Commercial	*Relief*			
July 5	..	..	..	7	7
12	..	..	..	51	51
19	9	..	15	243	267
26	12	..	63	354	429
Aug. 2	38	..	93	490	621
9	100	..	125	753	978
16	139	72	182	727	1,120
23	170	75	153	880	1,278
30	107	97	215	695	1,114
Sept. 6	60	73	238	578	949
13	64	75	269	524	932
20	74	65	243	518	900
27	60	74	186	482	802
Oct. 4	52	..	108	365	525
11	18	..	118	325	461
18	8	..	134	304	446
25	8	..	164	299	471
Nov. 1	3	..	54	259	316
8	3	..	47	270	320
15	..	..	30	235	265
22	..	..	42	142	184
29	..	..	22	145	167
Dec. 6	..	..	26	(1)	26
13	..	..	8	..	8
20	..	..	4	..	4
Totals	925	531	2,539	8,646	12,641

Note: Rail figures secured from United States Department of Agriculture reports from common carriers, for commercial movement; from Surplus Marketing Administration office, Trenton, for relief figures; boat figures obtained from United States Department of Agriculture reports, but subtracted from dealers' truck figures, as all of these were moved from country points to piers by truck; truck figures, by courtesy of 20 leading potato dealers in the central and southern sections of the state.

(1) Reports of truck figures secured to December 1 only.

(2) Truck figures converted on basis of 300 sacks per car to October 1, and 360 sacks thereafter.

DAIRY PRODUCTS MARKETING

The objective of the dairy products marketing project is to aid in the development of a practical milk marketing program for the state. The major activity of the program is the supervision of the production and distribution of milk under the New Jersey official grades and the expansion of the sale of such milk. These grades represent an effort to recognize and identify milk of definite quality standards. Other activities include cooperation with the Milk Control Board, the New Jersey Dairymen's Council, the New Jersey Junior Breeders' Fund, and other agencies, as well as the collection and dissemination of information of value to the dairy farmers of New Jersey.

New Jersey dairymen again enjoyed a successful year, although the disrupting influences of war economy were more and more evident as the year

progressed. Income to dairy farmers in New Jersey continued on a level above those of surrounding states, with the exception of Connecticut, as figures taken from reports of the Milk Control Board show a net weighted average return to all producers for all milk sold in New Jersey of $2.95 per hundredweight for the year as compared with $2.81 for the previous year. This is a clear gain of 14 cents per hundredweight over the previous year. However, as the year progressed, this favorable monetary return was more than absorbed by increasing costs of material, hay, grain and particularly, labor, so that, while the New Jersey farmer as a whole was much better off than his competitors in surrounding areas, the favorable conditions are being dissipated rapidly by the requirements of war, and a program of economy of effort and efficient management must be rigidly followed if the New Jersey dairyman is to maintain his present favorable position.

The general outlook for the industry in New Jersey is also far from favorable. Under a new set-up, a director of milk control supplanted a five-man board late in July, 1941. Under the wise leadership of this director, a sound and efficient program has been formulated and is now in effect and, if it can be carried to a conclusion, will be of much benefit to New Jersey dairymen. Unfortunately, war regulations again may disrupt this program. In May, 1942, the Office of Production Management froze all price levels, including milk, to those prevailing in March, 1942, but did not put a ceiling on labor costs. Farm labor is being attracted to defense plants by reason of high wages paid; and, in addition, a large number of farm boys have been inducted into the armed forces, so that the remaining labor available for farms is in a position to demand wages that will soon make the March prices much too low to cover cost of production.

Another disruptive influence is an effort on the part of the Metropolitan Bargaining Agency of New York City to include the nine northern counties of New Jersey under the New York City Marketing Agreement. Some 600 farmers of northern New Jersey are now in the New York City price pool, due to their milk being sold in New York City, and if the remaining 2,300 farmers in these nine counties were included, it would nullify the efforts of the director of milk control to maintain New Jersey prices. An amendment to the marketing order to this effect was proposed in January and defeated by the united opposition of all phases of the industry. In April, the New York City Board of Health asked for a conference in which a proposal was made to limit the milk shed for that city, the ostensible reason being to lessen the number of inspections. A committee of twelve was instituted to formulate this program, New Jersey having but one member. Among the proposals advanced to date was the inclusion of the nine New Jersey counties in the milk shed, thus making them subject to the provisions of the marketing order, and nullifying the orders of the director of milk control in those counties.

Under the present trend of government, some method of federal control seems inevitable. It is not too soon for the formulation of a long-time pro-

gram to overcome the disruptive effects of a wartime economy. In the meantime, every effort must be made to strengthen and support the sound marketing program now in effect in New Jersey.

NEW JERSEY OFFICIAL GRADES

The New Jersey official grades continue to be the principal project of the milk marketing work. Dealers and producers concerned in the production and distribution of milk under the New Jersey grades are quite evenly distributed in the principal dairy counties of the state, the bulk of the milk being produced in the counties of Hunterdon, Warren, Morris, Burlington and Salem. There are three official grades, "New Jersey Grade A Raw," "New Jersey Grade A Pasteurized" and "New Jersey Grade B Pasteurized." The volume of New Jersey Grade A milk, both raw and pasteurized, remained relatively stable throughout the year, while the New Jersey official Grade B milk has shown a decided increase in volume.

There are at present 49 dealers processing 110,120 quarts of milk daily. This is the highest amount ever supervised by the Bureau of Markets, a 12.44 per cent increase in volume over the preceding year and double the amount produced during the fiscal year 1939-1940. A significant trend is the steady increase in the amount of milk supervised while the number of dealers shows a slight decrease annually. Of these 49 dealers, 13 sold raw milk only, 21 sold pasteurized milk only, while 15 dealers sold both raw and pasteurized milk. The volume of milk distributed was 88.59 per cent pasteurized and 11.41 per cent raw, showing quite clearly a trend toward the elimination of raw milk.

The 49 dealers processing New Jersey official grade milk sell in turn to 258 subdealers, the milk being distributed in 217 municipalities of the state.

One of the important functions of the New Jersey official grade inspection is the physical examination of cattle in herds of cooperating farmers to eliminate diseased cows. During the fiscal year just ended, this involved the inspection of 21,111 cattle. This work is performed by private veterinarians designated by the Bureau of Animal Industry, the work being supervised by a representative of the Bureau of Markets and paid for by fees collected from the cooperating dealers.

Following is a table showing the results of the physical examination of cattle for the fiscal year 1941-1942, by counties:

PHYSICAL EXAMINATION OF CATTLE, FISCAL YEAR 1941-1942, BY COUNTIES

County	Number of Herd Examinations	Number of Animal Examinations	Number of Animals Passed	Number of Animals Isolated	Number of Animals Condemned
Bergen	6	131	128	3	..
Burlington	154	4,054	3,906	118	30
Cumberland	24	359	346	10	3
Essex	5	243	230	12	1
Gloucester	5	78	76	2	..
Hunterdon	137	4,615	4,426	170	19
Mercer	11	427	405	19	3
Middlesex	7	740	557	163	20
Monmouth	25	740	699	26	15
Morris	97	3,826	3,725	93	8
Ocean	1	9	9	..	..
Salem	58	1,192	1,159	26	7
Somerset	60	2,473	2,386	62	25
Sussex	5	204	189	11	4
Warren	90	2,020	1,952	60	8
Totals	685	21,111	20,193	775	143

SUMMARY

	Number	Per Cent
Herds examined	685	
Herds in which all animals were passed	346	50.51
Herds in which animals were excepted	339	49.49
Animals passed	20,193	95.65
Animals isolated	775	3.67
Animals condemned	143	.68

One of the requirements of the New Jersey official grades is the physical examination by a practicing physician twice each year of all employees of farms producing New Jersey Grade A Raw milk, and employees of bottling plants handling New Jersey Grade A and New Jersey Grade B Pasteurized milk. This involved the examination of 772 individuals, the medical certificates being on file in the Bureau of Markets.

During the past fiscal year, 3,365 samples of milk were collected for examination and analysis. With few exceptions, bacteria counts were maintained well below the standards of 15,000 per cubic centimeter for New Jersey Grade A Raw milk, 10,000 per cubic centimeter for New Jersey Grade A Pasteurized milk and 20,000 per cubic centimeter for New Jersey Grade B Pasteurized milk. All high counts were not only reported numerically, but the types of organisms were identified and so served as clues to factors contributing to high counts. Consequently, indications of trouble were readily traced and conditions immediately corrected. The average butterfat content of the 690 samples of "A" milk, both raw and pasteurized, was 4.30 per cent, while that of 140 samples of the "B" milk was 3.87 per cent.

The New Jersey official grades project is self-supporting to a considerable degree. Fees are based on a sliding scale, according to the amount of milk

processed by the distributor. The income to the Bureau of Markets from fees for the fiscal year averaged $37.77 daily, and the total income collected was $13,787.18.

In order that a comparison of the volume of work accomplished by this project since its inception may be secured, a summary of progress is presented, using only certain key years as a barometer:

	1931-32	1937-38	1940-41	1941-42
Number of cooperating dealers	30	62	53	49
Number of producers	102	184	380	339
Daily production of milk	24,709	55,848	96,420	110,120
Number of cows examined semi-annually	2,864	5,582	9,467	10,555
Number of employees examined semi-annually	259	525	503	386
Samples collected for analysis	401	1,816	2,481	3,365
Butterfat average	3.74%	4.10%	4.20%	4.30%
Average daily fee	$12.35	$22.91	$34.65	$37.77

The New Jersey official grades program has now completed its 11th year and, having been conducted on a commercial marketing basis, has proved the soundness of the program as a means of marketing quality New Jersey milk to discriminating consumers.

The New Jersey Health Officers' Association put into effect, as of October 1, 1941, a program of elimination of grades in the metropolitan area of northern New Jersey. This, as far as the official grades program was affected, merely changed the label on New Jersey Grade A Pasteurized milk to New Jersey Premium milk. Figures on New Jersey Premium milk in the above report are included in New Jersey Grade A Pasteurized milk.

Further recognition of the value of the New Jersey grades during the year was the inclusion of the grades in the orders of the director of milk control, and the fact that all army encampments within the state use New Jersey Official Grade A Pasteurized milk exclusively.

The New Jersey Official Grade A Milk Dealers' Association, composed of cooperating dealers distributing the New Jersey official grades, has been active in promoting the sale of these grades of milk. With the cooperation of the New Jersey Council, and continuance of the check-off system whereby each producer and dealer contributed one cent per can for each 40-quart can of milk, it was possible to conduct a ten-month advertising campaign in which 14 newspapers in the state were used, plus a five-month billboard campaign acquainting the public with the fact that New Jersey Grade A Pasteurized milk could still be obtained under the name of "New Jersey Premium." This advertising program was developed at a total cost of $4,365.09, and the bureau wishes to acknowledge, with deep appreciation, the assistance of the New Jersey Council in advertising these grades of milk.

SPECIAL SERVICES

During the year, a number of meetings were held in the metropolitan area on matters affecting New Jersey markets, and the supervisor of dairy products standardization was assigned to represent the department at these meetings. Among those of most importance were the hearing on amendments to the Metropolitan New York Marketing Agreement, at which a brief was presented opposing the inclusion of New Jersey in the marketing area; a meeting called by the Department of Health of New York City to limit the milk shed, and a meeting of the Northwestern Dairy Conference at which the formation of the "Free Farmers" was discussed.

The use of New Jersey official grades milk in the army encampments located in New Jersey necessitated a number of conferences with the Quartermaster Corps in Washington, D. C. and Trenton, and also with staff officers of the Second Corps Area at Governors Island, New York.

HACKETTSTOWN LIVESTOCK AUCTION MARKET

The supervisor of dairy products standardization has cooperated closely with the Livestock Cooperative Auction Market Association of North Jersey, Inc., better known as the Hackettstown Auction Market. This market, intended to correct abuses that have been prevalent over ten years in the northwestern counties of the state, has been more successful than was expected by the group that organized the association. Our supervisor has attended most of the directors' meetings, and also aided through actual services at most of the weekly sales that have been held. He has worked with the management and with the county agents, who have also given much of their time to develop this market.

The auction market opened on January 28, 1941, financed by certificates of indebtedness approximating $7,800. By April of the same year, it was quite evident that the plant was too small, and in June an addition, costing approximately $4,200, was erected; the cost being defrayed out of sales' commissions. On June 22, 1942, the certificates of indebtedness were paid in full, notwithstanding the fact that they did not mature until 1946. These certificates of indebtedness were paid from sales' commissions.

The total gross sales on this market for their fiscal year, January 1, to December 31, 1941, was $379,833.96, while the total gross sales for the first six months of their 1942 fiscal year were $330,940.02, a grand total of $710,773.98 for the first 18 months of operation.

To illustrate the phenomenal growth of this market, the following chart has been prepared, showing the number of animals sold and gross sales during this eighteen-month period.

SALES AT HACKETTSTOWN BY MONTHS

	1941-42		1941	
	Number of Animals Sold	Gross Sales	Number of Animals Sold	Gross Sales
July	1,408	$35,801.10	..	..
August	1,287	33,134.99	..	..
September	1,739	39,495.91	..	..
October	1,873	47,518.87	..	..
November	1,626	41,454.31	..	..
December	1,871	47,628.28	..	..
January	1,722	51,333.79	88	$ 2,262.29
February	1,653	48,626.08	1,066	22,869.87
March	2,266	66,901.75	1,156	24,760.76
April	1,632	54,729.61	1,455	29,797.59
May	1,375	46,939.67	995	29,157.69
June	1,894	62,409.12	1,025	25,952.30
Totals	20,346	$575,973.48		

NEW JERSEY JUNIOR BREEDERS' FUND

Cooperation was extended to the trustees of the New Jersey Junior Breeders' Fund, Inc. by supplying the services of the supervisor of dairy products standardizatlon to carry out certain field activities necessary in the administration of the fund. This necessitated seven farm visits and attendance at two fairs in various parts of the state during the year. The supervisor also served as a committee member with representatives of the Agricultural College and Extension Service to determine the awards for meritorious records presented by the trustees of the fund during Agricultural Week.

NEW JERSEY DAIRYMEN'S COUNCIL

The Bureau of Markets continued to cooperate with the New Jersey Dairymen's Council, and members of the staff of the bureau appeared on the program throughout the year.

FRUIT AND VEGETABLE MARKETING

In the year 1941 there was little change in the transportation facilities available to our fruit and vegetable shippers. These facilities have improved greatly, in some respects, during the past 20 years. While opportunities for the use of railroads have been reduced because of lack of use by shippers, they have been adequate for the need of our people. This reduction in use has been more than made up by greatly increased motor truck usage over our whole marketing area. As the year closed there was evidence of much greater demand on the railroads, and as the war continues we undoubtedly will wish that the secondary railroad lines in New Jersey, with stations and agents, that have been discontinued, could be back in service.

The motor truck has opened up many markets to our growers. Likewise, it has made the same opportunity for many sections of the country and has brought our markets and in fact, all of the larger markets of the nation, closer to all producing areas. This has caused keener competition in the

growing and marketing of fruits and vegetables in all states located within hauling distance of these markets.

Due to the fact that New Jersey farmers are within truck hauling distance of most primary markets, standardization and inspection of fruits and vegetables for fresh market sales have not been as popular here as in many other states. However, should our growers have to resort to rail shipments there may be a sharp increase in the application for this service which has been long established as a reliable basis for trading.

The New Jersey Department of Agriculture has promulgated standards for most fruits and vegetables grown in the state and has adopted as their official state standards those universally used by the United States Department of Agriculture on products of importance grown in various other states. The state department has established and maintains a competent inspection service cooperating with the federal department in securing and transferring of personnel, supervision of inspection and certification, and interpretation of standards. Inspection and certification of properly graded and uniformly packed lots of produce is the best and cheapest insurance obtainable. It minimizes the possiblity of disputes between buyer and seller, and aids in quick settlements and satisfactory returns.

INSPECTION WORK

Besides the certifying of quality and grade of fresh produce for market, another important activity in the bureau has been the certifying of growers' loads of vegetables for processing. This service has been growing rapidly, and although the loss of European and other foreign markets reduced the amount of service rendered in some commodities, the loss was more than made up in the domestic market and cannery deals.

CERTIFYING FRESH PRODUCE

APPLES

With European markets generally closed to American apples, only a few lots of New Jersey apples were exported during the 1941 season. These were generally purchased by the Surplus Marketing Administration for lend-lease purposes. In normal years approximately 150,000 bushels of New Jersey apples are exported. The loss of this market to our growers and the necessity for selling at home the vast amounts usually exported from the country created an unfavorable situation for our growers. Certification work was largely limited to inspection of lots purchased by the Surplus Marketing Administration, most of which were stored under state lot numbers to be moved later for relief purposes. Many lots moved directly to destinations for relief and some moved to storages near ports of export for later lend-lease shipment. The quality of fruit and keeping quality were generally good, and most holdings in storage were disposed of at good prices to growers in early spring.

ASPARAGUS

The market on fresh crated asparagus was generally good throughout the season. The yield was exceptionally good and cutting was heavy. The Swedesboro and Bridgeton areas were the chief shipping centers. Due to a shortage of labor, many growers who ordinarily crate their asparagus decided to contract to deliver to canners. Quality was generally good throughout the season and some growers used "tags" in the individual bunches. Due to the shortage of tires and the amount of driving necessary to carry on properly supervisory inspection at the various farms, the bureau was unable to furnish the service to the growers of fresh market asparagus that had been supplied in other years.

WHITE POTATOES

Potato inspection and certification by the bureau during the 1941 season was chiefly for commercial shipment, but a little over one-third of the total inspections made were for purchases made by the Surplus Marketing Administration for relief purposes.

During the season a total of 523 cars for the Surplus Marketing Administration and 981 carlot equivalents for commercial shipments were inspected by some 16 inspectors assigned to this work.

The season began in the latter part of July and early prices to growers were not very satisfactory. For this reason harvesting was slow and there was a general tendency on the part of the growers to allow their crop to mature for storage. The harvest period for early New Jersey potatoes is in the hottest months when consumption of potatoes is lowest. This tends to create a desire to hold supplies until cooler weather in the fall and winter months when consumption is greater and prices are usually better. The general quality of potatoes throughout the digging season was good, but due to the mildness of the weather during the fall and early winter, potatoes held in common storages showed considerable sprouting. The principal dealers handling New Jersey potatoes organized a central sales agency last year and the bulk of the crop was handled through this organization.

SWEET POTATOES

Although New Jersey is an important sweet potato producing state, the greater part of this crop is marketed without inspection and certification. Trucklots of this product purchased by the Quartermaster Marketing Center, located in New York City, for delivery to Northeastern army camps, were inspected and certified for quality and grade by the department during the winter and early spring. Quality of the crop was generally good when stored, and modern up-to-date storages prevented any material loss from deterioration during the storage period. Shippers experienced little difficulty in putting up a pack that met grade specifications.

The following table shows the ten-year record of shipping point inspection by products.

TEN-YEAR RECORD OF SHIPPING POINT INSPECTIONS BY PRODUCTS

Product	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42
Apples	230	91	94	333	160	391	579	672**	611	100
Beans	40	162	91	17	43	3	1	1	..	..
Beets	..	..	..	..	..	..	..	..	..	1
Cabbage	..	..	..	1	..	..	..	..	..	1
Celery	1	..	..	..	..	..	..	..	..	..
Corn	..	1	..	..	..	..	..	..	..	3
Cucumbers	..	..	..	1	..	..	..	..	..	..
Eggplants	..	..	..	..	..	..	..	..	..	1
Lima beans	..	75	1	..	3	..	..	..	..	..
Mixed fruit	9	1	..	..	..	..	..	..	..	..
Onions	30	223	36	55	42	61	9	3	8	1
Peaches	2	2	..	..	1	..	..	49	26	1
Pears	15	5	..	16	..	1	2	..	..	..
Peas	1	20	2	2	..	..	..	..	..	..
Peppers	..	18	3	..	..	..	..	..	..	..
Potatoes	10	20	40	121	323	5,180	1,972	397	2,264	1,328
Spinach	..	1	..	..	..	..	1	6	3	8
Strawberries	152	125	1	1	1	..	..	..	..	..
Sweet potatoes	..	..	..	..	..	45	..	62	9	29
Totals	490	744	268*	547*	573*	5,681*	2,564*	1,190*	2,921*	1,473*

*Does not include inspections at auction markets for which no certificates were written, as included in the columns for 1932-33 and 1933-34.

**Includes 101 certificates issued on "condition only" on apples in cold storages.

CANNERY CROPS INSPECTION

ASPARAGUS

The 1942 season for asparagus for processing started on about the same date as last year. The processors began receiving asparagus on April 20. Due to favorable weather conditions for an early growth, the crop began somewhat in advance of average normal seasons. In spite of the fact that the season was abnormally dry throughout, the quality was exceptionally good and yield was greater than the expectation of the growers in general. Damage by beetles and beetle eggs was largely confined to small growing areas and only occurred spasmodically in these.

Deliveries to canners were periodically heavy enough to necessitate their resorting to the use of cold storages to keep the surplus until such time as they were able to catch up with the over-capacity day deliveries. There were seven processors using inspection on asparagus this year, which is one more than last season. There were 14 regular licensed inspectors assigned to the 11 receiving stations to carry on the grading work. Except for one or two processors, there was very little open market purchasing of fresh crated asparagus for processing, most canners having received enough from their contractors to pack their desired volume.

All canners and receiving stations continued the receipt of asparagus through the month of June and into early July. The estimated volume of asparagus inspected, based on average weights of boxes checked, was 31,001,775 pounds.

During the winter the asparagus growers in South Jersey organized an association known as the "New Jersey Cooperative Asparagus Growers Association". The members of this association controlled approximately 10,000 acres of asparagus, most of which was grown for delivery to canneries. The outstanding work of the association was the development of a uniform contract which was submitted to all canners and buyers for cannery asparagus. The canners cooperated in this development. As a result, our work as an inspection and certification agency was simplified. In the 1941 report of the bureau, it was necessary to report results on four systems of buying. In 1942 we are able to report the results of our work in one table. This simplification of contracts, and uniformity of grade and buying procedure resulted in a minimum of complaints on the part of both growers and canners. General satisfaction was expressed by all parties. The association also employed a field representative to look after the interests of growers. Occasional criticisms by this field man were largely due to his lack of knowledge of inspection procedure, and due to the newness of his work. Any differences of this nature will be corrected before another season arrives.

The following table shows results of cannery asparagus grading for the 1942 season:

ASPARAGUS RESULTS, 1942 SEASON

Week Ending	Inspected	N.J. No. 1, Large *Per Cent*	N.J. No. 1, Medium *Per Cent*	N.J. No. 1, Small *Per Cent*	Culls *Per Cent*	Butts *Per Cent*
April 25	267	22	47	4	6	21
May 2	3,248	31	33	2	9	25
9	3,905	34	33	2	6	25
16	3,614	29	37	3	6	25
23	3,626	29	38	4	6	23
30	3,603	27	39	4	6	24
June 6	3,496	26	38	3	7	26
13	3,665	22	40	4	8	26
20	3,460	21	41	3	9	26
27	2,801	18	40	3	12	27
July 4	1,018	17	45	3	10	25
Season	32,703	25	39	3	8	25

CANNERY PEAS

In order to establish an equitable canner-grower contract for the purpose of purchasing peas for processing on the basis of grades, one of the largest Eastern processors of peas, both for quick-freezing and canning, requested that the bureau furnish an inspector to supervise his present system of grading and, with his cooperation, to work out a method of determining grades that were fast, accurate and reliable, and could be used as a basis for contracting with growers.

The bureau assigned to this work an inspector who was familiar with all existent methods used in grading peas for processing. Since there are as yet no established United States or New Jersey standards for the grading of peas for processing, the inspector assigned was instructed to do as much re-

search and experimental work as he thought necessary, and the processor furnished all equipment to carry on the work.

The inspector made a thorough study of the method of grading used at the plant. He worked out alternate methods and compared results in a way that took into consideration several factors which affected the accuracy of methods used. He then developed a table which could be used in converting readings under all conditions so that an accurate measure of quality of each lot examined could be determined.

In applying the method worked out, it will be necessary to use a set of standards for raw peas for processing. The Pennsylvania Department of Agriculture has such a set of standards. By adopting these or similar standards, it will be possible to contract with growers for peas to be paid for on the basis of a percentage of quality. The method of procedure in establishing the grade would be along lines worked out by our inspector.

The results of the work of this man have been appreciated by the company involved and are gratifying to this office. Upon our invitation, representatives of the United States Fruit and Vegetable Standardization Office and the Pennsylvania Department of Agriculture came to New Jersey to study the procedure and methods used. Their comments were very favorable.

The dry weather just previous to maturing dates affected the pea crop seriously. The yield was considerably below that of normal seasons. The number of growers contracting this season was 141. These growers delivered 7,319,859 pounds of shelled peas to the one company using our inspector. The company has expressed a desire to follow through on this work another season as a check against results obtained this season before using said results in drawing up their canner-grower contract.

TOMATOES

Growers and canners alike experienced the best tomato season in the history of this industry in New Jersey. Yields were generally high and quality was excellent. During only two seasons since 1932, when cannery purchasing on the basis of grades began, have there been any comparisons in yield and quality. In 1936, and again in 1939, yields and quality compared favorably with 1941.

During the past season, many more growers made the Ten-Ton Tomato Club of New Jersey than during any previous season. Yields of 12 to15 tons per acre were not uncommon, and a high of almost 22 tons was reported by one grower. The price to growers was increased and returns per acre were more than for any season since canners paid wartime prices during the first World War.

Inspection work on cannery tomatoes for the season of 1941 was very satisfactory. A minimum of complaints and criticisms was received and although the tonnage certified was the greatest ever, there was no necessity for increase in personnel. It is a generally accepted fact that high quality is attendant upon heavy yields, and in spite of increased tonnage, canners

were able to keep well up with deliveries and inspectors were not unduly rushed.

While it is generally recognized that producers are not prone to criticise or complain under favorable conditions, it was noticeable this past year that comments of growers were unusually favorable to our inspection work. The more cordial relations existing are due, to no small extent, to the activities of the several grower representative committees working with the department representative. The average yield per acre in New Jersey during 1941 was 8.2 tons. The average of the past ten years was 5.1 tons. The average income per acre in 1941 was $157.44. The average of the ten-year period was $79.60.

Eight canners in New Jersey purchased tomatoes on the basis of grades during the 1941 season. Two contracted on the cannery grades and six on the strained tomato products grade.

The following table shows the results of grading cannery tomatoes in New Jersey during the 1941 season, with summaries for previous years.

SUMMARY 1941 CANNERY TOMATO SEASON WITH COMPARISONS

Week Ending	Total Tons	U. S. No. 1 *Per Cent*	U. S. No. 2 *Per Cent*	Culls *Per Cent*
July 26	10	67	31	2
Aug. 2	187	59	38	3
9	7,624	67	31	2
16	21,599	63	35	2
23	32,148	67	31	2
30	32,481	65	33	2
Sept. 6	31,277	59	39	2
13	50,274	63	35	2
20	28,364	59	38	3
27	11,410	57	40	3
Oct. 4	4,122	57	40	3
11	1,159	65	32	3
Totals	220,655	63	35	2

Seasons	Total Tons	U. S. No. 1 *Per Cent*	U. S. No. 2 *Per Cent*	Culls *Per Cent*
1941	220,655	63	35	2
1940	162,813	55	41	4
1939	176,576	65	32	3
1938	108,096	53	43	4
1937	113,380	53	43	4
1936	183,027	64	33	3
1935	120,524	62	35	3
1934	91,060	58	39	3
1933	62,979	52	44	4
1932	151,140	58	39	3

MARKET ACTIVITIES

As the year ended, there was increased evidence of the effect of tire and gasoline shortages on direct marketing methods. Roadside stands have been the most direct sales program in New Jersey. Many such stands are now

closed. Some will open only during peak periods and in canning seasons when purchases by individuals are large. The restrictions naturally will hamper the sales to buyers on the farms. In past years, thousands of loads of produce have been sold to buyers who came out with their trucks and went from farm to farm, picking up loads, covering their store needs or buying for resale to retailers.

The organized produce auctions in the state will be a means of aiding these buyers. The association members of these auctions are working on plans to haul their products to the auctions in the most economical manner. These farmers know that the rubber they have must last as long as possible. Wherever possible they are combining loads, and more of this will be done as the season advances. The auction markets are concentration points for several million bushels of fruits and vegetables. They are strategically located on good highways and near railroad loading points. Eleven of these markets operated during the past year and served about 5,000 farmers.

The produce auction market associations were all organized with the help of the bureau. Two have served their communities for 14 years, one for 12 years, three for 11 years, two for nine years, one for six years, one for four years, and one for three years.

It is the responsibility of our chief inspector in fruit and vegetable marketing to work closely with the associations operating these markets. This man has attended all the annual meetings of the different associations during the year, and has attended 42 of the monthly directors' meetings. He has made 221 visits to the markets, at which time he has worked with the managers in solving certain problems that have come up. This does not include casual visits to other points. In addition, he has called meetings of the managers at which times mutual problems and policies have been discussed. He has also met with special committees of the associations.

The state organization, "The Cooperative Marketing Associations in New Jersey, Inc.", includes in its membership representatives of all the produce auction associations, and in addition representatives of five poultry and egg marketing associations, and one livestock auction association. Close to 12,000 members are included in these associations. Eight meetings of the state association were held during the year. The chief of the bureau has been the secretary of this association during the 12 years of its history.

The 1941 season at the auctions got off with a poor start, due to extremely dry weather early in the season. Prices made up for the smaller number of packages sold. This condition can be seen in the combined report of all of the produce auctions as shown in the following table.

We have also included an additional table which has been made from a study of the weekly reports made to the bureau by the market masters. This table shows the volume of 24 of the more important commodities sold at the auctions.

SUMMARY OF SALES AT FRUIT AND VEGETABLE AUCTION MARKETS

Market	*Season of 1941* Number of Packages Sold	*Season of 1941* Value of Sales	*Season of 1940* Number of Packages Sold	*Season of 1940* Value of Sales
Beverly	235,251	$ 149,773.37	246,763	$ 125,081.06
Cedarville	366,383	507,675.87	390,906	450,877.44
Glassboro	580,200	416,736.87	912,101½	519,948.99
Hammonton	121,315	215,230.12	80,821	155,919.89
Hightstown	452,241*	308,521.41*	492,452	250,528.96
Landisville	467,799	418,870.84	413,198	327,260.30
Newfield	20,872	17,203.07	27,054	23,883.63
Pedricktown	120,786	198,067.87	174,787	192,910.96
Rosenhayn	12,201	30,736.58	31,990½	64,981.96
Swedesboro	1,067,869	1,159,349.71	955,588	801,702.45
Vineland	469,613	323,180.51	566,877	377,166.75
Totals	3,914,530	$3,745,346.22	4,292,538	$3,290,262.39

Average price per package, 1941	$0.956
Average price per package, 1940	$0.766
Per cent of increase in price per package, all commodities 1941 over 1940	24.93

*Figures for Hightstown, 1941, do not include 57,549 packages selling for $30,962.38, which were sold privately.

PRINCIPAL COMMODITIES SOLD AT FRUIT AND VEGETABLE AUCTION MARKETS AND VOLUME IN 1941

Commodity	Volume
Apples	84,059 bushels
Asparagus	446,958 crates, dozen bunches
Beans, snap	170,400 bushels
Beans, lima	69,109 bushels
Beets	41,423 dozen bunches
Blackberries	22,101 crates, 24 qts.
Broccoli	46,108 bushels
Cantaloupes	42,679 bushels
Carrots	79,284 dozen bunches
Dandelions	27,716 bushels
Sweet corn	101,223 bushels or sacks
Cucumbers and pickles	251,812 bushels
Eggplants	118,387 bushels
Lettuce	57,478 crates, 2 doz.
Onions	115,249 sacks, 50 lbs.
Peaches	178,908 bushels
Peas	3,652 bushels
Peppers	581,454 bushels
Potatoes, white	147,057 sacks, 100 lbs.
Potatoes, sweet	225,005 bushels
Raspberries	37,205 crates, 36 pts.
Squash	8,445 bushels
Strawberries	73,563 crates, 24 qts.
Tomatoes	684,989 climax baskets
Miscellaneous	332,348 packages

This volume expressed in carlot equivalents approximates 9,750 carloads sold on the New Jersey produce auctions in 1941.

MUNICIPAL MARKETS

The bureau has continued its close cooperation with the city farmers' markets in the state. The chief contribution to the two largest, those at Newark and Paterson, has been in the promotional news letters sent out by our market news service as mentioned in this report under crops and markets information service. These two markets are farmer owned and operated. The work with other markets has been largely advisory. Occasional meetings of market boards or directors have been attended by bureau representatives.

The Atlantic City Market has continued to send in regular weekly reports on its sales. This material is very helpful in comparing prices received for farm products on this shore market as compared with prices and crop movement in other parts of the state. A summary of these weekly reports shows that this market sold 484,866 bushels of fruits and vegetables, 162,200 dozens of eggs and 89,200 pounds of live poultry during the year. Gross sales amounted to $525,903.15 as compared with sales amounting to $359,322.99 during the preceding fiscal year.

The Newark Farmers' Market continued its fine service to its members and to the buying public in the northeastern part of the state. Sales during the year were not quite up to the record established during the 1940-1941 season. There were 13,210,239 bunches of vegetables, 2,775,937 packages of fruits and vegetables, 81,068 pounds of horseradish and 66,627 watermelons sold during the past year, in addition to quantities of cider, thousands of flats of bedding plants, pots of flowering plants and bunched flowers. This market has been very successful in its operations. Its directors are all farmers who meet monthly and direct the policy of the management.

MISCELLANEOUS

The farmer associations interested in fruit and vegetable production have cooperated closely with the Northeastern Vegetable and Potato Council, paying one-third of the operating costs. The council represents 12 northeastern states, and has done much to protect the fruit and vegetable interests in this area. Monthly meetings were held in New York, and these meetings were attended by several representatives of New Jersey cooperatives and other organized groups.

Some progress was made during the year in package standardization programs. Early in the spring of 1942, when war needs brought on an acute package situation, this office cooperated in a move to eliminate odd sizes and unimportant packages. Because of a shortage of package material, more second-hand packages must be used than is normally advisable. Steps have been taken, however, to protect the buying public and the farmer-producer user of such packages. In this, the bureau has cooperated closely with the New Jersey Department of Weights and Measures, and with other groups working on these problems.

The bureau cooperated in erecting agricultural exhibits at the New Jersey State Fair and some county fairs. Although the Farm Show was not held

at the Trenton Armory during Agricultural Week, the bureau did assist in holding apple-packing contests for vocational agricultural classes, and in other contests.

POULTRY PRODUCTS MARKETING

The poultry interests of New Jersey are probably better organized than any other large branch of agriculture. This is due to the initiative and aggressiveness of the leading poultrymen of the state. Many associations have been organized in the past years for both educational and economic assistance. These include the New Jersey State Poultry Association, the Jersey Chick Association, the auction market cooperative associations, the New Jersey Federated Egg Producers' Cooperative Association, the New Jersey Poultry and Egg Cooperative Marketing Association, the Quality Egg Club, and the Northeastern Poultry Producers' Council, which has its headquarters in New Jersey. Several other fine organizations, such as county associations and local groups, all do their bit in furthering the work of our poultry farmers.

Our poultry division works closely with these groups, and with other groups and individuals mentioned later in this report. The large portion of the time of the supervisor of poultry products marketing has been devoted to promotional work, first, to encourage the poultry products marketing personnel of the New Jersey cooperatives to undertake projects that will enhance the already great reputation of these New Jersey products and thereby attract the buying interest of the trade and the ultimate consumer; and, second, to assist these cooperatives in capitalizing upon their special investments in time, labor and money so that increased consumer preference for New Jersey poultry products will be reflected in increased income for producers, thereby reacting to the benefit of the agriculture of the state.

The department's program of work in the poultry division has served the complete cycle of interests from the farm through the wholesale and retail outlets to the consumer. Thus, the improved breeding and disease eradication projects have served to make the business of poultry production increasingly safe and stable, influencing the future welfare of the farm families engaged in the poultry industry; and at the same time have assured the city families of adequate supplies of eggs and poultry meats, better in quality and lower in price than would be possible if these constructive projects had not been operating.

Similarly, the cooperative markets of New Jersey have served the producers by improving their incomes and insuring them of fair payments for products offered, yet have done so without increasing the ultimate price to the consumer. In fact, these markets' effects of eliminating costly and time-wasting rehandlings of eggs and poultry have actually had the result of giving the consumer food products at lower prices that are fresher in point of time.

Grading of both eggs and poultry according to the official standards of the Department of Agriculture has also fitted in with the best interests of those concerned with production, distribution and consumption. A high point of efficiency in this direction is achieved by those operations which involve the individual inspections of eggs offered to the public, such as the official certification operations of the cooperative markets. Proper payment for the products is assured by the producer's own cooperative. The retailer risks no hazard of loss of reputation with his customers. The consumer can buy with complete confidence that no egg in her purchased carton will be inedible or unsatisfactory. Waste of valuable food is eliminated through grading and inspection, and bases for producer payment and for consumer price are definitely established according to quality of product.

The object of the foregoing recapitulation of the purposes and effects of these official projects is to demonstrate how strong a foundation there is in New Jersey for developing a program of consumer information to increase preference for the products of the poultry farms of this state. The years of effort that have been expended upon increasing the quantity and improving the quality of poultry products; upon poultry standardization and breeding; the health program; grading and inspection; and the marketing, transportation and distribution of the ultimate products, have placed this state's poultry industry in a unique and enviable position to capitalize more fully upon our rich market in the metropolitan Northeast.

The supervisor has acted in an advisory capacity, working with the personnel of the cooperative markets to utilize these facts to the advantage of the New Jersey poultry industry. It is recognized that, to a large degree, the consumer, although benefiting through the cumulative effects of what the New Jersey poultry farmers and their markets have done, has not been thoroughly informed on these facts. This is not strange when it is recalled that even milk and dairy products, which have long been enterprisingly promoted through consumer education and advertising programs, do not enjoy the fullest public appreciation of their merits. Only in recent years has the poultry industry come to realize the public ignorance of its progressive efforts and of the basic merits of eggs and poultry meat from a nutritional standpoint. Much has been done to catch up with the programs of other foods' promotions, yet so very much more remains to be done.

The past year witnessed several enterprising steps taken in this direction by the New Jersey poultry industry, and the supervisor assisted in every way possible in carrying through to conclusion a number of minor projects pointed toward the desired major result. Specifically, these included:

1. Publicity interpreting the importance of egg quality maintenance from farm through markets to the consumer. The installation of the temperature and humidity control systems in the two cooperative markets at Hightstown and Toms River provided an effective springboard for newspaper and radio publicity that was particularly helpful to these markets, and generally promotional for New Jersey fresh eggs.

2. The New Jersey "Golden Egg Hunt," a direct-to-consumer promotion involving the discovery of marked eggs, for which rewards were paid. This plan operated for three months, and may be renewed.

3. The "Humpty Dumpty" campaign, a three-way approach to the consumers, using newspaper advertising with the assistance of the New Jersey Council, a point-of-sale poster, and egg carton inserts. Twenty daily newspapers with a total circulation of nearly 1,000,000 were used for approximately two months in the newspaper advertising part of this campaign. More than 100,000 fresh egg cartons under the State Certified seal carried the printed inserts, which contained information on nutrition and methods of egg cookery. The posters were displayed in about 800 retail stores.

4. "Chalk Talks" to consumers and producers. A number of invitations to give illustrated lectures were accepted and filled by the supervisor. The lecture, which is illustrated by drawings made before the audience, proved effective, although costly in time and preparation. Among audiences lectured were Consumers' Interest Committees, New Jersey College of Agriculture, Kiwanis Club, Lions' Club, New Jersey State Poultry Association, and various service organizations, as well as smaller groups.

5. Assistance was given to several retail outlets for eggs, including dairy companies and stores, in preparing egg promotional literature and displays. This work reached its peak during early May, the period of the "Springtime Egg Festival".

6. Consequences of unfavorable publicity that threatened in late winter, when higher-than-normal egg prices had to be charged, were successfully averted by immediate conferences with food page editors and home demonstration agents. This type of "bad press" took the form of widely circulated recommendations for "eggless cakes" and other recipes from which eggs had largely been eliminated. Causes of the high prices were explained, and the harm that had been done was remedied by the recommendation of eggs as part of the "Victory Diet" which followed in the press.

7. The New Jersey "Fried Chicken" advertising campaign. The New Jersey campaign operated from late June to the end of the fiscal year, for two reasons: Funds from the New Jersey Council were available then, but not after June 30; and the large supplies of New Jersey broilers start to market earlier than do supplies from other areas. A national campaign, sponsored by chain stores, was scheduled for a week in mid-July. The timing of the New Jersey campaign was intended to set the stage for moving local supplies to best advantage, and helped prepare the market for poultry meat when the shortage of red meat threatened several weeks later.

8. Salvage of materials such as promotional literature which had been left from other years. Large supplies of several printed folders were found in the possession of some cooperative associations. These, representing an outlay of several hundred dollars, were the remains of an original supply provided in 1939. The managements were persuaded to use the folders again as carton inserts, and otherwise useless materials were put to work.

9. Transportation. Because of war conditions, and rationing of rubber and gasoline, danger of a breakdown of ordinary methods of transporting poultry products from farms to markets, and from markets to stores and consumers was anticipated. This potential problem was called to the attention of the market managers, with the recommendation from the Secretary of Agriculture that immediate study be given to it, and steps be taken to avert difficulties. Simultaneously, the New Jersey Agricultural Ex-

tension Service presented an offer to supply members of its staff for a survey, and this is progressing in the Flemington area. Other markets are of the opinion that their facilities are adequate. All are cooperating in getting their memberships to double-up on hauling to market to save gasoline and tires, and encouraging the use of the services of local truckers engaged in farm pick-ups.

10. Motion picture. This project was begun during the 1941-1942 fiscal year, but had not progressed far enough to credit to that year. Indications are that its completion will require several months of the year 1942-1943.

11. Fresh Egg Law. A new edition of the circular interpreting the law was published (No. 333, June 1942). Special effort was made to popularize the information, yet without reducing its content of technical matter for the egg trade. The new circular will be supplemented by a copy of the egg grades and standards chart, prepared under direction of the chief inspector in charge of egg quality work. A strong suggestion from certain sources that the New Jersey grading standards be relaxed for the duration of the war was entertained, but the claims of necessity for such action were proved insubstantial upon thorough investigation.

Special cooperation was given by our supervisor to the five egg auction markets of the state, to the New Jersey Poultry and Egg Cooperative Marketing Association, the New Jersey Federated Egg Producers' Cooperative Association, New Jersey State Poultry Association, Northeastern Poultry Producers' Council, Jersey Chick Association, the National Association of Food Chains, the Poultry and Egg National Board, and a number of other organizations, as well as stores, dairy companies and individual producers, dealers and consumers.

POULTRY STANDARDIZATION

The poultry division cooperated with the United States Department of Agriculture for the seventh year in administrating the National Poultry Improvement Plan in the state. Contracts for continuing this cooperation for another year have been signed by the department. The work continued to improve in its effectiveness. The new set-up of flock selection and pullorum testing agents is working out satisfactorily. This program will assist greatly in carrying on the usual poultry improvement work in New Jersey during the war. The work in New Jersey was carried on efficiently for both chick producers and chick buyers. The program included breed improvement as well as pullorum disease control. The several classes in the program were as follows:

N.J.-U.S. Register of Merit
N.J.-U.S. Record of Performance
N.J.-U.S. Certified
N.J.-U.S. Approved
N.J.-U.S. Pullorum-Tested
N.J.-U.S. Pullorum-Controlled
N.J.-U.S. Pullorum-Passed
N.J.-U.S. Pullorum-Clean

With the new set-up of flock selection and pullorum testing agents, the two regular inspectors were able to do all flock inspection work without additional help in the field.

Under the revised plan of procedure as outlined in last year's report, we were able to increase the scope of the work in New Jersey through the use of flock selecting agents. These agents are trained in the proper culling and selecting of breeding birds, and are supervised in their work by representatives of the bureau. By using these men we were able to revise the fee charges downward, and this has encouraged the poultrymen to put more birds under official supervision.

Representatives of the Federal Department of Agriculture visited the state twice during the year, spending several days observing our work and conferring with cooperating poultrymen. Their reports were complimentary not only in regards to the standardization program, but to the quality of breeding birds produced in the state. This year there has been a great increase in demand for Record of Performance cockerel chicks. The hatcheries have not been able to secure the number required. This is a favorable recognition of the value of the work and should result in a considerable increase in breeding flocks of this quality another year.

The following table gives a condensed picture of the poultry standardization program as carried on in New Jersey during the past two years. It is interesting to note the increases that have taken place in the services rendered due to the reorganization of the plan.

N.J.-U.S.	1940-41	1941-42	Per Cent Changes in 1942
Number of flocks cooperating	539	665	+23.4
Total number birds in flocks	217,014	275,874	+27.1
Number of hatcheries cooperating	45	41	— 8.9
Hatchery capacity cooperating	3,083,670	3,985,688	+29.3
Number birds in Pullorum stages only	57,173	51,185	—10.3
Number birds in Approved stages only	112,991	146,925	+30.0
Number birds in Certified stages only	46,850	69,117	+47.5
Number birds in R. O. P. trapnest project	1,412	1,692	+19.8
Number females in R. O. P. breeding pens	694	815	+17.4
Number R. O. P. chicks produced	18,199	19,685	+ 8.2
Number R. O. P. chicks and cockerels sold	5,240	4,905	— 6.4
Per cent of birds reacting to the pullorum test	0.96	1.35	+ 0.39
Number flock inspections	254	246	— 3.1
Number hatchery inspections	67	85	+26.9
Number R. O. P. inspections	36	33	— 8.3
Number farm visits	353	326	— 7.6

We also include a chart which gives the classification and distribution of birds under supervision. It will be noted that flocks in the program are found in 18 counties of the state. The total number of birds accepted in these flocks was 267,227. This is a considerable increase over the 213,525 birds reported for the 1940-1941 season.

Also included is a chart showing the number of birds handled, by counties and breeds. The total figure of 275,874 birds includes the reactors to the pullorum test not included in the previous chart.

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

NUMBER OF BIRDS

County	No. of Flocks	*N.J.-U.S. Certified* Pul. Tested	Pul. Con-trolled	Pul. Passed	Pul. Clean	*N.J.-U.S. Approved* Pul. Tested	Pul. Con-trolled	Pul. Passed	Pul. Clean	*N.J.-U.S.* Pul. Tested	Pul. Con-trolled	Pul. Passed	Pul. Clean	Totals
Atlantic	26	693	9,840	...	...	...	6,918	...	...	...	1,158	...	...	18,609
Bergen	9	...	...	...	...	...	1,285	...	...	100	1,279	733	...	3,397
Burlington	20	1,381	4,468	...	...	1,825	2,046	...	1,079	602	544	...	...	11,945
Cape May	15	...	8,322	...	...	1,725	5,481	...	...	...	...	...	...	15,528
Cumberland	168	5,485	13,664	...	1,302	3,602	27,504	...	...	4,662	4,398	...	...	60,617
Essex	1	...	...	...	...	...	99	...	...	...	...	...	...	99
Gloucester	18	917	4,635	...	5,452	1,311	5,943	...	...	...	365	...	...	18,623
Hunterdon	5	...	...	...	...	...	1,794	...	...	220	...	...	...	2,014
Mercer	52	...	...	...	1,134	1,683	9,289	254	1,971	756	1,685	...	...	16,772
Middlesex	12	...	702	...	...	...	2,908	...	...	...	361	...	...	3,971
Monmouth	35	...	...	...	...	528	8,592	...	...	541	2,426	...	...	12,087
Morris	6	...	...	...	...	...	5,504	...	...	2,912	219	...	...	8,635
Ocean	19	1,104	801	...	...	557	6,250	...	...	377	2,431	...	...	11,520
Passaic	3	...	...	...	...	...	...	...	...	1,067	...	...	...	1,067
Salem	101	1,918	3,893	...	...	7,242	9,700	...	...	5,136	8,227	...	159	36,275
Somerset	11	...	1,003	...	...	1,062	893	...	...	2,273	135	...	...	5,366
Sussex	13	...	...	18	...	100	2,462	...	458	...	...	...	926	3,964
Warren	2	...	...	...	...	...	1,396	...	...	...	...	...	...	1,396
Out-of-state	149	252	2,133	...	...	7,454	18,010	...	...	2,565	4,928	...	...	35,342
Totals	665	11,750	49,461	18	7,888	27,089	116,074	254	3,508	21,211	28,156	733	1,085	267,227

NUMBER OF BIRDS HANDLED, BY COUNTIES AND BREEDS

County	No. Flocks Handled	S. C. White Leghorns	Rhode Island Reds	Barred Rocks	White Rocks	New Hampshires	Jersey Black Giants	White Wyandottes	Sex-link	Black Minorcas	Turkeys	Pullorum Testing Only	Totals
Atlantic	26	12,118	2,019	289	130	1,554	...	...	...	...	...	3,275	19,385
Bergen	9	1,752	...	30	131	1,552	...	...	...	...	...	...	3,465
Burlington	20	3,508	...	1,180	1,310	3,923	1,526	...	...	...	...	790	12,237
Cape May	15	9,547	3,436	...	...	2,780	...	...	...	...	...	...	15,763
Cumberland	168	34,566	3,999	1,927	2,858	8,642	...	258	392	...	...	8,834	61,476
Essex	1	...	...	...	130	...	...	...	...	...	...	...	130
Gloucester	18	11,246	3,279	642	...	3,275	...	266	...	...	...	365	19,073
Hunterdon	5	820	...	187	...	1,138	...	...	...	...	38	...	2,183
Mercer	52	2,708	...	6,300	523	5,862	435	...	...	...	75	1,655	17,558
Middlesex	12	715	...	1,653	375	1,248	...	...	...	...	...	...	3,991
Monmouth	35	4,673	...	4,171	126	2,471	...	...	...	...	...	1,737	13,178
Morris	6	6,346	225	606	...	794	...	...	...	...	...	928	8,899
Ocean	19	11,100	...	780	...	...	...	...	...	...	...	...	11,880
Passaic	3	1,647	...	...	...	...	...	...	...	...	...	14	1,661
Salem	101	11,418	2,303	2,025	5,472	1,482	...	...	...	193	...	13,607	36,500
Somerset	11	4,497	699	363	...	89	58	...	...	...	...	...	5,706
Sussex	13	3,321	...	74	...	655	...	...	...	...	...	...	4,050
Warren	2	966	...	...	...	468	...	...	...	...	...	...	1,434
*Out-of-state	149	4,328	1,377	14,605	2,717	6,351	...	...	1,062	...	...	6,865	37,305
Totals	665	125,276	17,337	34,832	13,772	42,284	2,019	524	1,454	193	113	38,070	275,874

*Handled by flock selection agents, supervised by New Jersey Department of Agriculture.

AUCTION MARKETS

Cooperative marketing of the products of New Jersey's poultry industry expanded to all-time highs both in volume and value during the fiscal year ending June 30, 1942. In the statistical portion of this report, a summary is presented of the year's business over the five cooperative auction markets which sell poultry products for their members, and a ten-year recapitulation for purposes of comparison is included.

Through these auctions are now sold approximately one-third of all eggs produced in New Jersey, and about one-quarter of all live poultry. In the past decade, there has been a six-fold increase in volume of egg sales, and a five-fold increase in volume of poultry sales.

Interesting conclusions can be derived from computing the percentages of comparsion between the volumes and value of sales, both eggs and poultry, for the previous fiscal year and the year just ended. It should be noted that the previous year, too, had established a record in the history of poultry products cooperative marketing in New Jersey. By comparison:

Volume of egg sales increased nearly 19 per cent on these five auctions in 1941-1942 over the previous record year.
Value of egg sales increased more than 51 per cent.
Volume of poultry sales increased 11.6 per cent.
Value of poultry sales increased more than 29 per cent.

Significantly, these increases occurred in all five auctions, and although each shows a different rate of development, the local growth in each instance is favorably comparable to the general growth. Furthermore, both eggs and poultry sales went ahead, although not at the same rate of advance.

The appended statistics tell, more eloquently than can be here described, how the poultry farmers have gained their objective of obtaining an important voice in determining how their products shall be marketed. The influence of their now tremendous offerings up on the general market for eggs and poultry, the effect of public and open bidding, resulting in authoritative quotations as compared with the hitherto confidential negotiations to establish price and reputation for the excellence of New Jersey eggs and poultry, which has developed through the concerted efforts of our poultrymen to produce and maintain quality products to meet Department of Agriculture grades and standards, have reached a new peak of reaction beneficial to the agriculture of the state.

Special note is made of the proportionately greater increase in value of products sold over the percentage of increase in volume. Largely, this can be attributed to the war. New Jersey poultry production is, this year, the highest in history; however, the demand for eggs and poultry meat temporarily has outdistanced the supply because of the scarcity and high prices of meats on the domestic market, as well as the greatly increased foreign market for eggs. Added to this effect of demand upon price is the fact that poultry production costs, like the costs of other production during wartime, have

greatly increased. Feeds, labor, materials and equipment have risen in cost to the extent that egg and poultry price advances are largely offset. In fact, the peculiar economics of wartime production have made poultry an extremely hazardous business for any but the most efficient operators. Economic casualties among poultrymen are expected to be at a high rate for the duration.

Physical problems that are being met for the first time in their history are the chief concern of the cooperative markets of New Jersey. These problems are war born: shortage of transportation, scarcity of supplies and insufficient labor.

TRANSPORTATION

Efforts are being made by two cooperative markets to establish pick-up routes to assemble poultry products from producers' farms and carry these to the markets. Because there is little concentration of production among members served by the Flemington Auction Market, the pick-up project there is extremely difficult. Two cooperatives, the Vineland Auction Market and the Federated Egg Producers' Cooperative at Toms River have from the beginning used trucks to haul eggs from distant producing areas. In a limited way, through private enterprise, Flemington and Hightstown have had similar service, and this may be expanded. Producers are being encouraged to double-up with their own trucks. Attention is being given to the transportation needs of buyers, with excellent private services prepared to accommodate them on deliveries to city points.

SUPPLIES

Egg cases, including flats, fillers and nails, have presented a major problem. The nation needs 150,000,000 cases a year, and only 30,000,000 will be produced this year. Before the war, large supplies of eggs were received in the metropolitan Northeast from distant producing areas. Because it was not economical to ship the empty cases back to these areas, large supplies of empty cases were available for reconditioning and further use by New Jersey producers. Today, smaller supplies of eggs are received from competitive areas, where egg-drying plants provide local markets, and even the smaller number of cases which enter our market now are demanded for return to these areas, greatly reducing the number of used cases in the East. For the first time, New Jersey poultrymen are using new wooden cases in considerable numbers, but even these are difficult to obtain. Large scale tests under practical conditions are being made with a new type of corrugated cardboard case. It appears to be capable of withstanding reasonably rough handling, but that its life will be as long as that of a wooden case is doubted.

LABOR

War conditions have made serious inroads upon the trained and experienced personnel of the markets. Many employees have been attracted into other industries, and Selective Service, as well as enlistment in the armed forces, has taken many others. The replacing of candlers and inspectors is especially difficult. In addition to requiring special training, they must be efficient, dependable and must possess good judgment in order to interpret and apply the official grades. Filling positions with such exacting requirements is difficult now when even common labor is at a premium.

SUMMARY OF EGG AND POULTRY AUCTION MARKETS

July, 1941 to June, 1942

Market	Cases of Eggs	Value of Eggs	Crates of Poultry	Pounds of Poultry	Value of Poultry	Total Value
Flemington	204,536	$2,154,135.12	65,258	3,059,575	$ 643,730.81	$2,797,865.93
Hightstown	107,961	1,155,317.84	15,434	809,934	158,109.02	1,313,426.86
Mount Holly	29,484	307,115.74	16,447	852,410	190,046.91	497,162.65
Paterson	48,688	507,807.46	13,224	664,137	131,360.90	639,168.36
Vineland	241,901	2,543,515.16	25,257	1,147,733	217,789.62	2,761,304.78
Totals	632,570	$6,667,891.32	135,620	6,533,789	$1,341,037.26	$8,008,928.58

Average price per case, 1941-42 $10.54
" " " " 1940-41 $ 8.26

Average price per pound, 1941-42 $0.205
" " " " 1940-41 $0.176

VOLUME OF EGG AND POULTRY SALES OVER FIVE NEW JERSEY AUCTION MARKETS 1941-1942 COMPARED WITH PAST TEN YEARS

Year	Number Cases of Eggs	Number Crates of Poultry	Pounds of Poultry	Total Combined Value
1941-42	632,570	135,620	6,533,789	$ 8,008,928.58
1940-41	532,249	122,679	5,854,246	5,429,695.92
1939-40	478,541	115,224	5,582,135	4,480,972.53
1938-39	384,345	108,395	5,191,647	4,057,113.69
1937-38	317,292	84,159	3,957,288	3,494,111.61
1936-37	288,865	81,358	3,877,124	3 253,303.74
1935-36	225,722	59,438	2,815,167	2,598,912.69
1934-35	177,908	47,845	2,307,996	2,022,357.29
1933-34	144,322	37,060	1,808,495	1,335,292..9
1932-33	104,427	27,060	1,349,342	951,351.99
Totals	3,286,241	818,838	39,277,230	$35,633,031.53

AUCTION MARKET MEMBERSHIP, BY COUNTIES

County	Flemington Auction	Hightstown Auction	Mount Holly Auction	Paterson Auction	Vineland Auction	Totals
Atlantic	...	...	6	...	172	178
Bergen	2	...	...	102	...	104
Burlington	5	25	512	..	...	543
Camden	2	2	27	...	11	42
Cape May	...	...	...	. .	31	31
Cumberland	1	...	...	...	385	387
Essex	6	1	...	16	...	23
Gloucester	2	1	2	...	110	115
Hudson	...	...	...	1	...	1
Hunterdon	2,034	...	...	...	...	2,034
Mercer	187	274	1	...	...	462
Middlesex	46	155	1	1	...	203
Monmouth	8	294	...	...	...	302
Morris	55	...	...	103	...	159
Ocean	3	58	10	1	1	73
Passaic	2	...	...	109	...	111
Salem	...	...	...	...	74	74
Somerset	408	5	...	...	...	413
Sussex	19	...	...	105	...	124
Union	36	...	...	2	...	38
Warren	312	...	...	33	...	345
Totals	3,130	815	559	473	785	5,762
1940-41 Totals	3,059	712	821	384	871	5,847
Difference	+71	+103	—262	+89	—86	—85

FLEMINGTON EGG AND POULTRY AUCTION

Whereas poultry sales were formerly held, during the heavy production season, on two days each week, Flemington has combined these sales into one a week, on Wednesday only. Shortage of labor was the principal cause for this change. Combining the two days' sales into one has resulted in record volumes at several sales. Volunteers among the producers have come

forward on many occasions to give several invaluable hours of work to help the market staff keep operations running smoothly.

To handle the large volume more efficiently, and to prevent the heavy annual loss of poultry coops owned by the market, a new method of live poultry inspection has been adopted. The coop loss had resulted from exchanging market-owned coops for producers' coops on an equal basis when many producers' coops were in such bad state of repair that they had to be retired from service. Now, when producers bring in poultry, the birds are transferred to side-door market-owned coops on the platform. During the transfer operation, the poultry is also inspected, so that if the producer has made an error in grading correction can be made in his presence. Having placed the poultry in side-door coops that were previously stacked on skids, it is a simple matter to truck them from the platform to the sale with no further handling.

Flemington has drawn plans for a poultry dressing plant. Wartime priorities on building materials and equipment, and the problem of where to locate the plant are delaying construction.

The Flemington directors found it necessary to increase the selling charge on eggs five cents per case, or from 30 cents to 35 cents.

Reconditioning of used egg cases and assembly of new cases had formerly been handled at Flemington by private enterprise. The market undertook these operations during the year.

HIGHTSTOWN EGG AND POULTRY AUCTION

A large new building was constructed, complete with offices, sales and meeting auditorium, live poultry storage facilities, egg inspection booths and a temperature-controlled humidified egg vault. Egg and poultry sales moved to the new building from the old and inadequate quarters in September, 1941.

Selling charges on both eggs and poultry were increased, and are now 40 cents per case of eggs and 50 cents per coop of poultry.

The new building, with its modern facilities for temporary egg storage, has helped attract buyers to Hightstown. At the same time, the importance of mechanical aids to help maintain original fresh egg quality has been dramatized to its producers, with the result that the egg quality production education carried on by the management has been furthered.

MOUNT HOLLY EGG AND POULTRY AUCTION

Egg sales continued on a twice-weekly basis, although the days of sale have been changed. The first sale of the week is held, as in the past, on Tuesday, when both eggs and poultry are sold. The second sale, formerly held Friday, has been changed to Thursday evening at the request of the buyers.

A drop in the active membership has occurred during the year. This is attributable, largely, to the effect an unfavorable feed-egg ratio has on

the member who is a general farmer and does not depend upon eggs and poultry as a steady source of income. Another factor is a shift in membership from this market to others nearby. Purchase of many farms near Wrightstown for military purposes, and the resettlement of the producers elsewhere, also reduced the membership.

PATERSON EGG AND POULTRY AUCTION

Plans were drawn for construction of a new building. Difficulty in securing building material and equipment has delayed the immediate realization of these plans.

The desirability of restoring official grades of eggs was considered by the board of directors. The new management had urged that the private grades be abandoned, because of certain advantages resulting from uniformity with other cooperatives. A study of the Paterson grades was made by the department, at the request of the management, and it was determined that with minor changes it would be possible to authorize official inspection service. Decision in favor of the change has not been made, although it is understood that this is in prospect for the near future.

VINELAND EGG AND POULTRY AUCTION

Sales of eggs and poultry have increased in volume to the extent that building expansion was necessary. The original building was enlarged by adding 65 feet to its length. Weekly sales of eggs went well over 6,000 cases during the flush period.

Largely because of strict marketing rules adopted, there was a slight drop in membership during the year. The new rules require that a member must sell at least 50 per cent of his eggs over the auction during each and every month, and any member who does not sell any eggs over the auction for a period of 30 days loses his privilege of shipping to the auction.

NEW JERSEY FEDERATED EGG PRODUCERS' COOPERATIVE ASSOCIATION, INC.

This cooperative market, located at Toms River, expanded its building to accommodate increased volume of eggs. A system of temperature and humidity control apparatus was installed in the egg room. The air conditioning proved itself to be of especially great benefit during the hot, dry weather of early summer. Water from a deep well is sprayed into the atmosphere of the egg room, lowering the natural temperature and increasing the degree of humidity, thus retarding the rate of evaporation through the pores of the egg shell, and helping to maintain quality.

NEW JERSEY POULTRY AND EGG COOPERATIVE MARKETING ASSOCIATION, INC.

The egg candling and retail cartoning operations at this organization's Flemington headquarters are now under direct supervision of a management committee, consisting of the managers of the auction markets at Flemington, Hightstown and Vineland. Gradually, through the efforts of this committee

and the association's officers and directors, the financial affairs which suffered serious reverses the previous year are improving. Much progress was made during the past year toward wiping out the association's indebtedness to the auction markets, and there are hopes of its becoming solvent within the next year or two if the same rate of improvement can be continued.

NEW JERSEY TURKEY GROWERS' COOPERATIVE ASSOCIATION, INC.

With the cooperation of the New Jersey Council, the turkey growers conducted an advertizing campaign to promote New Jersey turkeys to the consumer. The directors have under consideration changes in the by-laws to permit a reduction in the number of meetings, field days and similar events, so that travel by members may be conserved.

STATE GRADES AND CERTIFICATION

Regulations governing use of the certification seal on State Certified Fresh Eggs were drawn up for approval by the State Board of Agriculture. These regulations are necessary in the event a concern other than a farmer-owned cooperative requests authority to use the seal.

The two packing and sales organizations now using the seal are cooperatives, the New Jersey Poultry and Egg Cooperative Marketing Association, with headquarters at Flemington, New Jersey, and the New Jersey Federated Egg Producers' Cooperative Association, Inc., Toms River, New Jersey. Monthly reports of their volumes of business are now required by the department. The total number of eggs receiving the seals of certification during the fiscal year, combining both Flemington and Toms River operations, was 741,964 dozens. Comparisons with previous years were not possible, because reports were not previously required.

Suggestions that the New Jersey Department of Agriculture set up a program of certification for fresh dressed poultry meat have been received. A study has been made of dressed poultry grades, and time and effort have been expended upon determining how such a marketing program should operate. However, in the absence of any definite request to the department, the actual formulation of grades has not been attempted, nor has the machinery for enforcement been set up. If construction and equipment priorities permit, it is possible that a cooperatively owned dressing plant will be erected in New Jersey during the war.

Two inspectors from the Bureau of Markets and several auction market inspectors attended the Poultry Products' Marketing School sponsored by the Northeastern Poultry Producers' Council at Storrs, Connecticut, this year.

NEW JERSEY FRESH EGG LAW

The fresh egg law has now completed eight years of enforcement in New Jersey. During the year, the inspectors were brought together on several occasions to discuss problems relative to their work, and to insure

uniform interpretation of egg quality. The chief inspector assigned to supervise this project has checked each man's work in his own territory on numerous occasions.

During the year 22 wholesale stores, 16,784 retail stores, 348 roadside markets and 380 retail routes were visited by inspectors and the quality of eggs offered for sale was noted. Total inspections made were 17,534.

The following table analyzes by counties the work of the four inspectors used in the project. The breakdown between independent stores and chain stores shows considerable variation in different counties. The state average indicates that independent operators may have a slightly greater interest in the quality sold. However, this difference is too slight to be of value.

NUMBER OF SAMPLES INSPECTED AND PER CENT VIOLATIONS BY COUNTIES

	Independent Stores		*Chain Stores*		*All Stores*	
County	Number Samples Inspected	Per Cent Violations	Number Samples Inspected	Per Cent Violations	Number Samples Inspected	Per Cent Violations
Atlantic	1,381	8	278	2	1,659	6.8
Bergen	1,599	6	288	8	1,887	6.0
Burlington	706	2	238	2	944	1.8
Camden	1,680	4	501	0.99	2,181	3.2
Cape May	261	13	94	3	355	10.7
Cumberland	294	0.34	92	0	386	0.25
Essex	5,375	2	470	6	5,845	2.5
Gloucester	328	0.91	107	0.93	435	0.91
Hudson	4,641	3	227	5	4,868	2.6
Hunterdon	79	1	13	0	92	1.0
Mercer	284	7	138	22	422	12.0
Middlesex	855	3	211	6	1,066	3.8
Monmouth	417	4	175	2	592	3.7
Morris	533	2	30	20	563	3.1
Ocean	304	4	127	3	431	3.4
Passaic	2,135	4	216	2	2,351	4.2
Salem	245	3	55	0	300	2.3
Somerset	233	0	41	0	274	0.0
Sussex	128	2	2	0	130	1.5
Union	1,813	4	434	7	2,247	4.8
Warren	177	3	6	0	183	3.2
Averages		3.5		4.5		3.7

Total samples inspected	27,211
Total violations	1,014
Average per cent violations	3.7

The total of 17,534 inspections represents 27,211 samples, or 1.55 samples per store inspected. There were 817, or 4.6 per cent, of the stores found in violation of the fresh egg law. Of the 27,211 samples inspected, 1,014, or 3.7 per cent, were in violation.

The situation relative to the rubber and gasoline shortages during the latter part of the year necessitated a slight change in covering the four sec-

tions of the state. A thorough study of the records, by counties, of inspections and violations made during the year shows an average of 6.6 inspections per 1,000 population for the entire state. Violations in counties range from zero per cent to as much as 12 per cent. This data provides a means of directing the inspection work along more economical lines.

The 21 counties have been classified into four groups according to their population. One group is classified as definitely rural, one semi-rural, one fairly well populated and one densely populated. The rural group had 1.6 per cent violations of the fresh egg law, the semi-rural group 3.4 per cent violations, the fairly well populated group, which includes two shore counties, 5.8 per cent violations, and the densely populated group 3.8 per cent violations.

It appears that the rural group can be supervised with fewer inspections. The semi-rural group can, in an emergency, be inspected less frequently. However, the two most densely populated groups must receive the constant attention of our inspectors.

Report of the Bureau of Plant Industry

HARRY B. WEISS, *Chief*

STATISTICAL AND RELATED WORK

NEW JERSEY CROP AND LIVESTOCK REPORT

Eleven abbreviated issues of the New Jersey Crop and Livestock Report were published during the past fiscal year. Owing to the length of time required for printing, most of the information was incorporated and disseminated in a monthly mimeographed report. The data for the printed report were supplied by the Statistician of the United States Department of Agriculture.

NEW JERSEY PRICES OF HIRED FARM LABOR, FEEDSTUFFS, FERTILIZER MATERIALS AND SEEDS, AND THEIR INDEX NUMBERS, 1910-1941

The prices of farm labor, feedstuffs, fertilizer materials and seeds constitute about 75 per cent of the cost of production of farm commodities. Therefore, it is important to know the behavior of these prices and the annual amount of money spent for these goods and services. This knowledge enables us to judge impartially the economic condition of the farmers by subtracting these costs from the gross income. Keeping that in mind, the statistical division of the bureau made a current and historical study of the prices of farm labor, feedstuffs, fertilizer materials and seeds. The results were published in Departmental Circular No. 334.

A CENTURY OF AGRICULTURE IN NEW JERSEY

This project, which has been under way for several years, is nearing completion. County and state data on acreages, production and prices of practically all New Jersey crops, together with the numbers of livestock on New Jersey farms, were gathered from the United States census reports from 1840 to 1940. The analytical stage of the project in now in progress. Articles on (1) geography of New Jersey, (2) climatic features of New Jersey, (3) the principal soils of New Jersey and their utilization for agriculture, (4) Indian agriculture in New Jersey, (5) the first white settlers in New Jersey and (6) New Jersey crops and livestock during the Colonial period, are being prepared. It is hoped that this information may be published as a departmental circular.

REFRIGERATED WAREHOUSE SPACE FOR FOOD PRODUCTS IN THE NORTHERN AND SOUTHERN SECTIONS OF NEW JERSEY

The New Jersey Defense Council needed information on food storage capacity in New Jersey, and asked the statistical division of this bureau to make a survey of available storage space. The survey was completed and the results were submitted to the council. The project consisted of two parts: (1) ascertaining the storage space for cereals and (2) finding out the capacity of freezers, coolers and dry storage space. The data were given separately for North and South Jersey.

CONDITION OF NEW JERSEY DAIRY INDUSTRY AS AFFECTED BY THE REGULATION OF THE NEW JERSEY MILK CONTROL BOARD

Upon the request of the Secretary of Agriculture, the statistical division of the bureau gathered information on the current and historic condition of the dairy industry in the state as affected by the regulations of the Milk Control Board. The influence of the board regulations upon the well-being of consumers, producers and dealers was emphasized in the study. The work was completed and a report submitted to the Secretary of Agriculture.

NEW JERSEY CANNING INDUSTRY OUTPUT DURING 1941

The canning factories play a very important role in the economic life of the state. They buy a large quantity of vegetables and fruits from farmers, employ a considerable number of workers and supply the wholesale and retail markets with canned foods. To determine the extent of operation of canneries, the statistical division of the bureau made a survey covering every vegetable and fruit canning factory in the state and included the following topics: (1) quantity of each vegetable and fruit canned, (2) quantity of each vegetable and fruit bought from the farmers, and (3) contract and open market price paid by the canners to the farmers per unit of each commodity bought. The results were printed in the May, 1942 issue of the New Jersey Crop and Livestock Report.

QUANTITY AND PRICE OF VEGETABLES AND FRUITS SOLD AT NEW JERSEY FARMERS' AUCTION MARKETS FROM 1928 TO 1934 AND 1940 TO 1941

New Jersey farmers' auction markets are performing a great service to producers and consumers of vegetables and fruits. Since 1928, when the first market began its operations, considerable progress has been made. Twelve markets are in existence today. It is the object of the statistical division of this bureau to study the growth of these markets and to ascertain the progress from year to year in the quantity of goods sold. For this reason the Works Projects Administration was asked to inaugurate the survey covering weekly, monthly and annual sales as well as average weekly, monthly and annual

prices received per unit for every commodity sold at each auction market from 1928 to 1934 and during 1940-1941. This project is nearing its completion.

QUANTITY AND PRICE OF EGGS SOLD AT NEW JERSEY FARMERS' AUCTION MARKETS, 1939-1941

This W. P. A. project was inaugurated during the current fiscal year. The object is to find out: (1) weekly, monthly and annual quantity of various grades of eggs sold at each farmers' auction market, (2) average weekly, monthly and annual prices received by farmers for dozens of eggs of various grades, and (3) growth of the egg auction markets.

CRANBERRY SURVEY

The growers of cranberries are keenly interested in accurate data on current production of cranberries in the state. Such knowledge helps them to market their crops in an orderly manner. The statistical division of the bureau in cooperation with the United States Department of Agriculture made surveys of cranberry production in 1941 and submitted the findings to the growers.

ANNUAL PRODUCTION OF GRAINS AND HAY IN NEW JERSEY. YEARLY FEEDSTUFF REQUIREMENTS BY NEW JERSEY DAIRY AND POULTRY INDUSTRIES

Upon the request of the Secretary of Agriculture, data were gathered on the annual quantity of grains and hay produced in New Jersey and the tonnage of feed concentrates and hay required annually to feed New Jersey livestock. The object was to find out in which commodities the state is deficient and in which commodities the state has a surplus.

COST OF LIVING IN NEW JERSEY

This study was first published in October, 1939 as a quarterly, and data were carried back to include March, 1937. It was continued as a quarterly until June, 1941. At this time the demands for information at more frequent intervals were so numerous, and the requests from such widely diversified sources, that it was decided to publish a bi-monthly publication. It is planned to continue the cost of living study as long as the demand warrants it.

The mailing list for this publication, as of July, 1941, amounted to about 450 addresses. At the present time (July, 1942), this list includes 763 addresses, to which 838 copies are mailed. Some firms request as many as 25 copies of each issue, to be used in connection with their business.

In many cases a representative of this bureau was asked by employees or employers or both to explain our index numbers of the cost of living

and to interpret their meaning. This personal contact helped considerably in many cases to settle or at least to facilitate settlement of wage disputes. It has also resulted in many wage contracts being written with our cost of living indices as the basis of wage adjustment without arbitration.

Then again, many concerns are using our index numbers of the cost of living as a yardstick in arriving at fair wages for their employees.

Our index number is also used in many cases as a reference or as a check of index numbers published by other official or private agencies.

We are grateful to the many concerns and individuals in the state supplying us with unbiased, timely information on changes in retail prices of the hundreds of items entering into our index of the cost of living. These include food stores, real estate agencies, department stores, electric and gas companies, coal companies, drugstores and various state agencies.

When war began in Europe, it was inevitable that wages and retail prices in this country should increase. With this in mind, and to show more definitely what effects the preparation for, and later, the actual participation in war, had on retail prices, it was decided to use June, 1939 as the base period since this was the last month before the struggle in Europe started for which there is complete data. Increases in our index numbers on this base (with some seasonal changes excluded) may be laid in great part to the above causes.

The index numbers of the average cost of all goods and services in New Jersey have shown a steady upward trend from the base period up to and including April, 1942, with the exception of a slight decline in December, 1939, when prices readjusted themselves after the war scare rise in September, 1939. On May 18, 1942, ceiling prices were placed on many cost of living items by the Office of Price Administration. The result of this during June, 1942 was to turn our index downward for the first time since December, 1939, placing the June, 1942 index at 119.2. The decrease (which amounts to 0.2 per cent) was in itself rather insignificant.

NEW JERSEY RETAIL PRICES OF FOODS

This publication first appeared in September, 1936 and has been continued as a monthly by this bureau ever since. Eighty-three food items were used to compute the index but prices are gathered (and recently have been published) on 103 items from sources representing approximately 2,300 retail food stores scattered throughout the state.

The general trend of the average retail price of all foods combined since June, 1941 has been upward. Of the last 13 months (July, 1941 to July, 1942, inclusive) nine have been higher and four have been lower than during the preceding month. The largest relative monthly increases for all foods were noted between March and April, 1942 with an increase of 4.99 per cent, and September and October, 1941 with an increase of 2.89 per cent. The largest decrease was between April and May, 1942, when price ceilings began to work and amounted to a decrease of 1.67 per cent.

All foods during July, 1942 were 14.69 per cent higher than July a year ago. All groups of commodities without exception were higher in the more recent month. The increases ranged from 5.55 per cent for cereals and bakery products to 28.21 per cent for fats and oils.

Our mailing list for this publication is the same as that used for "Cost of Living in New Jersey."

We are grateful to the companies and stores which have furnished us timely, unbiased prices each month and cooperated with us in other ways.

LATE CROP SEED POTATOES IN STORAGE

This study, inaugurated in 1937, has been made annually for use in connection with seed certification work. Schedules were mailed to 20 cold storage plants in 1942. Thirteen of these plants reported a total of 33,702 100-pound bags or their equivalent in storage as compared with 24,836 in 1941 and 30,682 for the five-year (1937 to 1941) average.

SEED CERTIFICATION AND RELATED WORK

RASPBERRY PLANT INSPECTION

Ten nurserymen and growers requested the inspection and certification of raspberry fields in order to meet the special requirements of 14 states. Field inspections of growing plants covering 76 acres were made.

GRAIN SEED CERTIFICATION

The largest crop of certified grain seeds since the inception of the project in 1932 was made available to farmers of New Jersey in 1941. With few exceptions this seed was completely sold out, indicating an increased demand and consumer acceptance of New Jersey certified seed. An excellent growing season for the production of hybrid field corn gave the largest amount of seed available to date. Increased interest in soybeans as a desired crop for oil made an increased demand for seed of this crop. In addition to the list below, 2,635 bushels of winter barley were tagged as approved, all fields of this crop being rejected for exceeding the smut tolerance. Lots which showed less than 5 per cent combined smuts were approved.

Better facilities for drying hybrid corn were available by virtue of the completion of additional seed corn dryers equipped with heat and ventilating fans.

New varieties added to the list include Chief and Granger soybeans, both superior from the growth angle and because of greater oil content.

SUMMARY OF SEED INSPECTION, 1941

Crop	Number of Growers	Acreage Entered	Acreage Passed	Acreage Rejected	Bushels Sealed
Hybrid Corn					
No. 4	28	193	173	20	5,867
No. 2	13	114	110	4	3,258
Open Pollinated Corn	6	65.5	65.5	...	614
Spring Barley	3	11.5	7	4.5	200
Oats	7	89	89	...	1,750
Soybeans					
Harbinsoy	11	535	535	...	3,600
Chief	2	3	3	...	122
Granger	1	2	2	...	42
Winter Barley	19	361.5	...	361.5	...
Winter Wheat	14	386	360	26	3,706
Winter Rye	2	18	18	...	...
Totals	106	1,778.5	1,362.5	416	19,159

STRAWBERRY PLANT INSPECTIONS

Curtailment of activities due to diminished gasoline and tire supplies caused a reduction of inspection for the Red Stele disease. Only large growers making a specialty of selling strawberry plants were covered. The list included 13 growers having a total of 17 acres. The extremely dry season (early and late) of the previous year materially reduced the quantity of plants available for sale. Because many growers had no plants to sell, no hardship was entailed.

One case of Red Stele was located in Passaic County by members of the Agricultural Experiment Station.

TOMATO SEED CERTIFICATION

The following tables indicate the scope of the tomato seed certification work during the year and the expansion of the work from 1921 to 1941.

During the 1941-42 fiscal year, 68 seed treatment declaration certificates were issued at various times to three New Jersey seedsmen so that they could comply with the requirements of Cuba, Puerto Rico and Mexico. These certificates covered 6,321 pounds of tomato seed and 899 pounds of pepper seed.

GROWERS OF CERTIFIED TOMATO SEED AND ACREAGES CERTIFIED, 1941

Name	Marglobe	Rutgers	Stokesdale	Valiant	Bonny Best	Pritchard	Totals
Joseph White Co.	391	967	183	...	...	...	1,541
Edgar Hurff Co.	363	519	21	...	33	38	974
Geo. H. Pedrick & Sons	...	8	...	...	...	...	8
S. Tilden Ashcraft	...	...	...	...	...	10	10
Francis Stokes Co.	293	554	176	33	...	...	1,056
Campbell Soup Co.	199	499	...	...	...	...	698
Totals	1,246	2,547	380	33	33	48	4,287

TOMATO SEED CERTIFICATION PRODUCTION, 1941

Name	Marglobe	Rutgers	Pritchard	Bonny Best	Stokesdale	Valiant	Totals
Campbell Soup Co.	1,329	7,321	...	...	...	...	8,650
Edgar Hurff*	8,156	11,170	690	260	170	...	20,446
Francis Stokes	14,000	18,700	...	...	10,400	725	43,825
Joseph White	15,000	32,000	...	...	6,500	...	53,500
Geo. H. Pedrick	..... *No seed saved*						
S. Tilden Ashcraft	..... *No report received*						
Totals	38,485	69,191	690	260	17,070	725	126,421

*Edgar Hurff Company was unable to receive tomatoes and save seed from August 18 to September 8 because of incapacitation of the cannery by hurricane.

TOMATO SEED CERTIFICATION, 1932-1941

Varietal Distribution of Certified Tomato Seed Acreages

Year	Bonny Best	J.T.D.	Baltimore	Marglobe	Valiant	Break-O'Day	Stokesdale	Rutgers	Grothens Globe	Pritchard	Globel	Totals
1932	34	61	18	562	...	...	...	...	...	...	...	675
1933	12	...	15	543	...	...	...	...	...	99	...	669
1934	28	155	91	2,046	...	2	...	...	...	182	...	2,504
1935	5	247	61	1,520	...	8	...	730	...	192	...	2,763
1936	5	109	40	1,576	...	21	...	1,001	...	208	...	2,960
1937	94	100	...	1,365	17	...	67	936	24	136	7	2,746
1938	10	48	...	1,113	2	5	2	755	...	146	...	2,081
1939	18	...	...	1,658	...	3	...	1,331	...	84	...	3,094
1940	13	...	...	1,182	1	5	493	1,847	...	39	...	3,580
1941	33	...	...	1,246	33	...	380	2,547	...	48	...	4,287

WHITE POTATO SEED CERTIFICATION, 1941-1942

The production of certified seed potatoes in 1941 was severely curtailed by the drought which started in August and became critical in September. Not a drop of rain fell on most fields for a period of six to eight weeks. How the plants were able to keep green under these conditions is difficult to explain. The severe test of growing under a total drought during September gave a good comparison of the drought resistance of the several varieties being grown. The Katahdin and Sequoia varieties showed themselves to be definitely superior to other varieties with reference to drought resistance. Chippewas and Houmas ranked next with Cobblers and Green Mountains last. Yields per acre at digging time were in direct proportion to the ability of the fields to stay green under severe drought conditions. This ability to stand dry weather may explain the greater acceptance of the Katahdin variety over the Chippewa variety in many states from Florida north into Canada, and over a wide range of climatic and growing conditions.

The total production amounted to 60,043 bushels with an average yield per acre of 130.8 bushels. This is a decrease of about 40 per cent compared to last year and about 25 per cent under the average for the past 10 years. Some of the decreased production is accounted for in the smaller acreage certified, 459.10 acres compared with 502.49 acres certified last year. The larger part of the decrease is reflected in the shorter yield per acre which is a direct result of the dry weather. This year the yield per acre was 130.8 bushels compared with 189.5 bushels in 1940.

Entries were received from 59 growers with a total of 567.05 acres, representing a decrease of 166 acres under last year. During the field inspections, 107.95 acres were rejected or withdrawn for various reasons. In a few cases extremely high Leaf Roll counts made roguing inadvisable, and a withdrawal resulted. Drought injury making readings impossible accounted for a few additional rejections. Bacterial Ring Rot was the cause of rejection in the case of eight fields, this being the greatest number of cases of this disease in any single year. Five of the lots showing Ring Rot were in fields planted with stock seed from the same car of northern certified seed. Three other fields were planted with seed previously grown in New Jersey, indicating that the disease was present in small amounts last year but was not detected. Because of these facts proper precautions should be taken to be rid of this serious disease.

Aphids and leaf hoppers were present in some of the fields in Central Jersey but the South Jersey fields had the fewest aphids in many years. The fields in Central Jersey which had rather severe aphid populations, had the lowest yields, the combination of the sucking insects and the drought materially hurting the growth.

Spraying operations, because of the lack of rain to wash off the materials, and hamper the growers in taking their equipment into the fields, were more effective with greater coverage than in many years. Several growers feel

that their regular spray applications, even though they were not necessary for Late Blight protection this year, did help to keep the vines alive and resulted in increased yields. Early Blight, strangely enough, did not become a factor. Apparently high temperatures in the presence of dew are necessary to spread this disease, for the plants were certainly suffering from adverse conditions when they wilted each day for a prolonged period.

Many of the growers in Central Jersey used Rotenone or Rotenone and Pyrethrum mixtures for aphid control. It can be reported here that these materials gave excellent control in enough cases to indicate that, if the materials are fresh and of correct strength and are properly applied, good control can be obtained. Growers should, however, keep in mind that to kill these insects the job must not be postponed until the plants are literally alive with aphids and the leaves are curled about the insects affording them some protection from the materials. Most of the Rotenone was applied as a dust. It is apparently effective in this form if adequately distributed at the right time of a still day.

Another unusual circumstance of the season was the high population of the tarnished plant bug which built up during the latter part of the growing season and added injured leaves to those burnt up by the drought. Looking across fields at the end of the season one could see wilted and drooping leaves in the terminal growth of the plant and at the tips of the branches. Close examination showed a cluster of tarnished plant bugs in these wilted tips and the petioles showed the punctures of the insect. This insect and its damage are generally found in both the early and late crop of potatoes but the damage is seldom of economic importance. Usually new growth is at a rate greater than the damage done. It is our belief that the heavier-than-normal population of the insect was a result of migrations of the insect from other usual host plants, as these became tough and woody with the dryness.

Many of the practices of past years were followed in growing the crop. Seed disinfection was applied to about the same per cent of the seed. Fertilizers were applied at about the usual rate of a ton, more or less, of 4-8-7, 5-8-7 and similar formulae. One grower experimented with staggered row planting and "Hi-Lo" placement of fertilizer. It is doubtful if measurable differences of yield were obtained because much of the fertilizer was never used by the plants.

A major part of the foundation seed was home grown, with Maine, Prince Edward Island, Nova Scotia, New Brunswick and North Carolina providing the balance. The Sequoia variety was planted in small quantities for the first time. This variety is a long season one and has a very rugged and vigorous vine growth. The tubers are well formed and shallow-eyed but have a russetted skin. This variety may have a place in the New Jersey picture for the grower who wants a replacement variety for Green Mountains or who wants a potato to store for winter sales. The Houma variety which is coming into favor in other sections is still worthy of future trial.

The selling season opened with a strong demand accentuated by the prospects of a short crop. The Chippewa variety was in strongest demand and was soon completely sold. Aside from the Red Skins, which normally are not sold until late spring, only scattered lots of the other varieties remain to be sold in the spring.

A REVIEW OF THE INSPECTION AND CERTIFICATION WORK OF NEW JERSEY LATE CROP WHITE POTATO SEED IN 1941

Acres Entered for Certification:

County	Acres	Per cent
Burlington	8.00	1.41
Camden	8.50	1.50
Cumberland	379.95	67.00
Gloucester	3.50	.62
Mercer	17.85	3.15
Middlesex	78.25	13.80
Monmouth	8.00	1.41
Salem	63.00	11.11
Totals	567.05	100.00

Seed Source:	100-lb. Bags	Per cent
New Jersey	3,611	56.32
Maine	600	9.36
Prince Edward Isle	1,321	20.60
Nova Scotia	701	10.93
New Brunswick	158	2.46
North Carolina	21	.33
Totals	6,412	100.00

Seed Treatment:	100-lb. Bags	Per cent
Semesan	1,877	29.27
No Treatment	4,535	70.73
Totals	6,412	100.00

PRODUCTION AND DISTRIBUTION OF CERTIFIED CROP OF WHITE POTATO SEED IN NEW JERSEY

	1941	1940	1939
Acres of seed certified	459.10	502.49	541
Total yield (field run) in bushels	60,043	95,220	91,003
Average yield per acre in bushels	130.80	189.50	168.21
Bags of certified seed sold	13,137	22,387	18,303
Bags sold within the state	13,043	22,020	17,567
Bags sold out of the state	94	367	736
Pennsylvania	94	220	736
New York	...	147	...
Bags sold untagged (old sacks used) (tags not allowed)	1,998	621	1,053
Total bags of seed sold	15,135	23,008	19,356
Bags of seed unsold December 5	3,021	10,028	7,836
Baskets of seed retained own use	41,470	47,812	54,154
Bushels of seed retained own use	25,920	29,883	33,846

Note: Seed packed and sold in 100-pound bags.

POTATO ACREAGE ENTERED FOR CERTIFICATION, 1941

County	Growers	Chippewas	Irish Cobblers	Katahdins	Red Skins	Green Mts.	Houmas	Sebagos	Sequoias	Totals
Burlington	1	5.00	3.00	...	...	...	...	...	...	8.00
Camden	1	...	...	...	8.00	...	.50	...	...	8.50
Cumberland	31	129.75	97.35	119.35	20.00	4.00	8.00	1.00	.50	379.95
Gloucester	1	1.75	...	1.75	...	...	...	...	...	3.50
Mercer	3	...	11.00	6.50	...	...	...	...	.35	17.85
Middlesex	12	12.00	24.75	30.50	...	5.75	1.00	3.00	1.25	78.25
Monmouth	1	...	5.00	3.00	...	...	...	...	...	8.00
Salem	9	20.00	16.00	27.00	...	...	...	...	...	63.00
Totals	59	168.50	157.10	188.10	28.00	9.75	9.50	4.00	2.10	567.05

ACREAGE FAILING AND PASSING CERTIFICATION

	Acres	Per cent
Acreage rejected at first inspection	2.50	.44
Acreage withdrawn at first inspection	33.60	5.93
Acreage rejected at second inspection	71.85	12.67
Total acreages rejected at end of two inspections	107.95	19.04
Acreage rejected at third tuber inspection	...	...
Acreage withdrawn and rejected three inspections	107.95	19.04
Acreage passing three inspections	459.10	80.96

WHITE POTATO SEED CERTIFICATION INDUSTRY OF NEW JERSEY

Year	No. of Growers	Acres Entered	Percentage Rejection	Varietal Distribution	
1937	77	643.45	20.12	Cobblers	455.375
				Chippewas	70.75
				Red Skins	70.45
				Katahdins	29.125
				Green Mts.	17.50
				Idaho Russets	.25
1938	45	355.50	24.47	Cobblers	165.75
				Chippewas	149.75
				Red Skins	18.00
				Green Mts.	16.00
				Katahdins	6.00
1939	57	584.50	7.44	Cobblers	257.25
				Chippewas	178.75
				Katahdins	87.00
				Red Skins	48.00
				Green Mts.	12.00
				Houmas	1.50
1940	74	732.99	31.45	Chippewas	271.53
				Cobblers	252.04
				Katahdins	142.17
				Red Skins	43.50
				Green Mts.	11.75
				Houmas	10.00
				Sebagos	2.00
1941	59	567.05	19.04	Katahdins	188.10
				Chippewas	168.50
				Cobblers	157.10
				Red Skins	28.00
				Green Mts.	9.75
				Houmas	9.50
				Sebagos	4.00
				Sequoias	2.10

SUMMARY OF INSPECTION RESULTS, 1941

	Burlington	Camden	Cumberland	Gloucester	Mercer	Middlesex	Monmouth	Salem	Totals
Acreage entered	8.00	8.50	379.95	3.50	17.85	78.25	8.00	63.00	567.05
Number of growers	1.00	1.00	31.00	1.00	3.00	12.00	1.00	9.00	59.00
Average number of acres per grower	8.00	8.50	12.26	3.50	5.95	6.52	8.00	7.00	9.61
Acres rejected first inspection*	...	.50	12.60	...	...	7.00	...	16.00	36.10
Per cent rejected first inspection	...	5.80	3.30	...	...	8.90	...	25.40	6.37
Acres rejected second inspection	...	...	43.00	1.75	5.10	18.00	...	4.00	71.85
Per cent rejected second inspection	...	...	11.30	50.00	28.50	23.00	...	6.30	19.04
Acres rejected third inspection	...	...	...	...	...	...	...	...	...
Acres rejected total*	...	.50	55.60	1.75	5.10	25.00	...	20.00	107.95
Acres certified	8.00	8.00	324.35	1.75	12.75	53.25	8.00	43.00	459.10
Per cent certified	100.00	94.20	85.40	50.00	71.40	68.10	100.00	68.20	80.96

*Includes withdrawals

Varietal Distribution of Rejections and Withdrawals

Acres Rejected and Withdrawn by Inspections

Variety	Acres Entered	First	Second	Acres Certified
Katahdins	188.10	4.75	30.50	152.85
Chippewas	168.50	10.50	10.75	147.25
Cobblers	157.10	16.35	28.50	112.25
Red Skins	28.00	.50	...	27.50
Green Mts.	9.75	2.00	...	7.75
Houmas	9.50	...	...	9.50
Sebagos	4.00	2.00	2.00	...
Sequoias	2.10	...	.10	2.00
Totals	567.05	36.10	71.85	459.10

SUMMARY OF WEATHER CONDITIONS

(Note the unusual September rainfall data)

	Bridgeton				*Hightstown*			
	July	Aug.	Sept.	Oct.	July	Aug.	Sept.	Oct.
Number of days during which rain fell	14	6	0	6	18	10	2	8
Heaviest daily rainfall (in inches)	1.07	1.43	0.00	1.15	2.81	.81	0.01	0.81
Lightest daily rainfall (in inches)	.02	.03	0.00	0.07	.01	.01	trace	0.01
Total rainfall (in inches)	5.49	3.06	0.00	2.36	8.50	3.03	0.02	1.58
Deviation from normal (in inches)	+1.04	—1.61	—3.31	—0.74	+3.58	—1.99	—3.19	—2.12
Average relative humidity at 7:30 A.M.*	83	77	79	82	79	74	77	79
Normal for month at 7:30 A. M.*	73	76	77	75	78	81	80	82
Per cent of possible sunshine*	50	72	76	63	62	81	86	68
Deviation from normal (per cent)*	—2	+10	+13	0	+2	+20	+21	+11
Highest temperature reached†	100	97	95	96	97	94	95	95
Average of the high temperatures	86.5	86.3	85.2	74.0	84.2	83.8	81.4	71.1
Normal for the high temperatures	87.5	85.3	79.3	68.8	85.3	82.4	76.9	66.0
Lowest temperature reached	58	48	43	31	54	58.2	37	27
Average for the low temperatures	66.7	62.1	58.0	50.4	62.9	44.0	52.9	47.2
Normal for low temperatures	66.2	64.8	57.8	46.9	63.8	62.1	55.4	44.8

Note: Data given above are for Bridgeton and Hightstown official weather bureaus and are given as being more or less representative of the sections in southern and central New Jersey, respectively, where certified seed potatoes are grown.

*Philadelphia station for Bridgeton and Trenton station for Hightstown, such data not being available for the respective stations.

†Average date of first killing frost in autumn:—Bridgeton, October 22; Hightstown, October 14. Earliest:—September 22 (both).

NURSERY INSPECTION SERVICE

Certificates of inspection were issued beginning September 1, 1941, to a total of 530 nurseries. Certificates are issued only when the nurseries are found, upon inspection, to be free of dangerously injurious insects and plant diseases. Following is a list of insect infestations observed and the frequency of occurrence:

Insect Pests	Number of Nurseries
Juniper Scale	114
Spruce Gall Aphid	77
Oyster Shell Scale	39
Juniper Webworm	35
European Pine Shoot Moth	34
Rhododendron Lace Bug	30
Pine Sawfly (Neodiprion sertifer)	26
Pine Leaf Scale	14
Euonymus Scale	12
Boxwood Leaf Miner	11
Bagworm	11
San Jose Scale	5
Azalea Lace Bug	5
Pine Tip Moth	4
Mealy Bug	4
Lilac Borer	3
Oak Scale	3
White Pine Weevil	2
Elm Scale	2
Lecanium Scale	2
Willow Gall	2
Holly Leaf Miner	2
Scurfy Scale	2
Wooly Aphis	1
Poplar Borer	1
Elm Bark Scale	1
Rose Scale	1
Twig Girdler	1
Oak Lace Bug	1

In all there were 168 nurseries in which 445 infestations were found, and in which clean-up measures were required before certificates were issued.

CANADIAN NURSERY STOCK INSPECTIONS

In compliance with Canadian regulations, it was necessary to make nine inspections of plant material for shipment from New Jersey to Canada. An agreement was reached with the Department of Agriculture of Canada late in the year, whereby it would not be necessary for this department to inspect most shipments of plant material into Canada, immediately prior to shipment. The previously required inspections were costly in time and travel and the Canadian officials were in agreement with us that inspection by the Canadian officials at the Port of Entry would be satisfactory for determination of freedom from plant pests. Should the New Jersey grower consign to Canada material infested with plant pests, he will, of course, risk destruction of that material at the Canadian Port of Entry. It thus devolves upon the grower to ship only clean stock.

WHITE PINE BLISTER RUST CONTROL-AREA PERMITS

Under the provisions of Quarantine No. 63 of the United States Department of Agriculture, effective December 21, 1938, in order to prevent the spread of white pine blister rust in this state, currant and gooseberry plants (Ribes sp. and Grossularia sp.) may be shipped into New Jersey only after a "control-area permit" has been issued to the out-of-state consignor. Between July 1, 1941 and June 30, 1942, a total of 799 such permits was issued.

DEALERS' CERTIFICATES

Certificates were issued to 60 dealers in nursery stock for the year beginning September 1, 1941. These dealers signed agreements to purchase stock only from listed certified nurserymen.

FOREIGN STOCK INSPECTIONS

There was one inspection made of nursery stock shipped into this state from Brazil.

DOMESTIC STOCK INSPECTIONS

The following inspections were made of nursery stock shipped into New Jersey from other states.

	Bags	Cases	Cars	Bales	Truckloads
Fall of 1941	2	147	16	74	7
Spring of 1942	..	11	7	7	..
Totals	2	158	23	81	7

The drop in the number of inspections of domestic shipments during the spring of 1942 has been caused by our efforts to conserve rubber and gasoline. It is felt that, at least for the duration of the war, inspections of this nature can be considerably reduced without seriously endangering plant material within New Jersey.

SPECIAL CERTIFICATES

Special certificates are issued to nurserymen who desire to ship plant material to a state or a foreign country which has special requirements other than the copy of the certificate of inspection. The special certificate attests to the freedom of the stock from insects and diseases at the time of inspection (just previous to shipment). It is also issued, on request, to persons not in the nursery business who desire to make a small shipment or two to some point outside of the state. A total of 171 of these certificates was issued.

REQUEST INSPECTIONS

Requests are received from time to time for advice in the control of various insects and in other nursery and horticultural problems. In some cases, special calls are necessary. Fifty-nine such calls were made during the year ending June 30, 1942.

EUROPEAN CORN BORER SURVEY

This Bureau again cooperated with the Federal Bureau of Entomology and Plant Quarantine in making a survey of corn fields throughout the state in order to determine the status of the European corn borer. This project, completed in November, 1941, has received our support for several years and it is felt that the work is worthwhile in that it provides us with reliable information concerning the abundance of the insect in various parts of the state. Similar information is made available for all infested areas, and we are thus able to tie in the New Jersey data with those of the United States.

Following is a summary of the data obtained for this state, with a table showing the average number of borers per 100 plants in both 1941 and 1940:

County	Average per cent plants infested, 1941	Average number borers per 100 plants, 1941	Average number borers per 100 plants, 1940
Atlantic	18.8	72.8	9.6
Bergen	26.8	108.8	234.0
Burlington	53.2	235.6	505.4
Camden	26.2	121.8	98.8
Cape May	10.0	22.2	36.2
Cumberland	14.4	31.0	58.6
Essex-Union	24.4	101.4	106.2
Gloucester	28.8	82.0	101.4
Hunterdon	16.4	46.2	8.0
Mercer	82.0	610.6	187.2
Middlesex	59.2	457.8	105.0
Monmouth	32.4	167.6	387.4
Morris	15.2	36.0	53.6
Ocean	27.4	94.9	34.8
Passaic	19.2	61.4	46.6
Salem	24.8	111.2	58.0
Somerset	17.5	33.0	4.0
Sussex	2.4	2.8	4.6
Warren	6.0	13.4	31.8
State average (19 counties)	26.6	126.9	109.0

As in other years, the above figures represent samples from 10 corn fields in each county. These fields are in the immediate vicinity of fields sampled in previous years.

In general, it can be reported that populations of the corn borer in New Jersey averaged about the same in 1941 as in 1940. Hunterdon, Somerset, Mercer, and Middlesex counties, in the central part of the state, showed increases in 1941. It is thought that this increase was due to July rains which occurred at particularly favorable times with regard to egg hatch for the second generation of borers.

The parasites of this insect which have been released by the United States Department of Agriculture, are becoming established over the area, and, in general, extended their ranges during the past year.

Reports from Dr. B. B. Pepper of the Agricultural Experiment Station as to the practical use of insecticides in corn, especially in the early sweet

varieties, are very promising. He reports that treatment, costing about $25.00 per acre, can be expected to be profitable. This practice, of course, would depend upon the condition of the corn market and also upon insecticide prices, for any benefit to the farmer.

THE PARASITE *(Microplectron fuscipennis)* OF THE INTRODUCED PINE SAWFLY *(Neodiprion sertifer)*

As reported in the 26th Annual Report of this department, it was possible during the spring of 1941, to rear one promising species of parasite of the European pine sawfly which has become established in this state. The rearing work was done at the White Horse Japanese Beetle Laboratory. During July and August, 1941, 64 screened boxes of parasitized cocoons were placed in plantations where serious defoliation by the host sawfly had occurred. These cocoons had been exposed to oviposition by adult parasites. The parasite lays its eggs within cocoons containing larvae or pupae of the sawfly. After exposure to oviposition, the cocoons were packaged and distributed. Each package contained 200 cocoons and each package should have yielded at least 1,000 parasites within one week after placement in the field. Since the parasites require about 20 days for a complete generation, those emerging from the parasitized material would have had sufficient time for at least one generation before the sawfly larvae would complete their development and before the adult sawflies would emerge in late September and early October.

Following is a full list of releases:

Date	Number of Releases	General Location of Release
July 29	4	Rocky Hill plantation of Atlantic Terra Cotta Company
	2	Plantation of John R. Hardin, Jr., near Chester
	2	Peapack-Gladstone watershed
31	2	Rocky Hill plantation of Atlantic Terra Cotta Company
	3	Vicinity of Burnt Mills
	2	Plantation of John R. Hardin, Jr., near Chester
	1	Voorhees State Park
August 4	4	In and near the Milltown Reservoir
	2	Franklin Rue plantation near Imlaystown
5	8	Glen Gardner Sanitorium plantation
	3	Planting of Centenary Junior College near Hackettstown
	11	Peapack-Gladstone watershed
	6	John R. Hardin, Jr., plantation near Chester
	10	Owen Winston plantation near Gladstone
	4	Rocky Hill plantation of Atlantic Terra Cotta Company

In April, 1942, arrangements were again made for breeding these parasites at White Horse for liberation within the infested area. In the field, the overwintering eggs of the sawfly began hatching in mid-April, and by late May the larvae had completed their feeding in most of the area, and had started forming their cocoons on the surface of the ground. Feeding damage

was again severe and there were indications that secondary pests were present. It is expected that there will be considerable loss of red and Scots pine trees in reforestation plantings within the next few years.

During June, 1942 a total of 239 packages, each containing 200 cocoons which had been exposed to parasite oviposition, were released within the infested area, as follows:

Date	Number of Releases	General Location of Release
June 18	61	Daly planting on Highway 31, two miles north of Bedminster
22	93	Atlantic Terra Cotta planting at Rocky Hill
25	85	Borie Estate, adjacent to Hacklebarney State Park
	85	packages of cocoons were also prepared for distribution at the Bound Brook Reservoir planting, near Martinsville.

The area of infestation was not scouted during the larval feeding period of 1942. It is expected that there has been some extension of the range of the sawfly. There is no apparent need for an annual survey of the boundaries of infestation, though it will be of value to check these boundaries another year.

The damage caused by this insect is receiving increasing attention by private owners of forest plantations and by watershed managers. It is expected that, during the coming year, the department will be able to expand its activities in the propagation and release of parasites.

GIPSY MOTH

As usual, during the months of July and August, gipsy moth assembling cages were distributed and patrolled during the flight season of the adult male moths. The United States Bureau of Entomology and Plant Quarantine furnished the necessary material for the cage program, including gipsy moth attractant, cans, cotton, tanglefoot and other articles. This season the New Jersey allotment was 206 units, and these were distributed as indicated below. No gipsy moth male adults were captured by these cages.

LOCATION OF CAGES

Township	Number of Cages
PASSAIC COUNTY	
Pompton	30
BERGEN COUNTY	
Hohokus	30
Washington	30
Orville	30
Englewood and vicinity	80
MORRIS COUNTY	
Mendham	6
Total	206

NURSERY SCOUTING

It seemed advisable to have some of the larger nurseries intensively scouted for the gipsy moth, and after the cage work was completed about the middle of September, this work was started in Kingston. Four of the nursery inspection force worked with the gipsy moth scouts in the nurseries until the end of December. The weather was ideal for scouting work until this time, when ice and snow covered the small trees and shrubs. All work in the nurseries was very carefully done and no indication of the gipsy moth was found.

WOODLAND SCOUTING

Early in January two scouting crews were assigned work in woodland areas in Bergen and Warren counties. One crew operated in the Englewood area in Bergen County, near the place where one adult male gipsy moth was captured in 1938. The necessary scouting work here has now been completed with the exception of a small area southwest of Englewood. The weather was favorable for scouting work, there being very little or no snow, and the temperature was such that the workers did not suffer from the cold. A good area was covered in very favorable growth north and northeast of Englewood. However, no gipsy moth infestation was found. This work was discontinued in the middle of June when the nursery inspectors returned to nursery work.

The second crew worked in Warren County along the Delaware River from the township of Knowlton, north to Millbrook in Pahaquarry township. As the river was very low, this work along the river banks was done first. There is a good possibility that gipsy moth egg masses deposited on logs, driftwood, etc., may be carried downstream and left on the banks where an infestation would be started. About twelve miles of river edge were scouted. The crew then did considerable scouting work on the west slope of the Kittatinny mountain range approximately opposite the section of Barrett township in Pennsylvania where gipsy moth infestation was found last year. This township is about 10 to 12 miles from the New Jersey line. As the foliage developed and the weather became warm, scouting work was discontinued in the mountain section, and the crew assigned scouting work in the township of Hillsboro, Somerset County. Here the men could accomplish much more because of the level terrain. This crew discontinued work about June 15, when the nursery inspectors returned to nursery work. Although every effort was made to locate an infestation, no indication of the gipsy moth was found this season.

SUGGESTIONS

There are many hundred of acres of solid woodland in Warren and Sussex counties which should be scouted before we can be sure that no gipsy moth infestation has been introduced into this state from Pennsylvania or New York. In both of these states the gipsy moth has been found in woodland which is a continuation of the mountain ranges in this state, and in one

township in Pennsylvania, Barrett, infestation was found only twelve miles from our border last year. However, because of the restrictions on gasoline, rubber, etc., it is recommended that this work be postponed until some future time. In the meantime the Bureau of Entomology and Plant Quarantine and the states of Pennsylvania and New York will be doing some work along our borders and this will be closely watched by this department. In 1936, a male adult gipsy moth was caught in a gipsy moth trap in Mendham township. The only work done there since was by WPA men, and a small colony could have been missed by them. It is therefore recommended that scouting work be done there this season. Any small infestation in 1938 will have increased sufficiently by now to be easily picked up. Also the mileage, by transporting the entire crew in one car, will be very small compared to that of the past few scouting seasons. If adult gipsy moths have been taken near our lines the plan of work may be changed accordingly.

ANNUAL SUMMARY OF SCOUTING AND TREATMENT WORK

	Open Scouted				
			Scattered Trees		Woodland Scouted (acres)
	Nursery Stock	Miles of Road	Apple	Shade	
BERGEN COUNTY					
B & A nursery	425	...	...	280	67
Clifton	...	...	115	1,760	235
Englewood Cliffs	...	...	...	450	501
Englewood Borough	...	...	...	2,345	278
ESSEX COUNTY					
Cedar Grove	...	...	720	1,475	402
MIDDLESEX COUNTY					
Piscataway	...	...	...	100	30
Raritan	...	...	175	2,002	192
MERCER COUNTY					
Princeton Nursery	650	...	...	...	...
MONMOUTH COUNTY					
Lovett Nursery	202	...	...	85	...
MORRIS COUNTY					
Randolph	...	...	...	...	142
PASSAIC COUNTY					
Millers Nursery	122	...	...	...	...
SOMERSET COUNTY					
Bridgewater	...	13	...	...	161
Bernards	...	...	...	...	71
Hillsboro	...	3	...	150	829
Montgomery	...	1	...	580	210
UNION COUNTY					
F & F Nursery	110	...	...	...	...
WARREN COUNTY					
Pahaquarry	...	...	65	335	860
Totals	1,509	17	1,075	9,562	3,978

BEE INSPECTION SERVICE

Regular bee inspection work was carried on during the first part of the fiscal year until winter, when scouting was curtailed to conserve tires for spring and summer work. However, the importance of the work in eradicating diseased colonies that die during the winter months was noticeable throughout the season's inspection. Some of the outbreaks of American foulbrood could be traced to this source of infection.

The queen rearing apiaries received their seasonal inspections. The practice of inspecting apiaries located in the vicinity of queen rearing apiaries was continued in the spring in order to control bee diseases.

There has been an increase in the number of persons keeping bees. This created a demand which completely absorbed all available package bees and queens produced by breeders. The three leading races of bees reared within the state are Italians, Caucasians and Carniolans. The continuous selection for race characteristics was noticeable in each breeder's work.

Where the two-story ten frame hive has been used for wintering colonies, there has been a definite decrease in winter losses.

APIARY INSPECTIONS

During the fiscal year, 561 apiaries were visited for inspections; 5,448 colonies and 817 nuclei of bees were examined. American foulbrood was found in 113 apiaries, and 275 colonies were infected. In most cases the diseased colonies found were destroyed and burned by the owners. However, in Cumberland County three apiaries comprising 25 colonies of bees and equipment had been moved in from adjoining states. The colonies were examined and found infected with American foulbrood. All were seized and burned immediately.

European foulbrood was found in 11 apiaries, and 51 colonies were infected. The introduction of vigorous young queens of resistant stock apparently corrected this condition. The number of colonies found in plain boxes was 34, and the number of colonies with movable combs was 48. Demonstrations in transferring colonies from box hives to immovable frame hives has reduced the number of such colonies in the state.

MICROSCOPIC DIAGNOSIS

Beekeepers continue to submit smears of dead bee brood for microscopic diagnosis. During the year 71 smears were received by mail and diagnosed microscopically. The organism, *B. larvae*, causing American foulbrood, was found in 35 smears, and the organism, *B. Pluton*, causing European foulbrood, was found in 23 smears.

CERTIFICATES ISSUED

Nine queen rearing certificates were issued during the fiscal year.

County	Number of Certificates	Race of Bees
Cape May	2	Italians
Hunterdon	4	Italians, Caucasians, Carniolans
Mercer	2	Italians
Morris	1	Caucasians

Sixteen certificates for sale of colonies and out-of-state shipments were issued.

County	Number of Certificates
Bergen	1
Cumberland & Salem	1
Essex	3
Gloucester	1
Hunterdon	2
Mercer	1
Middlesex	1
Monmouth	1
Morris	1
Passaic	1
Warren	3

One certified honey certificate was issued to a resident of Burlington County.

APIARY INSPECTIONS BY COUNTIES
JULY 1, 1941 TO JUNE 30, 1942

County	Apiaries	Colonies Inspected	Nuclei Inspected	Box Hives	Cross Combed	Apiaries A.fb.	Colonies A.fb.	Apiaries E.fb.	Colonies E.fb.	Colonies Destroyed and Burned	Neg.	Smears A.fb.	E.fb.
Bergen	87	389	...	3	9	24	60	..	..	10	8	2	..
Burlington	42	531	...	1	11	4	5	2	14	..	..	1	..
Cape May	5	143	162	..	..	..	..	3	26	..	..	..	5
Cumberland	62	732	...	4	6	10	69	..	..	25	1	14	..
Essex	36	168	...	..	1	6	12	..	..	1	1	4	..
Gloucester	3	27	...	1	..	..	..	1	1	..	1	..	1
Hunterdon	74	1,401	574	5	12	13	22	3	6	1	..	1	6
Mercer	39	463	81	5	..	6	21	..	..	..	..	1	..
Middlesex	3	41	...	..	..	..	..	..	..	..	..	..	..
Monmouth	15	165	...	..	..	8	13	..	..	3	3	3	..
Morris	59	495	...	1	1	21	43	..	..	..	3	3	..
Ocean	7	35	...	..	..	1	1	1	2	..	1	1	1
Passaic	64	222	...	..	..	8	14	..	..	4	2	1	..
Salem	1	12	...	..	..	..	..	..	..	..	..	..	..
Somerset	30	260	...	..	2	11	14	1	1	..	2	1	..
Union	11	87	...	..	..	..	..	..	..	..	1	2	..
Warren	23	277	...	14	6	1	1	..	..	..	..	1	..
Totals	561	5,448	817	34	48	113	275	11	50	44	23	35	13

DUTCH ELM DISEASE CONTROL

The first known New Jersey Dutch elm disease infected tree was detected in Maplewood in May, 1933. The following year the United States Department of Agriculture and the New Jersey Department of Agriculture became active with a program of scouting and eradication of trees known to be infected by this disease.* During the years, 1935-1938, as available labor increased in numbers, scouting was extended into many parts of the state, with the result that by 1938 the known infected area in New Jersey involved 11 counties. The scouting as originally conducted was of the strip type, similar to that used on the White Pine Blister Rust for the eradication of Ribes sp., with the exception that areas in which no elms were visible were removed from the scouting area. From the outset, however, certain facts became very evident. The most prominent among these was that strip scouting in many of the areas involved only a few elms of scattered distribution. Therefore, in 1936, an important phase of the entire program was undertaken, to eradicate widely scattered elms in areas where such trees had little importance, so that considerable areas could be removed from a future work program. Clean cutting and silviciding added to this area.

By 1940, WPA personnel, with which this project has been almost entirely sustained, fell from the level of 4,000 men in 1937 to approximately 600 men. In spite of this sharp curtailment in available manpower, a vigorous effort was made to scout the entire known infected area in New Jersey in accordance with the severity of the previously determined disease conditions. Although the scouting in 1940 was not done as thoroughly as some previous years, a fairly acceptable job was accomplished. The WPA personnel in June, 1940 was 809; during the latter months of that year it dropped considerably, and by January, 1941, the number had dwindled to 510. During the month of April, when the scouting program for the year 1941 was being formulated, the available WPA help had further declined to 397. With this very much reduced manpower, it became evident that the previous scouting procedure, namely, the scouting of the entire known infected area in New Jersey, would require drastic modification.

*The Dutch elm disease is caused by the fungus *Graphium ulmi*. The terms *Graphium* and GU as used in the text refer to this disease.

NUMBER OF WPA WORKERS ON DUTCH ELM DISEASE CONTROL PROJECT IN NEW JERSEY

1935	July	1,823
1936	January	2,054
	July	1,230
1937	January	4,050
	July	3,092
1938	January	2,278
	July	1,651
1939	January	1,586
	July	1,409
1940	January	479
	July	754
1941	January	510
	July	255

Up to this time all woodlot trees had been examined. However, when confronted with the necessity of making a decision as to which of the elm trees in New Jersey should receive the attention of this reduced force, a program dividing the elm trees into categories according to ornamental and shade trees and woodlot trees was established. Manifestly, the ornamental and shade trees in many urban centers of the infected area had to receive first consideration, and therefore a unit of work known as a "Control Area" was established. Each county was accordingly surveyed to ascertain the areas in which trees of shade and ornamental importance were situated. Control areas embrace the following: (1) urban areas; (2) certain suburban areas; (3) parks; (4) cemeteries; (5) golf courses.

However, it was also realized that along the primary and secondary highway within the infected area many ornamental trees are to be found and should be protected if such work could be accommodated. Therefore, another category, known as linear scouting, was established in addition to the control area. Linear scouting is essentially scouting for the examination of trees within a band of approximately one hundred feet on either side of the highway. Approximately 10,000 linear miles were established for scouting in 1941.

CHANGES IN AREA SCOUTED FOR DUTCH ELM DISEASE

(Square Miles)

County	Total Area	Silvicided Area	Clean Cut Area	Natural Elm Free	Total Silvicided Clean Cut and Elm Free	Net Area Scouted 1940	Control Areas 1941	Percentage of 1940 Scouted Area Represented by 1941 Control Areas
Bergen	234	13.4	3.0	71.5	87.9	146.1	143.0	97.8
Hudson	44	...	...	14.0	14.0	30.0	30.0	100.0
Passaic	208	14.4	1.9	46.0	62.3	145.7	44.0	30.2
Morris	480	35.8	35.8	21.2	92.8	387.2	104.0	26.8
Warren	364	8.5	3.8	37.2	49.5	314.5	8.0	2.5
Sussex	526	19.5	4.0	20.7	44.2	418.8	71.0	14.7
Essex	126	2.7	8.8	27.2	38.7	87.3	86.0	98.5
Union	102	3.8	4.5	27.7	36.0	66.0	45.0	68.1
Monmouth	475	.5	3.2	316.8	320.5	154.5	49.0	31.7
Middlesex	309	1.5	9.5	235.0	246.0	63.0	43.0	68.2
Somerset	305	12.0	3.2	62.9	78.1	226.9	63.0	27.8
Hunterdon	437	7.0	14.0	55.0	76.0	361.0	6.0	1.7
Mercer	226	2.6	3.3	101.5	107.4	118.6	9.0	7.6
Burlington	373	...	...	75.0	75.0	298.0	4.0	1.3
Totals	4,209	121.7	94.8	1,111.1	1,328.4	2,880.6	705.0	24.5

Linear scouting conducted in addition to the control area scouting of 1941 totaled 10,000 miles, equivalent to 500 square miles. This area added to the square miles of the control area totals 1,205 square miles or 42 per cent of the net area (2,880.6) scouted in 1940.

The scouting season began in June, 1941 with 324 WPA workers, a declining proportion of whom were physically able to climb suspects for the collection of samples for laboratory determinations. By July this number had dwindled to 231, which number remained about constant throughout the scouting season which terminated September 15.

At the conclusion of the Graphium scouting season the project was confronted with the establishment of comparable data regarding the incidence of disease, inasmuch as the scouting system of previous years had not been followed. Accordingly, a man was assigned to develop on a county and control area basis the number of Graphium trees, from 1938-1940 inclusive, which occurred within the boundaries of newly established control areas. Inasmuch as the 1941 information for diseased trees was confined to the control area basis, the adapted information for the previous years would now become comparable.

The following table, presenting the number of Graphium trees by county and control areas, will indicate the status of disease conditions in the control areas established within the state. The comparison of the total Graphium trees in New Jersey in 1941 to the total found in previous years no longer holds because of the considerable portion of the previous work area which is not now being scouted.

GRAPHIUM CONFIRMATIONS IN NEW JERSEY 1938-1941, INCLUSIVE

	1938	1939	1940	1941*	Totals
BERGEN COUNTY					
Total GU	1,662	1,271	389	182	3,504
GU in control areas	285	291	113	79	768
GU in linear scouting	...	...	...	103	...
BURLINGTON COUNTY					
Total GU	...	2	9	7	18
GU in control areas	...	...	...	...	...
GU in linear scouting	...	...	...	7	...
ESSEX COUNTY					
Total GU	1,930	768	253	140	3,091
GU in control areas	306	152	108	105	671
GU in linear scouting	...	...	...	35	...
HUDSON COUNTY					
Total GU	7	1	4	3	15
GU in control areas	7	1	4	3	15
GU in linear scouting	...	...	...	...	...
HUNTERDON COUNTY					
Total GU	2,587	1,146	363	109	4,205
GU in control areas	19	14	10	4	47
GU in linear scouting	...	...	...	105	...
MERCER COUNTY					
Total GU	748	452	218	120	1,538
GU in control areas	1	5	2	2	10
GU in linear scouting	...	...	...	118	...
MIDDLESEX COUNTY					
Total GU	641	277	32	27	977
GU in control areas	12	15	3	6	36
GU in linear scouting	...	...	...	21	...

*The 1941 Graphium (GU) total is not comparable to the total for previous years because of the reduction of the areas scouted. The control area figures are for com-

	1938	1939	1940	1941*	Totals
MONMOUTH COUNTY					
Total GU	43	46	26	14	129
GU in control areas	2	6	12	11	31
GU in linear scouting	...	...	...	3	...
MORRIS COUNTY					
Total GU	2,126	1,469	420	254	4,269
GU in control areas	172	122	27	38	359
GU in linear scouting	...	...	...	216	...
PASSAIC COUNTY					
Total GU	682	305	169	97	1,253
GU in control areas	118	52	27	18	215
GU in linear scouting	...	...	...	79	...
SOMERSET COUNTY					
Total GU	3,552	1,622	363	109	5,646
GU in control areas	169	78	32	19	298
GU in linear scouting	...	...	...	90	...
SUSSEX COUNTY					
Total GU	174	470	297	108	1,049
GU in control areas	1	10	3	2	16
GU in linear scouting	...	...	...	105	...
UNION COUNTY					
Total GU	1,751	474	188	99	2,512
GU in control areas	453	170	99	37	759
GU in linear scouting	...	...	...	62	...
WARREN COUNTY					
Total GU	345	521	125	31	1,022
GU in control areas	2	11	...	...	13
GU in linear scouting	...	...	...	31	...

In anticipation of a further decline in the number of WPA men available, and likewise in anticipation of the lower quality of men supplied, this office, by October, 1941 introduced a further time saving feature by plotting, as far as possible, the locations of elm trees within the control areas. For example, the elms on the golf courses within the infected area were definitely plotted so that the scout could walk directly to the trees rather than explore the entire area. This resulted not only in a considerable saving of time for scouts on golf courses, but likewise in city streets where in some instances elms do not occur in entire blocks. This important information should be very helpful in the scouting work of subsequent years.

The sanitation work was conducted on the usual basis, viz: The pruning or eradication of trees which in the opinion of the scouts, contained bark beetle breeding material. Furthermore, intensive effort was made to locate all elm wood piles so that this material could be destroyed before the emergence of the adults in the spring. Experience has taught that cut elm wood left within reasonable proximity of standing elm trees is one of of the most dangerous items as far as the dissemination of the Dutch elm disease fungus is concerned. The sanitation work was confined almost entirely to the control areas, very little having been done in the rural areas represented by linear scouting work.

NEW JERSEY COLLECTIONS AND IDENTIFICATIONS

Year	Graphium		Cephalosporium		Verticilium		Miscellaneous		Sterile		Totals
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	
1932	...	...	...	...	...	...	1	100.0	...	...	1
1933	740	50.5	111	7.6	128	8.7	192	13.1	293	20.0	1,464
1934	4,377	57.1	1,269	16.5	305	4.0	798	10.4	919	12.0	7,668
1935	4,113	28.1	4,780	32.7	287	2.0	4,539	31.0	906	6.2	14,625
1936	5,793	21.2	12,761	46.8	602	2.2	6,989	25.6	1,142	4.2	27,287
1937	4,830	18.8	7,912	30.8	259	1.0	10,065	39.1	2,654	10.3	25,720
1938	16,248	38.3	9,816	23.1	2,184	5.1	12,187	28.7	1,977	4.7	42,412
1939	8,824	33.7	10,514	40.1	785	3.0	5,378	20.5	692	2.6	26,193
1940	2,856	33.5	3,551	41.7	1,025	12.0	949	11.1	141	1.7	8,522
1941	1,302	40.6	938	29.3	395	12.3	512	16.0	57	1.8	3,204
Totals	49,083		51,652		5,970		41,610		8,781		157,096

The accomplishments for the calendar year 1941 are summarized as follows:

1. The enforced adaption of the 1940 work program to one involving work only in the so-called control areas, and areas along primary and secondary highways. Only 42 per cent of the 1940 area was scouted in 1941.

2. The intensification of effort toward a more complete plotting of the location of elms within the control areas in order to reduce the scouting time by elimination of wasted manoeuvers.

3. The determination that 25 per cent of the total Graphium trees in New Jersey for 1941 were in the control areas and the balance, 75 per cent, were located in the linear scouting area, most of which involves rural trees.

4. The establishment of intimate working relationships with the Shade Tree Commissions, the Park Commissions, golf course greenskeepers, etc., in order to enable them to assist us in the several phases of work on this project, particularly the reporting to the Bloomfield office of any suspicious trees.

5. The constant planning of the entire work program in anticipation of a continuing reduction in personnel.

DUTCH ELM DISEASE WEEKLY REPORT FOR WEEK ENDING DECEMBER 27, 1941

Number of Employees	Last Week's Report	Conn.	New Jersey	New York	Pennsylvania	Outside	Present Totals
Appointed Dept. Funds	55	2	33	5	4	11	55
WPA Administrative	4	1	1	1	1	0	4
WPA Supervisory	46	0	14	6	15	12	47
State Appointed	15	1	5	9	0	0	15
State Per Diem	38	0	16	19	0	1	36
Per Diem Dept. Funds	30	3	0	0	9	18	30
Work Relief Funds	1,889	48	362	212	457	774	1,853
Man Hours							
Scouting	8,581	80	120	0	2,034	2,366	4,600
DED and Sanitation	39,575	1,384	4,011	3,336	6,674	12,849	28,254
Selective Work	3,585	0	864	1,102	0	776	2,742
Miscellaneous	13,117	327	5,684	2,195	1,628	1,091	10,925
Scouting Project							
B. M. Scouted	529.79	39.60	0	0	119.06	106.92	265.58
B. M. Scouted	7,732.47	1,487.99	14.78	414.55	2,310.39	3,770.34	7,998.05
B. M. Roadway, Lin. Mi.	2,002.00	...	2,002.00	...	...	...	2,002.00
Suspects Collected This Week	129	13	2	19	13	100	147
B. M.'s Tagged This Week	749	0	6	0	202	84	292
Laboratory Identification							
Confirmed DED This Week	4	1	4	5	1	2	13
Total Elms Confirmed DED	64,141	1,774	49,081	12,014	639	646	64,154
Total Reported Not DED	411,639	72,512	108,010	131,915	21,937	77,448	411,822
Suspects Unreported	245	27	2	2	30	135	196
Total Suspects Collected	476,025	74,313	157,093	143,931	22,606	78,229	476,172
Total DED's Standing	179	8	49	101*	23	8	189
Elms Removed This Week							
Confirmed DED's	18	1	1	10	1	1	14
Sanitation	2,639	56	132	167	165	829	1,349
Selective	560	0	80	0	0	474	554
Total Elms Removed This Week	3,217	57	213	177	166	1,304	1,917
Elms Removed to Date							
Confirmed DED's	63,951	1,766	49,032	11,913	616	638	63,965
Sanitation	4,450,893	508,002	2,174,558	1,474,357	86,622	208,703	4,452,242
Selective	1,278,140	74,607	1,117,286	64,131	1,834	20,836	1,278,694
Total Elms Removed To Date	5,792,984	584,375	3,340,876	1,550,401	89,072	230,177	5,794,901
Elms Pruned This Week	827	1	108	11	31	229	380
Total Elms Pruned To Date	304,550	15,767	87,159	101,816	57,000	43,188	304,930

*Correction by State Leader

JAPANESE BEETLE SUPPRESSION

NEMATODE STUDIES

The cooperative agreement between the State Department of Agriculture and the Federal Bureau of Entomology and Plant Quarantine was continued throughout the year.

LABORATORY DEVELOPMENTS

In 1938, preliminary experiments were begun on the possible control of larvae of the white-fringed beetle by means of the nematode *Neoaplectana glaseri,* the work being done under the cooperative agreement with the Bureau of Entomology and Plant Quarantine. The tests with living insects were conducted by the Laboratory of the Division of Cereal and Forage Insect Investigations, now located at Gulfport, Mississippi. This phase of the project has had a steady development since its initiation. During the current year, many hundreds of millions of nematodes were cultured and sent to Gulfport for further laboratory and field tests as parasites of the two species of white-fringed beetles. *N. glaseri* and an undescribed species of *Neoaplectana* found in Mississippi have both shown excellent promise in this work. The field experiments have been good, averaging considerably better than have the results of similar work in New Jersey on the Japanese Beetle. This is attributed to the more favorable climatic and soil conditions existing in the area infested by the white-fringed beetle. The laboratory at Gulfport has now installed equipment for the rearing of these nematodes, and the personnel has been instructed in the techniques developed by the White Horse laboratory for this work. In the future, the Gulfport laboratory will be able to operate independently on the large scale rearing, the White Horse laboratory supplying the breeding stock of nematodes.

In the earlier part of the fiscal year, several lots of *N. glaseri* were sent to Honolulu, Hawaii, and tried as a parasite of the pineapple pest, *Adoretus sinicus.* Very promising results were being obtained in laboratory and greenhouse tests, but the work has been disrupted by the war.

For the past several years, trials of *N. glaseri* for the control of various species of *Phyllophaga* and *Cyclocephala* have been in progress at Madison, Wisconsin, and Lafayette, Indiana. The White Horse Laboratory has been supplying the nematodes and examining the insect cadavers for evidence of parasitism. These tests were promising in the laboratory, but during this year a number of field tests have been discouraging, and it is probable that the work will not be continued.

Laboratory tests at Gulfport, Mississippi, have shown a complete control of the vegetable weevil, *Listroderes obliquus,* by the namatode, *N. glaseri.* This investigation will be continued as time permits.

Coincident with the completion of the larger part of the program for the colonization of New Jersey with *N. glaseri,* the laboratory expanded the investigations on the possibility of Japanese beetle control by the entomo-

genous fungus, *Beauveria bassiana*. The so-called coleopterous strain of this fungus causes death in the adult beetle, and has been found to be communicable. During the current year it was demonstrated that the fungus remained virulent under outdoor conditions for two successive years, and produced an outbreak of disease in the corresponding two successive broods of adult beetles.

During July and August, 1941, 21 experimental field plots were established to study the effect of the fungus on adult beetles, and various methods of applying the fungus were tried. It was determined that the beetles acquire the disease by direct external contact of the spores with the integument, and not by ingestion of spores while feeding. Applying the spores as a dry dust proved to be most effective in causing infection in the insects. Since the beetles are easily trapped in large numbers, the simplest means for introducing the fungus in an area appears to be trapping the adults, dusting these with the dried spores, and liberating them to disseminate the disease. This was tried on one plot of approximately 20 acres. The plot had a heavy growth of smartweed situated in a small valley, and the beetles did not exhibit any pronounced tendency to leave the experimental area. Thousands of beetles infected and killed by the fungus were found after the fungus introduction, and, as far as could be determined, the trapping, dusting, and liberation of beetles is a practicable means of introducing the fungus disease. While these field results substantiate the laboratory finding that *B. bassiana* is a virulent and communicable disease of adult beetles, a much larger field trial is required in order to determine whether or not any significant benefit can be expected from its introduction over a large area. Now that the techniques for culturing the fungus and for its dissemination among the beetles have been developed and tested, it is proposed to make a large-scale field test during the summer of 1942. Then it should be possible to determine whether or not a significant reduction in beetle population occurs in successive years as a result of the disease introduction.

There are two strains of *Beauveria bassiana*, known respectively as the coleopterous and the lepidopterous strain, dependent upon the order of insects which they attack. Further work has shown that the lepidopterous strain will also attack the larval stages of coleopterous insects, and is frequently more virulent than is the coleopterous strain. High rates of mortality occurred when the spores of the lepidopterous strain of the fungus were applied to Japanese beetle larvae, and field plots were established to test both strains as larval parasites. The results obtained were negative under field conditions. It appears probable that the attack of beetle larvae by these fungi is too dependent upon soil moisture and texture conditions to be of much practical significance, and this line of investigation was discontinued.

The lepidopterous strain of *B. bassiana* was also investigated as a possible control measure for larvae of the European corn borer, the walnut datana, the catalpa sphinx, and the eastern tent caterpillar.

The field tests on the parasitism of the European corn borer were done in cooperation with the European Corn Borer Laboratory, at Moorestown, New Jersey. These tests on the first generation of corn borers were failures, in that no significant difference in borer population would be found between the treated and control areas. Since similar work in Connecticut and Canada has shown that the fungus is capable of markedly reducing corn borer infestations, a further trial at some future time certainly seems justified.

Field trials of the fungus as a control for the catalpa sphinx and tent caterpillar larvae appeared promising. The fungus infected and killed large numbers of each species, and trees to which the spores were applied were not as severely defoliated as were the control trees. Larvæ of the walnut datana proved to be quite resistent to attack by the fungus under outdoor conditions, and it was concluded that *Beauveria* is not a promising control for this insect.

Some further work on the fungus infection of both the adult and larval stages of the elm bark beetle, *Scolytus multistriatus*, was done. The adults were readily infected by the coleopterous strain of *B. bassiana*, while the larvæ were found highly susceptible to attack by the lepidopterous strain. Time and personnel limitations precluded carrying these investigations very far. However, it is possible that some method might be developed which would help in the control of this insect which is credited with being so important in the spread of the Dutch Elm disease.

NEMATODE COLONIZATION WORK

During the period 1939-1941, colonies of *Neoaplectana glaseri*, a nematode parasite of the Japanese beetle, were established at intervals of three and one-half miles over the sections of the state having an economically important Japanese beetle infestation.

This year, additional colonies were placed in the areas where the beetle infestation was heaviest. The purpose of this work was to decrease the distance between colonies, reducing the time required for the natural spread of the parasite to accomplish a general infestation of the area by nematodes.

Thirty-five additional nematode colonies were placed in Essex County in the fall of 1941, and thirty-four new introductions were made in southeastern Morris County in the spring of 1942, reducing the distance between colonies in these areas from three and one-half to one and three-quarters miles. The total number of nematode colonies in the state is now 560.

EMERGENCE EXPERIMENTS

In the annual report for 1940-1941, an improved method of obtaining data on the results of nematode-treated plots was described. It involved the trapping, in small screened enclosures, of beetles emerging from treated and untreated turf.

Additional data were obtained by this method during the year 1941-1942. Four experiments were studied, two of which had been treated in 1940. The remaining two were treated in May, 1941.

During the period of beetle emergence, the screened enclosures were examined daily, and records were kept of the emergence from the treated and control areas.

During the second summer, results obtained in the plots treated in 1940 indicate that the nematodes cause a reduction in emergence during the second summer after treatment. In the experiment which had been treated by the surface application of 25,000 ensheathed nemas per square foot, the emergence from the treated area was only 19.5 per cent of that which occurred from the corresponding control area. In the second 1940 experiment, treated with 10,000 nemas per square foot, the emergence from the treated area was 45 per cent of that in the control area.

The results of two additional experiments of the same type begun in May, 1941 confirmed the results of the first summer in the 1940 experiments.

FIELD STUDIES IN THE OLDER EXPERIMENTAL PLOTS

The four small plots established in 1931 by the surface application of agar-reared nemas were stocked twice with healthy grubs and later examined for parasitized material. In the fall of 1941, parasitism occurred at a rate much lower than that which has usually prevailed in these plots, probably because of the severe drought which occurred. Rainfall was deficient in all months of 1941 except June, July and December. In the spring of 1942, the plots were again stocked with healthy beetle larvae. Parasitized material in fairly large quantities was found in each of the plots approximately two weeks after the healthy larvae were introduced. The occurrence of parasitism at this time extends to 11 years, the period during which the parasites have been active at this location. The plots have been maintained under natural field conditions, but a high host population has been provided by the periodic introduction of healthy beetle larvae.

The customary fall survey of the large field plot treated in 1933 was conducted, but the soil was very dry and no parasitized grubs were found. Also, the beetle population average was low and the usual spring survey was, therefore, not conducted this spring.

Parasitism surveys were conducted in two of the older experimental plots treated with ensheathed nematodes. One had been treated by the subsurface method of introduction in 1937. The second was treated by surface application in 1938. Parasitized material in small quantities was recovered from both plots.

FOLIAGE DAMAGE SURVEY

A survey was conducted during August, 1941, to determine the damage to susceptible foliage caused by the feeding of the adult Japanese beetle.

This survey aids in the selection of areas for later experimental work and makes possible a dependable comparison of the foliage damage in successive years. Previously this has been largely guesswork.

In making the survey, observations were made at approximately 600 spots distributed over the state. At each location the degree of damage was observed and recorded. The selected spots were also marked on a permanent map so that observations can be made at the spots in successive years.

This year, the area of heaviest beetle infestation, judged on the basis of host plant defoliation, was found to be a triangular area extending from Paterson to Morristown to Springfield. The Mullica Hill-Salem-Bridgeton area was second in importance. The five counties having the heaviest average infestation were Essex, Salem, Union, Morris and Bergen, listed in order of decreasing infestation.

A similar survey had been conducted in August, 1940. For purposes of comparison, the method of scoring and the county averages for the two years are included below.

SCORING SYSTEM FOR ESTIMATING FOLIAGE DAMAGE

1. Host plants present, but no damage observed.
2. Host plants very scarce, no damage observed.
3. Damage present, but scarcely discernible.
4. Slight damage to host plants, easily discernible.
5. Moderately heavy damage to host plants.
6. Heavy damage to host plants, with serious defoliation.

OBSERVATIONS ON SEVERITY OF BEETLE DAMAGE, 1940 AND 1941

County	Average Degree of Damage 1940	1941
Atlantic	2.5	2.9
Bergen	3.6	3.9
Burlington	3.4	3.3
Camden	2.8	3.0
Cape May	3.2	3.1
Cumberland	4.1	3.8
Essex	4.4	5.0
Gloucester	3.7	3.4
Hunterdon	4.1	3.9
Mercer	4.3	3.5
Middlesex	3.6	3.7
Monmouth	3.6	3.8
Morris	4.0	3.9
Ocean	3.6	3.2
Passaic	2.6	2.4
Salem	4.8	4.2
Somerset	4.1	3.7
Sussex	1.3	1.3
Union	4.2	4.0
Warren	3.2	3.3
State Average	3.8	3.6

SPREAD EXPERIMENT

Additional information is needed regarding the ability of the nematodes to spread or be carried from artificially infested areas to adjacent turf. To obtain this information, 25 routine colonies were established on a golf course in June, 1942. In subsequent years, diggings will be made at intervals between the plots to determine the extent to which the parasites have spread from the treated areas.

JAPANESE BEETLE QUARANTINE

SEASONAL QUARANTINE ON FARM PRODUCTS AND CUT FLOWERS

The following activities of this project are for the fiscal year 1942. The project, as heretofore, was operated jointly by the Bureau of Plant Industry and the Bureau of Entomology and Plant Quarantine of the United States Department of Agriculture.

As usual, the summer months brought the movement of farm products which meant long hours and added responsibility to the inspection force. The sudden shift from the fumigation of loaded refrigerator cars to inspection and screening was responsible for this. Although there was a decrease in the number of carload lot fumigations, the total amount of farm products certifications increased by 7.5 per cent.

The movement of white potatoes to points outside the quarantined area increased by 27 per cent over the preceding year. The southern markets received practically all of the potatoes shipped by van. There were 796 vans carrying certified loads, which was an increase of approximately 360 per cent over the preceding year for this type of shipment.

There was a sharp decline in the number of shipments of apples certified for this same season. Other shipments of farm products varied slightly during 1940 and 1941, but the total amounts certified during both years are small.

Cut flower certifications dropped 25 per cent under the previous year due largely to increased advertising of seeds and plants for home gardens.

INSPECTION POINTS; NUMBER OF PACKAGES CERTIFIED

During 1941, inspection points were maintained throughout the state to check the loading and to certify cars prior to movement. Throughout the season 2,447 empty refrigerator cars were pre-inspected for certification which necessitated the assignment of crews at various railroad yard car cleaning points to complete this process.

Cyanide was used to fumigate 13 empty refrigerator cars which were used for the shipment of apples and string beans.

The first methyl bromide fumigation in a refrigerator truck for certification was made at Cedarville on July 10, 1941. The shipment consisted of 500 bags of onions.

FARM PRODUCTS AND CUT FLOWERS CERTIFIED AND NUMBER OF BEETLES REMOVED FROM EACH KIND

Articles	No. of Packages	No. Beetles Removed
Apples	1,528	...
Beans, Lima	586	...
Beans, Snap	463	...
Cabbage	1,850	15
Cantaloupes	24	...
Corn	825	...
Cucumbers	755	6
Egg Plants	1,794	...
Onions	550	...
Parsley	365	...
Peppers	1,029	...
Peaches	251	...
Pickles	1,116	...
Potatoes, white	354,034	454
Potatoes, sweet	191	...
Tomatoes	876	...
Cut flowers	639	...
Totals	366,876	475

FUMIGATION OF FARM PRODUCTS

Article	Methyl Bromide	Carbon Disulphide
Beans, Lima	586 units	...
Beans, Snap	6,237 "	...
Blueberries	...	2,074 units
Corn	828 "	...
Egg Plants	16 "	...
Onions	550 "	...
Potatoes, white	8,700 "	...
Tomatoes	506 "	...
Totals	17,423 "	2,074 "

The above fumigations consisted of 40 refrigerator cars and five trucks. Cyanide was used to fumigate 13 empty cars.

SHIPMENTS OF QUARANTINED NURSERY STOCK

The fall shipments of nursery stock started off very slowly because of extremely dry weather. The ground was very hard and it was impossible to dig plants which would hold soil balls. Some nurseries reported that it was necessary to use picks to loosen the soil. Most nurseries requested spring deliveries on their orders as this condition continued to exist in November.

Although fall weather conditions were dry and unsatisfactory as far as shipments of nursery stock were concerned, the combined fall and spring shipments exceeded the preceding year by 63 per cent.

The azalea business was again far above expectations, as some of the nurserymen reported they were sold out weeks in advance of shipping season. This is again due to the impossibility of obtaining foreign bulbs because of the war.

There was very little difference between 1940 and 1941 in the fumigation of plants and soil.

Additional methyl bromide chambers have been constructed by greenhousemen due to the fact that the fumigation has proven very satisfactory for clearing up greenhouse insects and mites. The use of the fumigant also has a stimulating effect on hydrangeas.

TOTAL AMOUNTS OF PLANTS, SAND, SOIL, PEAT, COMPOST AND MANURE SHIPPED

Month	*Outside* Plants	*Outside* Sand, Soil, etc.	*Inside* Plants	*Inside* Sand, Soil, etc.
July	312,369	..	159,261	32,275
August	86,973	..	105,099	65,610
September	116,685	..	109,484	39,500
October	256,289	25	123,303	15,000
November	368,648	256	161,964	26,000
December	225,317	..	111,351	...
January	158,441	..	113,468	...
February	116,636	..	95,803	...
March	412,640	..	556,503	3,950
April	844,741	9	380,597	2,600
May	414,951	29	201,941	...
June	644,239	250	177,642	33,000
Totals	3,958,299	569	2,276,416	220,935

SUMMARY OF TREATMENTS MADE JULY 1, 1941 TO JUNE 30, 1942

Articles Treated	Agent	Units Treated
Plants (field)	Miscible CS_2	1
Plants	Methyl Bromide	423,527
Plants	Paradichlorobenzene	83,049
Plants (initial treatment)	Arsenate of Lead	62,179
Plants (retreatment)	Arsenate of Lead	31,088
Plants (no lead required)	Arsenate of Lead	57,883
Total		629,827

Potting Soil Treated

Agent	Cu. Yds.
CS_2	1,283.54
Steam	19.20
CH_3Br	60.67
Total	1,363.41

Surface Square Feet

Naphthalene	Carbon Disulphide	Steam	Misc. CS_2
5,790	2,509	...	840

Square Feet Heeling in Areas, etc. Arsenate of Lead

Initial	Retreatments	No Lead Required
4,946	12,688	349,805

SQUARE FEET OF GLASS AND NUMBER OF ACRES INVOLVED WHICH WERE ADDED TO AND REMOVED FROM THE CLASSIFIED LIST DURING FISCAL YEAR 1941-1942

Sq. Ft. of Glass classified as of July 1, 1941	2,584,475		
" " " " added during fiscal year 1942	...		
" " " " classified during fiscal year 1942		2,584,475	
" " " " removed during fiscal year 1942		1,275	
" " " " classified as of June 30, 1942			2,583,200
No. of acres classified as of July 1, 1942	4,155		
" " " added during fiscal year 1942	1		
" " " classified during fiscal year 1942		4,156	
" " " removed during fiscal year 1942		23	
" " " classified as of June 30, 1942			4,133

YEAR-ROUND QUARANTINE ON NURSERY AND ORNAMENTAL STOCK, SAND, SOIL, EARTH, PEAT, COMPOST AND MANURE

Number of classified establishments dealing in nursery and ornamental stock, etc., showing classification as of June 30, 1942.

	Class I	Class III	Totals
Nurseries	1	29	30
Greenhouses		8	8
Nurseries and Greenhouses		40	40
Plant Growers		42	42
Misc. establishments	1	5	6
Totals	2	124	126

Number of establishments, together with square feet of glass and number of acres involved, which were added to and removed from the classified list during 1942:

No. of establishments classified as of July 1, 1941	128		
" " " added during fiscal year 1942	1		
" " " classified during fiscal year 1942	——	129	
" " " removed during fiscal year 1942		3	
" " " classified as of June 30, 1942		——	126

NUMBER OF MEN EMPLOYED EACH MONTH DURING THE YEAR

	Farm Products		*Nurseries and Greenhouses*		*Totals*	
	Federal	State	Federal	State	Federal	State
January	..	..	13	14	13	14
February	..	..	13	14	13	14
March	..	..	13	14	13	14
April	..	..	14	14	14	14
May	..	..	14	15	14	15
June	3	4	12	12	15	16
July	20	2	7	10	27	12
August	19	2	8	9	27	11
September	10	..	16	11	26	11
October	..	..	17	12	17	12
November	..	..	14	13	14	13
December	..	..	13	14	13	14

Note: Five men paid from both federal and state funds, from July, 1941 to March, 1942, inclusive, are listed only under federal above.

NUMBER OF AUTOMOBILES OPERATED EACH MONTH DURING THE YEAR

	Farm Products		*Nurseries and Greenhouses*		*Totals*	
	Federal	State	Federal	State	Federal	State
January	..	..	4	17	4	17
February	..	..	2	18	2	18
March	..	..	3	18	3	18
April	..	..	3	18	3	18
May	..	..	4	18	4	18
June	3	4	3	12	6	16
July	5	15	1	3	6	18
August	4	14	1	4	5	18
September	3	7	2	10	5	17
October	..	..	3	17	3	17
November	..	..	4	17	4	17
December	..	..	3	14	3	14

Official Proceedings of the Twenty-seventh Annual State Agricultural Convention

The Twenty-seventh annual State Agricultural Convention was held in the Assembly Chamber of the State Capitol at Trenton on Tuesday, January 27, 1942. The meeting was called to order at 10:00 a.m. by Jacob A. Blakeslee, president of the State Board of Agriculture. The invocation was offered by Rev. Paul W. Kapp, chaplain of the New Jersey State Grange.

The roll of delegates was called by W. H. Allen, Secretary of Agriculture, as follows:

DELEGATES OF THE STATE AGRICULTURAL CONVENTION

From County Boards of Agriculture

Name	Address	Term	County
William J. Slack	Hammonton	2 years	Atlantic
Louis J. Sanguinetti	Vineland, R. D.	1 year	Atlantic
Steffan Olsen	Ridgewood, R. D. 1	2 years	Bergen
Fred Van Riper	Allendale	1 year	Bergen
Clement B. Lewis	Riverton	2 years	Burlington
F. W. Shivers, Bordentown, alternate for Raymond Kirby	Columbus	1 year	Burlington
Joseph Battaglia	Hammonton	2 years	Camden
Fred C. Sickler	Sicklerville	1 year	Camden
Michael McPherson	Cape May, R. D.	2 years	Cape May
Muier Semoff	Woodbine, R. D.	1 year	Cape May
Percy D. Fogg, Bridgeton, R. D. 1, alternate for Vernon A. Keller	Newport, R. D. 1	2 years	Cumberland
Albert Gallino	Chestnut Avenue, Vineland	1 year	Cumberland
C. Russell Jacobus	Upper Montclair	2 years	Essex
Edgar A. Schmidt, Caldwell, R. D., alternate for J. W. D. Goodman	North Caldwell	1 year	Essex
J. Willard Gardner	Mullica Hill	2 years	Gloucester
Joseph P. Broadhurst	Woodbury	1 year	Gloucester
Harold B. Everitt	Flemington	2 years	Hunterdon
Charles Burd	Pittstown	1 year	Hunterdon
Ralph Hunt	Princeton, R. D. 2	2 years	Mercer
Robert M. Dilatush, Jr.	Trenton, R. D. 2	1 year	Mercer
Joseph J. Smith	New Brunswick, R. D. 1	2 years	Middlesex
Leroy Scott, Cranbury, R. D. alternate for J. Edward Chamberlin	Cranbury	1 year	Middlesex
George C. Probasco	Freehold, R. D.	2 years	Monmouth
William H. Hunt	Freehold, R. D. 1	1 year	Monmouth
Elbert Van Duyne	Towaco	2 years	Morris
Francis Ruzicka	492 Main St., Chatham	1 year	Morris
Martin Schubkegel	Lakewood, R. D. 3	2 years	Ocean

Name	Address	Term	County
William Bornemann	Toms River, R. D. 2	1 year	Ocean
Arthur Butt	Clifton, R. D. 1	2 years	Passaic
Charles Hess, Mountain View, alternate for Walter Sikkema	Paterson, R. D. 2	1 year	Passaic
Harvey M. Beal	Elmer, R. D. 2	2 years	Salem
Bernard G. Wegner	Newfield, R. D. 1	1 year	Salem
Edward M. Haynes	Skillman	2 years	Somerset
D. W. Amerman	Neshanic	1 year	Somerset
Irving Drew	Sussex, R. D.	2 years	Sussex
Gottlieb S. Katzenstein	Andover, R. D. 2	1 year	Sussex
Walter M. Ritchie, Rahway, alternate for Walter E. Essex	Plainfield, R. D. 1	2 years	Union
Charles H. Brewer	Rahway, R. D. 2	1 year	Union
Earl T. Watters	Port Murray, R. D.	2 years	Warren
Norman Van Horn	Blairstown, R. D.	1 year	Warren

FROM POMONA GRANGES

Name	Address	Term	County
Martin Decker	Hammonton, R. D. 1	1 year	Atlantic
Charles C. Ballentine	Paterson, R. D. 3	1 year	Bergen and Passaic
William D. Cowperthwaite	Medford	1 year	Burlington
Abel B. Clement	Laurel Springs, R. D.	1 year	Camden
Edwin C. Miller	Cape May City	1 year	Cape May
William Terhune	Chester	1 year	Central District
*George L. Brooks	Bridgeton, R. D. 2	1 year	Cumberland
Earl C. Urion	Woodstown	1 year	Gloucester
*Theodore H. Dilts	Three Bridges	2 years	Hunterdon
Edgar L. Cubberley	Trenton, R. D. 3	1 year	Mercer
James P. Barr	New Brunswick	1 year	Middlesex
Sidney D. Thompson	Freehold, R. D. 2	2 years	Monmouth
Joseph M. Cooper	Elmer, R. D. 2	2 years	Salem
Ramon Ayers	Beemerville	1 year	Sussex
Arthur Frey	Stewartsville	1 year	Warren

*Absent.

FROM OTHER ORGANIZATIONS

American Cranberry Growers' Association—D. M. Crabbe, Toms River, alternate for James D. Holman, Whitesville, 2 years; F. A. Scammell, Toms River, alternate for Theodore H. Budd, 1 year.

New Jersey State Horticultural Society—Lester Collins, Moorestown, 2 years; Lawrence J. Smith, South River, 1 year.

New Jersey State Grange—David H. Agans, Three Bridges, alternate for Harry E. Taylor, Freehold, 1 year; William H. Blackwell, Titusville, 1 year.

New Jersey Association of Nurserymen—Charles Hess, Mountain View, 2 years; William H. Wells, Jr., Millville, alternate for C. Courtney Seabrook, Bridgeton, 1 year.

New Jersey Florists' Association—George Smith, 557 Main Street, East Orange, alternate for Irving Christensen, Wood Ridge, 2 years; J. Fred Piper, Livingston, 1 year.

New Jersey State Poultry Association—R. L. Scharring-Hausen, Hopewell, 1 year; W. A. Cray, Stockton, 1 year.

Jersey Chick Association—Henry Rapp, Jr., Farmingdale, 1 year; Martin Schubkegel, Lakewood, 1 year.

New Jersey Agricultural Experiment Station—Joseph Barton, Marlton, R. D., 1 year.

New Jersey State College of Agriculture—William H. Martin, New Brunswick, 1 year.

Holstein-Friesian Association of New Jersey—Stanley B. Roberts, Port Jervis, N. Y., R. D. 1, 1 year.

New Jersey Guernsey Breeders' Association—Lloyd Bruce Wescott, Clinton, 1 year.

New Jersey Alfalfa Association—Herbert T. Borden

New Jersey State Potato Association— J. Edward Chamberlin, Cranbury, 1 year.

Cooperative Growers' Association, Inc.—Arthur L. Richie, Riverton, 1 year.

New Jersey Beekeepers' Association—Elmer G. Carr, Pennington, 1 year.

E. B. Voorhees Agricultural Society—H. Gordon Bailey, New Brunswick, R. D. 1, 1 year.

Blueberry Cooperative Association—Harold B. Scammell, Toms River, 1 year.

APPOINTMENT OF COMMITTEES

At the delegates' dinner held on the evening preceding the Convention, the nominating committee was appointed by President Blakeslee as follows:

Robert M. Dilatush, Jr., Chairman	Mercer County
Harold B. Everitt	Hunterdon County
D. M. Crabbe	Ocean County
Albert Gallino	Cumberland County
J. Willard Gardiner	Gloucester County
Gottlieb Katzenstein	Sussex County
Clement Lewis	Burlington County
Michael McPherson	Cape May County
Henry Rapp, Jr.	Monmouth County

Other committees, appointed at the Convention by President Blakeslee, were:

COMMITTEE ON RESOLUTIONS

Francis Ruzicka	Morris County
Martin Decker	Atlantic County
Herbert T. Borden	Gloucester County

COMMITTEE ON CREDENTIALS

Harvey M. Beal	Salem County
D. W. Amerman	Somerset County
Joseph Barton	Camden County

GOVERNOR'S ESCORT

Elmer H. Wene	Cumberland County
W. A. Cray	Hunterdon County
Lester Collins	Burlington County
David H. Agans	Three Bridges

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 James D. Holman, of Whitesville and Walton B. Kostenbader, of Blairstown, in nomination for membership on the State Board of Agriculture to succeed Jacob A. Blakeslee, Newton, and P. Wendell Beideman, Haddonfield, whose terms would expire on June 30, 1942. The nominations were seconded by Norman Van Horn, of Warren County. On motion of Francis Ruzicka, seconded by Martin Schubkegel, the nominations were closed and Messrs. Holman and Kostenbader were unanimously elected for a four-year period beginning July 1, 1942.

CITATIONS

Citations for distinguished service to agriculture were awarded to Jacob S. Katzenstein, of Sussex County, and John Casazza, of Atlantic County.

The citations, read by Secretary of Agriculture, Willard H. Allen, were as follows:

CITATION OF JOHN CASAZZA

Yours has been a lifetime of distinctive service to others. As a member of one of the pioneer families in upper Atlantic County, you have contributed much to the transformation of that area from virgin woodland to its present importance in the production of fine fruits and vegetables.

Ever modest and unselfish, you have served for over a half century as a leader in your community. Successful in your own extensive farm operations, you have always found time to encourage and assist your neighbors.

Your devotion to the cause of better education for rural youth, your keen interest in building strong farm organizations and your active participation in civic affairs are well known.

You are to be congratulated as you approach your seventy-fifth anniversary with continued optimism and with undiminished zeal for helping others, so characteristic of your career. The State Board of Agriculture desires publicly to commend you and so awards to you this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

CITATION OF JACOB S. KATZENSTEIN

For nearly 40 years you have rendered a most valuable service to your fellow farmers, particularly in the field of dairy husbandry, contributing in no small measure to the present high rank of Sussex County in efficient milk production.

Your keen interest in farm organizations, new crops, animal nutrition and herd improvement programs, and your prompt adoption of better farming practices have served to demonstrate to others that these are basic factors essential to success.

Recognized as an outstanding leader of your own community and county, you have never failed to respond to the call to serve the state-wide dairy interests of New Jersey, especially during the emergency which has prevailed during the past decade.

At a time when we are engaged in defending the ideals for which our nation stands, it is most fitting that we recognize your achievements in your adopted land with this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

REPORT OF COMMITTEE ON RESOLUTIONS

The following resolutions, presented by Mr. Francis Ruzicka and reported favorably by the committee, were adopted by the Convention:

WHEREAS, In fulfillment of mutual pledges for greater appreciation of the problems of all citizens of New Jersey, the State Chamber of Commerce and the Department of Agriculture have brought to us for the first time in the history of the New Jersey Agricultural Convention, the President of the United States Chamber of Commerce

AND WHEREAS, It is our special privilege in 1942 to welcome one of New Jersey's own first citizens, Albert W. Hawkes, in his official capacity as President of the United States Chamber of Commerce

AND FURTHER WHEREAS, Mr. Hawkes' record of good will toward, and active cooperation with, New Jersey's agriculture is so well known as to endear him personally to us all,

BE IT THEREFORE RESOLVED BY THIS CONVENTION that these inadequate words be spread in full on the minutes of the meeting and that a copy thereof duly attested by the Secretary and Board of Agriculture, be forwarded to Mr. Hawkes.

BE IT RESOLVED by this Convention that in view of the serious shortage and even greater impending shortage of hand labor for the picking and harvesting of vital farm crops, that every measure of cooperation be requested from the State Legislature and the State Department of Labor to relax and review during this trying period the strict prohibitions against the use of family labor.

RESOLVED that the Secretary and Board of Agriculture be instructed to confer with Selective Service officials to the end that a uniform definition of agriculture and proper grounds for agricultural labor deferment be established and copies of same be furnished to all regular and appeal boards in New Jersey by the Selective Service System.

RESOLVED, that this agricultural convention endorses and urges wide repetition of the fact that; "Food will help win the war and even more help to establish a just and lasting peace,"

BUT BE IT FURTHER RESOLVED, that the New Jersey Department of Agriculture urge in every way possible to all willing citizens the extreme advisability of leaving the task of increased farm production in the hands of farmers lest much valuable material, seed and labor be lost through inefficient or poorly advised attempts by men and women better qualified for equally important tasks in our national defense.

RESOLVED that this Convention, through its regularly elected officials, convey to the office of the Governor and to the State Highway Department an earnest appeal for cooperation and planning in the matter of improved county and township systems of farm-to-market roads, and wherever possible, adequately constructed bridges and culverts for the better transportation in all weather of New Jersey's vital food products to local and distant markets.

RESOLVED THAT the Agricultural Convention here assembled on January 27, 1942, does unanimously rise to thank the officials and scores of workers responsible for the planning and execution of the many details which make this Convention and its attendant meetings of such outstanding value for better farming through better fellowship and understanding.