

STATE OF NEW JERSEY
DEPARTMENT OF AGRICULTURE

W. H. ALLEN, *Secretary*



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Twenty-eighth Annual Report
OF THE
New Jersey
State Department of Agriculture

July 1, 1942 — June 30, 1943

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Trenton, N. J., June 30, 1943

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STATE OF NEW JERSEY
DEPARTMENT OF AGRICULTURE

W. H. ALLEN, *Secretary*
TRENTON

June 30, 1943.

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

I have the honor to transmit, on behalf of the State Board of Agriculture, the Twenty-eighth Annual Report of the New Jersey Department of Agriculture, for the fiscal year ended June 30, 1943.

Respectfully yours,

W. H. Allen

**TWENTY-EIGHTH ANNUAL REPORT OF THE
NEW JERSEY STATE DEPARTMENT OF AGRICULTURE
July 1, 1942 to June 30, 1943**

Report of the Secretary of Agriculture

W. H. ALLEN

The eighteen months which have passed since war came to America have seen New Jersey agriculture rise to the needs of the nation in its hour of peril. On the date of this report, covering the fiscal year just ended, the farmers of New Jersey are on the battlefield as surely as if they were bearing arms. The greatest agricultural effort in the recent history of the State is taking shape in the increased acreages of food crop plantings and the intensification of livestock and poultry production.

Rewards for their greater efforts in the past year, and incentive for further acceleration of their agricultural endeavors, have come to the farmers of New Jersey in the largest gross farm value of products for all time, estimated to be approximately 165 million dollars. The greater gross value of products has been hard-earned. In many instances the war-inflated costs of production have left the farmers with smaller net returns for their labor and investments than they would have a right to expect under normal conditions. Perhaps with the lessons of the last war still remembered, our farmers are investing their greater financial returns to improve their debt situation as well as to expand their facilities for food production. The last crop year was one of a series of years favored by weather and excellent growing conditions. These conditions cannot be expected to continue indefinitely, therefore our farmers have been doubly provident in using the increased rewards of the past few years to set their houses in order financially.

Besides unbalanced economics, many other physical handicaps are being encountered by our farmers, as a result of the war, and there are indications that these problems will become even more complex as the war progresses. The most acute problem the farmer faced during the year was that caused by a shortage of labor. Attractive wage rates offered in nearby war industries, coupled with the demands of Selective Service under our democratic process of manpower mobilization, have drained off a substantial amount of labor that is sorely needed in food production. Efforts of governmental agencies were directed toward the alleviation of this serious situation, and they succeeded in a degree, but not to the extent really necessary. It is a tribute to the farmers of New Jersey that they worked long and tirelessly in trying to make up this loss in manpower.

One of the groups under whose direction a substantial reservoir of farm help was developed was the recently created State Commission on Student Service. Acting in cooperation with the educational system of our state, the Extension Service and the U. S. Employment Service, this State Commission and its local county groups effectively set up procedures whereby an army of willing youths devoted a limited number of actual school days and, in some cases, entire summer vacations, to filling the gap on the farm labor front. Unskilled though they were, under adequate supervision a great many of them did yeoman service in the production and particularly in the harvesting of our crops.

Shortages of machinery, equipment and supplies have added to the burdens of the farmer. The limited production of farm machinery began to be felt in many quarters, and it was up to the ingenuity of our farmers, with the assistance of machinery dealers, to salvage, repair and share the equipment at hand. Fertilizer shortages, more particularly a reduction in nitrogen analyses during the spring months of 1943, were a matter of concern because high crop production depends upon essential plant nutrients.

The gasoline and rubber situation has aggravated marketing difficulties to some extent, because a great volume of our products normally moves, and has to move, to market by motor truck. However, Federal regulations placing a limitation on farm transportation mileage operations have been adjusted to meet our needs better than when first imposed.

The application of price control regulations to certain of our commodities has in some instances resulted in injustices because the authorities have not recognized and accepted conditions applicable to New Jersey, and have failed to maintain the higher levels of financial returns which have always been necessary because of our normally higher cost of operation. First to feel the effects of unbalanced regulation was the live poultry industry which was confronted with low price ceilings on the one hand and mounting costs of feed and labor on the other. As this report is written, it appears likely that similar unfavorable situations may soon develop in some other commodities important to our agriculture.

New Jersey's determination to meet and exceed, if possible, its food production goals has been aggressively demonstrated by our farmers throughout the state this year. The crop season of 1942 was one of our best in quantity of production. Increased acreages planted to essential food crops during the spring of 1943 are even higher than last year. Estimates place the acreage for major crops at about 800,000 acres, or about 13,000 acres more than in 1942 and some 20,000 acres above the 10-year average. A substantial portion of this increase is accounted for by white potatoes, to which 71,000 acres have been planted this year. This is larger than any potato acreage here since the early days of 1920. Acreages of vegetables for both market and processing held at about the same levels in both 1942 and 1943, in the neighborhood of 170,000 acres.

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Hatchery reports for the recent spring months give evidence that the coming year will witness a tremendous increase in poultry production in New Jersey. Market value of eggs when compared with production cost has encouraged the poultry expansion now in prospect. The poultry population has been increased by chick purchases in the recent spring on the strength of favorable prices, and in hopes that the ratio of cost vs. price will continue to favor the farmer. The verdict of history must be awaited to learn whether this expansion will prove wise economically for our farmers, although there can be no question as to its wisdom insofar as food production for the war is concerned.

The dairy outlook presents a somewhat discouraging aspect, in contrast with the generally favorable conditions under which this important branch of agriculture has operated for a number of years prior to 1943. Costs of production are steadily mounting; but product return has been effectively "frozen" under the Federal economic stabilization program. In the Federal pricing agency's deliberations on this problem, consumer resistance to increased prices for milk in proportion to its production cost has apparently carried greater weight than the arguments presented by agriculture for a farm price adjustment. Grave concern has been expressed that the policy will prove short-sighted, and result in decreased production of essential dairy products.

The immediate problems of agricultural production and marketing during the war may take precedence, in the minds and in the time of many farmers, over those fundamental problems of agriculture which were with us before the war and which will again be uppermost when peace returns. These are the long-time problems of disease and insect control, improved breeding of livestock and poultry, better seeds and plants, and official grading for purposes of market development with a view toward keeping ahead of the competition from other producing areas. At the same time that the services of the State Department of Agriculture have been converted to the immediate needs of wartime, with each staff member and bureau putting forth special efforts to serve the agricultural industry so that it can better serve the nation, all fundamental projects and principles concerned with these permanent problems of agriculture are being maintained so that the return of peace will not find that any serious setback has occurred in these programs.

One of the Department's fundamental functions which has contributed to the long-time improvement in New Jersey agriculture is its seed certification work. The major crops concerned in this program are tomatoes, potatoes, and more recently field crops, particularly soybeans, hybrid corn, oats and barley. It is of especial interest to record that New Jersey certified tomato seed is held in outstanding favor among tomato growers the country over, and this state now produces about three-fourths of the nation's certified tomato seed. Certification of seed has definitely accounted for increased yields over a period of years.

Cooperative enterprise among our producers is making constant gains. There are now nearly 14,000 members of cooperative agricultural associations who have pooled their interests together in one form or another for common good. Twelve country produce auctions, five associations handling eggs and poultry, two engaged in livestock marketing, and two large city farmers' markets comprise the major part of these activities. The benefits derived from them have been substantial and well worth the effort on the part of the great number of farmer-directors who have ably guided their activities. The Department has been closely associated with these organizations since the initial organization was launched fifteen years ago, by aiding in their incorporation and in supervision of quality standards for their products.

Recent Federal price-fixing policies on some products handled by these markets have jeopardized their activity and usefulness by obviating the foundation on which they were built, namely, selling to the highest bidder. Continued enforcement of unjust policies without consideration of the part the cooperative type of organization plays in the marketing of products will create a serious hardship and may even contribute to the suspension of some of our markets. It is the concensus among farm leaders that these cooperative organizations, if they can weather this period of control, will be a real nucleus around which much of our post-war planning for agriculture will be developed.

The year has been one of greater service by the Department. Its staff has been called upon for added responsibilities, not only because of decreased personnel, but also because of new and some unusual activities as a result of the war. Adjustments in transportation and reorganization of work programs have enabled us to contribute to the rubber and gasoline economy program by saving more than 40 per cent in the mileage of departmental automobiles during the past year.

For a more complete record of the services of the New Jersey State Department of Agriculture during the recent work-year, the detailed reports on the following pages are recommended to the reader.

COSTS OF MILK DISTRIBUTION SURVEY

The State Department of Agriculture was authorized under Chapter 263 of the Laws of 1942 to make examinations and studies of the cost records and accounts of stores, milk dealers, processors and sub-dealers licensed by the Director of Milk Control, for the Director of Milk Control to use in conjunction with available information on costs of production and costs of operations in determining prices for milk to consumers.

Every effort was made in carrying out this act of the legislature to see that the study made would be a thorough, careful presentation of facts and figures gathered by certified firms of accountants, directed and consulted by a person of recognized authority of national reputation.

The first step taken by the Department of Agriculture was to call together a committee consisting of representatives of organizations of dealers, farmers and consumers and to outline to them the plan of work for the study. Approval of the plan was obtained. The Department also, upon inquiry obtained from the Department of Banking and Insurance, names of firms of certified public accountants. These firms were interviewed and the following firms were selected because of their experience, size and reputation:

H. Braverman & Co., Newark, New Jersey
Ernst & Ernst, New York City
Puder & Puder, Newark, New Jersey

Ernst & Ernst were selected because of their past experience in making a similar study in New York State; Puder & Puder because their staff is one of the largest in the state and in a position to immediately undertake a phase of the study; H. Braverman & Co. because of similar investigations made before.

Dr. Leland Spencer, of Cornell University School of Agriculture, Department of Agricultural Economics, was engaged by the Department to head the study because of his many studies of a similar nature in the field of milk distribution. This proved to be a wise step inasmuch as it resulted in a program of work in which every step taken by the accounting firms was of value, and inefficient efforts were eliminated. Dr. Spencer was given full charge of the study without any suggestions or direction other than the law. Every cooperation was given him by the Department. All interested parties included in the study gave equally friendly and willing cooperation.

Before the study was started Dr. Spencer and the Secretary of Agriculture met with the following dealer organizations to acquaint them with procedure and goal of the study:

North Jersey Dealers' Association
South Jersey Dealers' Association
Sub-dealers
Official Grade A Dealers' Organization

After reviewing the situation and interpreting the purpose of the law, the decision was made to divide up the work into three parts and to assign one accounting firm to each phase. Ernst & Ernst were given the study of the dealer; Puder & Puder, stores; and Braverman, the sub-dealers. This seemed to work out exceedingly well.

It may be noted here that, although the firms whose records were studied offered every cooperation, still in many cases the type of records kept by the firms did not lend themselves to easy study. This was due in most cases to the fact that few dealers kept complete cost records of their business. In other cases the books incorporated the simplest of bookkeeping; while in others, outside business interests of the firm were bulked in with the expenses of doing business in the sale of milk.

The study most certainly indicated the need of keeping a better set of records by most dealers for their own information so that they might know better their costs of doing business.

The data assembled by Dr. Spencer and the accounting firms has been summarized in a short bulletin for immediate use. A more complete report and analysis is now being printed. The following is a general summary which appeared in the first published result of the study.

SUMMARY

The most striking fact disclosed by this study is the wide differences that exist in cost and profits not only between sections of the State, but also between various groups of dealers, plants and delivery systems within each of the principal areas.

The largest distributors both in northern New Jersey and in the southern part of the State made smaller profits than the smaller companies in proportion to their sales and capital invested.

Selling and delivery are the most expensive operations in getting milk from the farm to the consumer's doorstep. Remarkable differences were found in the costs of operating retail delivery routes and the loads carried on these routes—differences between the northern and southern parts of the state, and, in the northern area, differences between large dealers and sub-dealers. These differences may be summarized as follows:

	Cost per Route per Day	Number of Retail Quarts or Equiv- alent per Route per day	Cost per Quart
Northern New Jersey:			
Large Dealers	\$18.18	273	\$.0666
Many-route Sub-Dealers	\$17.74	366	\$.0484
Single-route Sub-Dealers	\$11.91	303	\$.0397
Southern New Jersey	\$13.39	334	\$.0401

In the northern part of the State the sub-dealers had larger loads on their routes and much lower delivery costs per quart of milk than the big dealers.

The southern New Jersey distributors delivered milk to retail customers for about two cents a quart less cost than did those in the northern section of the state. Again the difference in cost was due principally to the size of loads, which averaged 61 quarts more in South Jersey. The greater incentive offered to drivers on the South Jersey routes in the form of commission appeared to be an important reason for the difference.

The indicated profit margin on milk delivered to homes (one-eighth cent a quart) was too small to yield a normal return on the investment of large dealers in the northern part of the State. In the southern area the situation was much more favorable for retail trade.

In the northern area, substantial profit was made on milk delivered to stores by wholesale routes but no profit on that delivered by retail routes. The latter is more costly because of small-sized deliveries.

Several indications point to the probability that the margins now allowed to storekeepers on milk are below normal, and probably too small to encourage storekeepers to push the sale of this product.

Salaries and wages, including social security taxes and compensation insurance premiums, made up more than half the total cost of receiving, pasteurizing and bottling milk; nearly three-fourths the total cost of selling and delivering milk to family trade; and more than half the total administration and general expenses. It is evident, therefore, that really substantial economies in milk distribution can only be made by means of adjustments that will increase the number of quarts handled and delivered per dollar of salaries and wages paid.

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

It is obvious from the records of the past five years that the number of licensed dealers has dropped each year, but during the past two years the drop has been greater whereas it might be expected that with our entry into the War the effect would have been in the opposite direction. However, there have been restrictions and regulations put into effect by various Federal Government agencies which have had a great deal of influence on the economic conditions in general throughout the United States, and the milk industry certainly received its share of regulations.

Regulations which were put into operation shortly after our entry into the War in December, 1941, and those added as time went on showed their effect during the 1942-1943 licensing year to a greater degree than at any time previously. Such factors as the limiting of the amount of gas and number of tires, trucks and new machinery available together with numerous other items directly or indirectly reduced by Federal agencies had a very decided effect on the milk industry as a whole in this State. The producers endeavoring to increase their production had to contend with a greater scarcity of labor than ever before, higher costs of feed, cattle, fertilizer and farm equipment essential in the production of milk.

Some dealers considered that with the additional problems they must now contend with that it was better to sell their business, and obtain employment in some other line of work. Those dealers who have continued to

operate have found it more and more difficult to procure a sufficient quantity of milk to supply their trade, and with a much greater demand for this food due to increased purchasing power this problem became worse as time went on.

OPA was given authority to control prices on consumer goods, and in May, 1943, this body authorized an increase of 23 cents per hundredweight of milk containing 3.5 per cent butterfat to farmers by dealers and processors, but the dealers and processors were not permitted to increase the price of milk to consumers. As a result of this announcement by OPA the Milk Control Board held a public hearing on June 2 and 3 so that testimony might be submitted to the Director of the Milk Control Board on which he might base an order to the dealers of this State to raise the price of milk from \$3.60 to \$3.83 per hundredweight. The Director issued an order to take effect August 3 increasing the price of milk to \$3.83 as permitted by the OPA. The dealers appealed to the Milk Control Board, but that Board voted in favor of the Director's order and the date on which the order was to take effect was set by the Board to take effect on August 9. Seventeen dealers and processors in North Jersey appealed to the New Jersey Supreme Court for a decision in the matter.

Failure on the part of the surety company to pay to the Department \$5,000.00 (the full penalty of the bond) so that this money could be used to reimburse the farmers who sold milk to Elmer Kleppinger, T/as Farmers Exchange Company, resulted in the Department taking the case to the New Jersey Supreme Court. The case was heard on May 28, but, due to the decision rendered by the justice who heard the arguments being unsatisfactory to us on one important point in the case, this matter has been appealed to the Court of Errors and Appeals.

Two rather large plants in South Jersey and one in North Jersey that were experiencing difficulties in operating and would probably have had to close entirely have all been purchased by reliable dealers and these plants continue to offer good markets for numerous farmers in those localities. Although farmers can sell their product readily at this time due to the scarcity of milk, yet the loss of these markets would be severely felt as soon as conditions returned to normal or in case of a temporary flush period.

Due to negligence on the part of several dealers to renew their licenses on time it was necessary for the Department to take penalty action against seventeen dealers, penalties amounting to \$575.00.

Claims filed with us during this year amounted to \$5,421.87. This is the smallest amount of claims filed with us for the past several years. All claims have been satisfactorily settled.

Licenses were issued to 266 dealers who filed bonds totaling \$1,905,800.00.

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NUMBER OF LICENSEES UNDER MILK DEALERS' LAW

County	Licenses Issued		Bonds Filed	Amount of Bonds
Atlantic	2		2	\$50,000.00
Bergen	10		10	89,100.00
Burlington	18		18	133,200.00
Camden	9		9	45,000.00
Cape May	2		1	1,000.00
Cumberland	19		19	63,000.00
Essex	12		12	146,600.00
Gloucester	11		11	21,600.00
Hudson	2		1	4,000.00
Hunterdon	10		10	170,000.00
Mercer	24		24	127,200.00
Middlesex	16		16	81,700.00
Monmouth	24		24	103,400.00
Morris	32		27	94,100.00
Ocean	3		3	8,000.00
Passaic	13		13	83,800.00
Salem	12		9	25,400.00
Somerset	15		15	71,500.00
Sussex	2		2	52,000.00
Union	11		11	61,200.00
Warren	12		12	129,000.00
Out-of-State	7		7	345,000.00
Totals:	1942-43	266	256	\$1,905,800.00
	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

PRODUCE DEALERS' LAW

Now that a year has passed since our last report in which it was indicated that our figures at that time showed there would not be much if any increase in the number of licensees during 1942-43, it can be stated that only four more licenses were issued this year than in 1941-42.

Several reasons were cited at that time for the lack of new dealers' entering this line of work, and several more could now be added to that list.

Dealers have stated that it was not only difficult to get a supply of all the various commodities which they customarily handled, but also only very limited supplies of the most generally used vegetables and fruits. Some dealers reported that the ceiling prices set by the OPA in some instances were so low that the margin of profit was either eliminated entirely or so small that in order to continue in business it would be necessary to operate in violation of the OPA price regulations.

Several of our licensed dealers of previous years either discontinued business or tried their luck in handling those commodities on which ceiling prices had not been set. Others, according to reports received from time to time, showed a rather large number of dealers charged prices above those set by the OPA and several of those dealers were penalized by the OPA for such violations.

During the year we had one of our licensees go into receivership owing a rather large amount to the trade, but apparently paid all their New Jersey

farmers for no claims were filed with us against this firm's bond; another dealer was unable to pay all his creditors among which were two of our farmers both of whom filed claims totaling \$357.31. This amount was paid to the farmers by the surety company. This case is the only one this year in which a loss was sustained by a bonding company. Owing to the failure on the part of two other licensees to pay their producers in full, it was necessary to schedule hearings before the Secretary. However, one dealer paid his debts in full previous to the date set for his hearing, but the delay on the part of the other dealer in liquidating the claim although ordered to do so at the close of the hearing resulted in the revocation of his license. Upon full payment of the claim he was notified that he could obtain a license for the balance of the year.

Usually dealers comply upon being notified by the Department to obtain or renew a license so that in only one instance was it necessary to prosecute for failure to comply. The Court awarded the Department \$100.00 penalty plus costs against this violator.

Seven claims were filed totaling \$892.41 which is a decided drop in comparison to the amount of claims filed in previous years, and all claims have been paid in full.

NUMBER OF LICENSEES UNDER PRODUCE DEALERS' LAW

County	Licenses Issued		Bonds Filed	Amount of Bonds
Atlantic	31		31	\$93,000.00
Burlington	6		6	18,000.00
Camden	6		6	18,000.00
Cumberland	41		41	123,000.00
Essex	41		41	123,000.00
Gloucester	32		32	95,000.00
Hudson	4		4	12,000.00
Middlesex	6		6	18,000.00
Mercer	8		8	24,000.00
Monmouth	20		20	60,000.00
Passaic	13		13	39,000.00
Salem	10		10	30,000.00
Somerset	1		1	3,000.00
Union	1		1	3,000.00
Warren	5		5	15,000.00
Out-of-State	114		114	312,000.00
Totals:	1942-43	339	339	\$1,017,000.00
	1941-42	335	335	1,005,000.00
	1940-41	332	332	995,000.00
	1939-40	314	314	942,000.00
	1938-39	312	312	935,000.00

CATTLE DEALERS' LAW

Although for the past few years there has been more interest in the raising of steers on farms in this State, primarily for the purpose of increasing the humus in the soil, the number of steers increased very slowly until 1942. However, in that year a decided increase took place largely due to the high prices paid for beef. High prices continued during the greater part of

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1943 so that according to data on this subject there was an increase in the number of steers of approximately 360 per cent during the first half of 1943 over that of 1941-42.

As most of these steers were imported from other states, our records show that many new dealers as well as dealers who were licensed previously, but who had discontinued business for several years, obtained licenses or, in the latter cases, renewed their licenses so that they might transport cattle interstate without unnecessary delays and also carry on a profitable business. Most of these dealers would prefer to handle only dairy animals, but dairy cows continued to be difficult to obtain and were much more expensive to purchase whenever obtainable.

An indication that the cattle business has been more prosperous this year than for the past several years is the fact that very few complaints of any kind have been made to us, in fact it was necessary in only one case for the Department to take part in a farmer-dealer dispute and this case was agreeably settled promptly by the dealer concerned.

We are pleased to report that it was unnecessary to penalize any dealer for violation of the statute or regulations concerned with the licensing of cattle dealers.

Although the total number of licenses issued for this year is only slightly higher than that of the previous year these figures by no means indicate the numerous changes that took place in this line of work during the present year.

Licenses were issued to 213 dealers.

NUMBER OF LICENSEES UNDER CATTLE DEALERS' LAW

County	Licenses Issued
Bergen	4
Burlington	13
Camden	4
Cape May	5
Cumberland	12
Essex	10
Gloucester	5
Hudson	2
Hunterdon	18
Mercer	7
Middlesex	5
Monmouth	13
Morris	18
Ocean	6
Passaic	12
Salem	19
Somerset	11
Sussex	25
Union	8
Warren	15
Out-of-State	1
Total:	1942-43 213
	1941-42 207
	1940-41 205
	1939-40 207
	1938-39 207

FARMERS' WEEK

For the second successive year New Jersey's annual Farmers' Week, held in Trenton, January 25-28, 1943, was dominated by discussions of wartime problems centering around increased food production, labor and supply shortages, marketing, and future planning. Following the annual convention of official delegates to elect two members of the State Board of Agriculture, numerous commodity and livestock organizations held one or two-day meetings to seek the means of accomplishing the objectives established for agriculture in wartime.

Continued suspension of the New Jersey Farm Show, long an allied feature of Farmers' Week, was obviously necessary. Lack of farm machinery of all kinds, as well as adequate space in which to stage any kind of an exposition, prompted this move. Without doubt this same action will continue for the duration.

INFORMATION AND PUBLICATIONS, 1942-43

An information service was conducted by the Department of Agriculture to disseminate information on the activities and regulations of the Department to press and radio.

Excellent cooperation was given by newspapers, agricultural publications and radio. Through these means, it was possible to reach a wide audience of farmers and consumers with timely agricultural facts, and to call attention to the Department's service to the public.

Farm Service News, prepared for farmers and containing general agricultural information, was issued bi-monthly to a list of 16,000 persons. Many of the articles prepared for this publication were reprinted in newspapers of the state, and others were the basis for farm program radio comment.

Exhibits of the Department's work and displays of New Jersey agricultural products were staged at various meetings, conventions and the State Fair. An innovation, in this connection, was the New Jersey asparagus "tasting" at which approximately 125 hotel and restaurant executives of the New York City area were introduced to this choice product of the State. Among other efforts along the same line in which the information service participated were egg freshness demonstrations for more than 2,000 consumers, in cooperation with the Bureau of Markets, and promotion of New Jersey cranberries, peaches, apples and blueberries.

A total of 135 regular news releases, including mat releases, was issued to a list of approximately 200 newspapers of New Jersey, New York City and Philadelphia; and to all agricultural publications, both in New Jersey and in nearby states which circulate in New Jersey; and to a list of 20 radio stations of the area which have farm programs or have requested our informational releases for their general news broadcasts.

In addition, 119 special articles were prepared for publication and broadcast purposes; besides a great amount of editorial cooperation given

to agricultural writers for press and radio, and the authors of several books on farming. Special cooperation was also given to a large number of persons requiring information or assistance in the preparation of lectures on agricultural subjects.

Following is a list of the printed publications issued during the fiscal year ending June 30, 1943:

- Circular No. 333—Fresh Eggs in New Jersey.
- 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 Fruits and Vegetables Fresh From the Farms of New Jersey.
- Circular No. 337*—Dealers Licensed Under the Milk Dealers' Licensing and Bonding Act; Produce Dealers' Licensing and Bonding Act; Cattle Dealers' Licensing Act.
- *Circular No. 339—New Jersey Agriculture.
- Circular No. 342—County Boards of Agriculture and State Agricultural Organizations for 1943.
- Circular No. 266—(Reprint) The Treatment of American Foulbrood.
- Handbook—The Breeding Flocks and Hatcheries Under Official Supervision in New Jersey, 1943.
- *Handbook—Costs of Distributing Milk in New Jersey.
- Twenty-seventh Annual Report of the New Jersey Department of Agriculture, 1941-1942.
- Six issues of bi-monthly publication, *Farm Service News*.
- Leaflet—Drink New Jersey Premium Milk.
- Leaflet—Amendments to Official Grades for Raw and Pasteurized Milk and Cream.
- Poster—New Jersey Auction Calendar.
- Program—1943 Agricultural Week.
- Booklet—Distinguished Service Citations for 1943.
- Booklet—Highlights of Your Convention.
- Four Issues of *Farm Week Chaff*.

*Edited and prepared for publication, but not issued during fiscal year.

COOPERATION WITH NEW JERSEY COUNCIL

For the fifth consecutive year, an allotment of funds provided by the New Jersey Council, for the promotion of the agricultural products of the State, was disbursed under supervision of the Department of Agriculture. This year, the allotment was approximately \$11,000. Cooperating commodity organizations appropriated private funds to match or exceed the governmental fund. The total was invested in newspaper and magazine advertising space, promotional literature and poster advertising.

Under this cooperative plan, advertising projects were conducted with the Blueberry Cooperative Association, the New Jersey Peach Industry Committee, the New Jersey Association of Nurserymen, Jersey Fruit Cooperative Association, the New Jersey Poultry and Egg Cooperative Marketing Associa-

tion, the New Jersey Field Crop Improvement Association, the Jersey Chick Association, the New Jersey Holstein-Friesian Association, and the Cooperative Marketing Associations in New Jersey, Inc.

THE NEW JERSEY JUNIOR BREEDERS' FUND

During the fiscal year, ending June 30, 1943, 71 livestock loans were made, totaling \$5,177.05. There were only two agricultural loans, amounting to \$72.50. Baby beef loans comprised more than half of the loans made. At the close of the year there were 109 loans outstanding, totaling \$7,849.89, of which \$420.30, or 5.35 per cent was one month or more overdue.

Only five of the loans made were to vocational agricultural students. These loans dropped off very sharply compared to previous years, probably due to their cooperation with the Farm Security Administration's program during the year.

During the period covered by this report, Salem County led with 25 loans, totaling \$1,792.65; Middlesex County had 15 loans, amounting to \$920.60; Hunterdon County had seven loans, \$739.00; Somerset County, seven loans, \$519.50; Warren County, six loans, \$258.00; Burlington County, three loans, \$271.20; Mercer County, three loans, \$218.00; Sussex County, three loans, \$205.00; Morris County, two loans, \$200.00, and Cumberland County, two loans, \$125.60. The total amount of loans in each county since the Fund was established follows:

AMOUNT LOANED BY COUNTIES TO DATE

County	Amount
Atlantic	\$...
Bergen	75.00
Burlington	11,775.91
Camden	...
Cape May	938.75
Cumberland	7,726.23
Essex	335.95
Gloucester	3,617.30
Hudson	...
Hunterdon	9,463.81
Mercer	23,527.16
Middlesex	17,936.19
Monmouth	11,161.85
Morris	5,479.00
Ocean	2,356.00
Passaic	166.25
Salem	22,538.11
Somerset	5,996.40
Sussex	13,138.68
Union	...
Warren	12,910.58
Total	\$149,143.17

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THE BABY BEEF SHOW AND SALE

The Baby Beef Show and Sale was held on December 9, at New Brunswick. An interested group of buyers was present, resulting in a top price of 50 cents a pound for the grand champion animal and an average price of 29 cents a pound for all animals sold. The State Chamber of Commerce gave its usual contribution of \$200.00, which was used to present war savings stamps to the winners. Twenty-five dollar war bonds were awarded to Asher Schanck, Jr. and William E. Thompson, Jr., both of Monmouth County, who won, respectively, the highest scoring project and best feeding and showmanship.

Certificates of meritorious production records were again presented by the New Jersey Junior Breeders' Fund at the annual dairy banquet during Agricultural Week. Thirty-three awards were made at this time.

A record of the livestock loans and the agricultural loans that have been made each year since the Junior Breeders' Fund was established follows:

LIVESTOCK LOANS

Fiscal Year	<i>Dairy Loans</i>		<i>Beef Cattle</i>		<i>Pig Loans</i>		<i>Chicken Loans</i>		<i>Turkey Loans</i>		<i>Total Livestock Loans</i>	
	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	4,614.00	..	...	10	620.00	31	890.70	..	...	95	6,154.70
1928-29	55	4,950.00	..	...	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	21	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	4,355.00	..	...	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	155.10	126	7,566.24
1939-40	35	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	7,065.85
1942-43	24	2,095.00	30	2,654.85	1	50.00	6	280.45	1	96.75	71	5,177.05
Total	1,136	\$99,013.00	178	\$10,780.63	275	\$15,178.78	452	\$20,499.93	18	\$692.55	2,059	\$146,164.89

AGRICULTURAL LOANS*

Year	<i>Poultry Feed Loans</i>		<i>Pig Feed Loans</i>		<i>Agricultural Prod. Loans</i>		<i>Miscellaneous Loans</i>		<i>Total Agricultural Loans</i>	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
1934-35	3	\$38.38	..	...	..	...	..	...	3	\$38.38
1935-36	..	...	..	...	..	...	..	...	..	...
1935-37	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
1942-43	..	...	..	...	2	72.50	..	...	2	72.50
Total	113	\$2,031.89	11	\$193.25	27	\$745.12	1	\$8.02	152	\$2,978.28

*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.

Report of the Bureau of Animal Industry

DR. R. A. HENDERSHOTT, *Chief*

TUBERCULOSIS ERADICATION

Notwithstanding the fact that all cattle in the State, with the exception of the small herds in Atlantic and Cape May counties, are tuberculin-tested annually, we have continued to encounter breaks in accredited herds throughout this fiscal year.

In the two counties mentioned above, with the exception of the larger milk-producing herds which are tested annually, we have planned to test every two years, because of the necessity for curtailing expenses as much as possible, with respect to both veterinary service and travel.

At the beginning of this fiscal year, there were 234 herds classed as infected. On checking the post mortem reports of reactors disclosed in these herds, we find that when the reactors were slaughtered 55 of the infected herds failed to exhibit lesions of tuberculosis and 178 revealed lesions.

Retests of these infected herds have been made at frequent intervals and 133 of the 234 infected herds recorded at the beginning of the year have become re-accredited.

During the year, 219 additional herds were classed as infected, but on removal of reactors for slaughter the reactors from 65 of these herds failed to disclose lesions while 154 gave evidence of tuberculosis. Of these 219 herds, 23 were reaccredited at the end of two 60-day retests while 20 herds were removed from the infected herd quarantine list but have not been reaccredited because one year has not elapsed since the test on which the reactors were disclosed.

Where no lesions of tuberculosis are disclosed and the herd passes two clean tests, it has been our procedure to reaccredit the herd without further test. Where definite lesions were found, reaccreditation is withheld until one year has elapsed since the test on which the reactors were disclosed. This procedure is one which is followed in practically all of the states.

Although the bureau has been handicapped because of the loss of veterinarians through death, resignation and the fact that some have joined the armed forces, we were successful in reaccrediting as tuberculosis-free the counties of Passaic, Burlington, Mercer, Warren, Sussex, Somerset, Morris and Union during this fiscal year. In each instance the percentage of infection disclosed on the last test of the entire county was less than one-half of one per cent.

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On June 30, 1943, there were 15,965 herds consisting of a total of 212,323 head of cattle under supervision in the State, a decrease of 209 herds and an increase of 3,296 cattle over the number recorded at the beginning of this fiscal year.

During the year, initial tests were made on 1,546 herds of 8,668 cattle and 14 or 0.16 per cent of the cattle reacted. The percentage of reactors disclosed on tests of cattle added to herds under supervision was 1.66. Of 7,521 cattle tested, 125 reacted.

A total of 235,221 tuberculin tests were conducted, resulting in 580 reactors or 0.25 per cent infection.

Indemnity payments were made on 454 reactors, 14 of which were registered and 440 grade animals as compared with 726 reactors for the preceding year, 45 of which were registered and 681 grades.

Following is a table which will give the trend of tuberculin test results in the State for the past 10 years:

Year	Herds Under Supervision	Animals Under Supervision	Tests Conducted	Reactors Resulting	Per Cent Reaction
1932-1933	15,880	163,692	151,073	3,090	2.01
1933-1934	18,939	184,343	168,380	3,223	1.91
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
1942-1943	15,965	212,323	235,221	580	.25

The amount of state indemnity paid during this fiscal year for reactors condemned increased from an average of \$38.08 for the fiscal year, 1941-1942, to \$43.14 for 1942-1943. During the year, 26,381 dairy cattle and 2,058 steers, a total of 28,439 cattle, were imported as compared with 26,905 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, 1943.

Class of Cattle	Number of Animals	Amount Paid
Registered animals	14	\$ 1,109.48
Grade animals	446	18,732.92
Registered and Grade	460	\$19,842.40

Average State Indemnity Paid Per Head:

Registered animals	\$79.24
Grade animal	42.00
Registered and Grade	43.14

STATE DEPARTMENT OF AGRICULTURE

The following summary indicates the amount of salvage received by owners for reactors resulting from the tuberculin test during the year ending June 30, 1943.

Class of Cattle	Number of Animals	Amount Paid
Registered animal	14	\$ 1,206.83
Grade animals	446	33,427.76
Registered and Grade	460	\$34,634.59

Average Salvage Received Per Head:

Registered animal	\$86.20
Grade animal	74.95
Registered and Grade	75.29

The following summary indicates the amount of Federal indemnity paid for reactors resulting from the tuberculin test during the year ending June 30, 1943.

Class of Cattle	Number of Animals	Amount Paid
Registered animals	14	\$ 552.02
Grade animals	446	8,472.09
Registered and Grade	460	\$9,024.11

Average Federal Indemnity Paid Per Head:

Registered animal	\$39.43
Grade animal	19.00
Registered and Grade	19.62

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)	\$53,501.10
Average amount received per head by owners for reactors	\$138.05

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TOTAL STATE INDEMNITY PAID

July 1, 1942 to June 30, 1943

County	Amount
Atlantic	\$ 40.67
Bergen	...
Burlington	2,789.01
Camden	170.46
Cape May	...
Cumberland	204.01
Essex	356.05
Gloucester	84.39
Hudson	...
Hunterdon	1,122.21
Mercer	423.01
Middlesex	706.00
Monmouth	528.75
Morris	903.93
Ocean	886.38
Passaic	...
Salem	1,075.05
Somerset	1,909.94
Sussex	5,250.56
Union	286.52
Warren	3,105.96
State	\$19,842.90

TOTAL STATE INDEMNITY PAID, FROM THE BEGINNING OF
ACCREDITED HERD WORK IN 1916 TO JUNE 30, 1943

County	Amount
Atlantic	\$ 8,620.13
Bergen	33,822.93
Burlington	331,827.03
Camden	14,260.49
Cape May	10,847.14
Cumberland	76,074.17
Essex	38,958.98
Gloucester	63,643.56
Hudson	4,455.78
Hunterdon	344,129.70
Mercer	179,705.83
Middlesex	77,633.38
Monmouth	128,211.44
Morris	135,713.21
Ocean	31,621.80
Passaic	33,314.94
Salem	356,052.01
Somerset	220,259.41
Sussex	962,764.80
Union	39,154.72
Warren	373,873.87
State	\$3,464,946.32

HERDS AND CATTLE UNDER STATE AND FEDERAL SUPERVISION

June 30, 1943

County	Herds Under Super- vision	Herds Fully Accred- ited	No. of Cattle Under Spervision, 6/30/43			No. of Cattle Fully Accredited, 6/30/43		
			P.B.	Grades	Total	P.B.	Grades	Total
Atlantic	231	199	6	567	573	4	527	531
Bergen	226	198	182	2,513	2,695	177	2,113	2,290
Burlington	1,162	1,025	1,190	21,643	22,833	1,170	19,977	21,147
Camden	304	253	298	1,430	1,728	286	1,301	1,587
Cape May	175	150	81	678	759	81	640	721
Cumberland	1,132	980	505	7,300	7,805	489	6,754	7,243
Essex	119	103	218	1,886	2,104	217	1,477	1,694
Gloucester	1,055	829	707	5,036	5,743	685	4,733	5,418
Hudson	24	10	...	102	102	...	78	78
Hunterdon	2,013	1,918	2,563	27,924	30,487	2,443	24,031	26,474
Mercer	865	730	1,459	8,639	10,098	1,383	7,434	8,817
Middlesex	1,067	930	695	7,377	8,072	739	4,378	5,117
Monmouth	1,312	1,082	1,667	8,627	10,294	1,303	7,851	9,154
Morris	908	747	2,089	10,386	12,475	1,950	9,965	11,915
Ocean	283	255	20	1,506	1,526	16	1,331	1,347
Passaic	201	184	70	2,542	2,612	20	2,158	2,178
Salem	1,279	1,076	400	17,422	17,822	380	16,611	16,991
Somerset	1,087	932	2,786	10,069	12,855	2,655	9,171	11,826
Sussex	1,148	958	2,314	31,874	34,188	2,117	27,329	29,446
Union	193	170	72	2,892	2,964	72	1,994	2,066
Warren	1,181	1,014	1,824	22,764	24,588	1,775	21,864	23,639
State	15,965	13,743	19,146	193,177	212,323	17,962	171,717	189,679

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INFECTED HERD RECORD

County	No. of Infected Herds in New Jersey, 6/30/43	No. of Cattle in Infected Herds, 6/30/43	No. of Reactors Disclosed in Infected Herds, 7/1/42 to 6/30/43
Atlantic	1	12	1
Bergen	..	...	...
Burlington	16	597	59
Camden	..	...	1
Cape May	..	...	...
Cumberland	5	192	7
Essex	3	155	33
Gloucester	5	83	6
Hudson	..	...	...
Hunterdon	7	187	41
Mercer	10	909	13
Middlesex	13	1,472	21
Monmouth	16	375	21
Morris	5	181	18
Ocean	4	106	28
Passaic	1	53	2
Salem	19	646	52
Somerset	14	345	57
Sussex	46	1,893	136
Union	1	1,171	...
Warren	35	1,302	84
State	201	9,679	580

INITIAL TESTS MADE AND REACTORS RESULTING

July 1, 1942 to June 30, 1943

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	28	2	40	..	..	..	..	42	..	..
Bergen	5	4	6	..	..	..	..	10	..	..
Burlington	74	...	385	..	2	..	.52	385	2	.52
Camden	51	1	140	..	1	..	.71	141	1	.71
Cape May	24	...	37	..	..	..	..	37	..	..
Cumberland	133	3	398	..	2	..	.50	401	2	.50
Essex	11	1	21	..	..	..	..	22	..	..
Gloucester	118	72	303	..	..	..	..	375	..	..
Hudson	14	...	24	..	..	..	..	24	..	..
Hunterdon	169	98	1,135	..	1	..	.09	1,233	1	.08
Mercer	109	66	389	..	..	..	..	455	..	..
Middlesex	112	11	422	..	2	..	.47	433	2	.46
Monmouth	118	49	255	..	1	..	.39	304	1	.33
Morris	105	118	540	..	..	..	..	658	..	..
Ocean	25	3	76	..	..	..	..	79	..	..
Passaic	4	4	55	..	..	..	..	59	..	..
Salem	123	9	839	..	1	..	.12	848	1	.12
Somerset	105	107	407	..	..	..	..	514	..	..
Sussex	96	155	1,322	..	1	..	.08	1,477	1	.07
Union	20	...	37	..	..	..	..	37	..	..
Warren	102	61	1,073	..	3	..	.28	1,134	3	.26
State	1,546	764	7,904	..	14	..	.18	8,668	14	.16

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

July 1, 1942 to June 30, 1943

	INITIAL TESTS					HERD ADDITION TESTS					OTHER TESTS				
	Lots	Tested		Reactors		Lots	Tested		Reactors		Lots	Tested		Reactors	
		Reg.	Gr.	Reg.	Gr.		Reg.	Gr.	Reg.	Gr.		Reg.	Gr.	Reg.	Gr.
1942															
July	20	17	120	..	..	..	..	..	..	..	137	209	2,145	..	6
August	9	..	14	..	..	..	..	2	..	2	189	408	3,137	2	.44
September	24	1	117	..	..	..	..	..	..	..	264	1,092	3,039	..	2
October	11	3	24	..	..	..	..	2	..	..	242	166	3,228	..	3
November	11	..	21	..	..	2	1	24	..	1	255	619	4,238	..	15
December	4	9	8	..	..	1	..	1	..	..	130	235	2,417	..	2
1943															
January	10	55	64	..	..	1	4	..	..	..	101	96	3,347	..	7
February	21	..	91	..	..	1	3	16	..	..	197	44	3,650	..	2
March	20	6	81	..	..	5	1	38	1	..	271	422	3,540	..	..
April	26	54	133	..	..	2	1	40	1	2	210	223	3,899	..	3
May	48	22	211	..	..	2	15	57	..	3	306	1,079	3,126	..	9
June	26	4	68	..	1	..	..	34	..	20	197	105	2,269	..	25
Totals	230	171	952	..	1	14	25	214	2	28	2,499	4,698	38,035	2	118
Percentage of Reactors				..	.11				8.00	13.08				.04	.31
Average Percentage				.09					12.55					.28	

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

July 1, 1942 to June 30, 1943

	Lots	INITIAL TESTS				HERD ADDITION TESTS					OTHER TESTS				
		Tested		Reactors		Lots	Tested		Reactors		Lots	Tested		Reactors	
		Reg.	Gr.	Reg.	Gr.		Reg.	Gr.	Reg.	Gr.		Reg.	Gr.		
1942															
July	11	..	49	..	1	..	..	..	..	..	28	...	...	..	..
August	4	..	6	..	..	..	..	29	..	..	89	12	316	..	3
September	11	..	41	..	..	..	..	248	..	..	97	19	1,101	..	..
October	10	1	36	..	..	..	..	53	..	..	41	40	1,497	..	17
November	13	..	5	..	..	..	..	86	..	1	49	135	2,131	..	1
December	2	..	13	..	..	1	..	14	..	..	14	7	473	..	..
1943															
January	5	..	51	..	..	..	..	33	..	..	74	12	746	..	..
February	8	15	20	..	..	..	14	59	..	..	96	236	477	..	..
March	3	..	5	..	..	..	..	30	..	1	75	36	1,269	..	4
April	12	..	359	..	..	1	..	154	..	1	79	243	2,843	..	..
May	17	21	32	..	1	..	..	67	..	1	56	23	1,967	..	..
June	30	4	91	..	..	..	..	75	..	..	123	19	750	..	1
Total	126	41	708	..	2	2	14	848	..	4	821	782	13,570	..	26
Percentage of Reactors				..	.28				..	.47				..	.19
Average Percentage					.27					.46					.18

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

July 1, 1942 to June 30, 1943

	Lots	INITIAL TESTS				Lots	HERD ADDITION TESTS				Lots	OTHER TESTS			
		Tested		Reactors			Tested		Reactors			Tested		Reactors	
1942		Reg.	Gr.	Reg.	Gr.		Reg.	Gr.	Reg.	Gr.		Reg.	Gr.	Reg.	Gr.
July	70	2	190	..	..	9	2	128	..	3	509	361	3,207	1	10
August	42	4	126	..	..	29	1	389	..	6	514	632	7,010	..	7
September	94	16	376	..	1	28	114	463	2	5	1,036	1,302	15,566	..	30
October	130	46	648	..	1	24	92	726	..	9	975	911	13,754	3	13
November	65	66	307	..	..	31	12	661	..	14	971	1,214	16,498	..	23
December	80	12	686	..	1	45	5	555	..	5	795	2,101	12,720	1	22
1943															
January	113	9	601	..	..	48	42	666	..	7	894	1,280	11,662	1	31
February	87	36	671	..	5	34	34	479	..	16	1,033	2,363	15,103	..	28
March	114	58	782	..	1	28	17	404	..	5	920	1,760	14,261	..	35
April	112	125	738	..	1	18	24	575	1	10	1,025	1,620	13,308	..	47
May	130	162	601	..	1	26	34	526	..	5	1,020	1,812	11,712	1	26
June	153	16	518	..	..	23	11	460	..	3	1,126	1,352	10,438	1	15
Totals	1,190	552	6,244	..	11	343	388	6,032	3	88	10,818	16,708	145,239	8	287
Percentage of Reactors				..	.18				.77	1.46				.05	.20
Average Percentage					.16					1.42					.18

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SUMMARY OF CATTLE TESTED UNDER ACCREDITED HERD PLAN

July 1, 1942 to June 30, 1943

INITIAL TESTS	Registered Animals	Grade Animals	Total
Tested	764	7,904	8,668
Reacted	...	14	14

Percentage of Reactors .16

HERD ADDITION TESTS

Tested	427	7,094	7,521
Reacted	5	120	125

Percentage of Reactors 1.66

OTHER TESTS

Tested	22,188	196,844	219,032
Reacted	10	431	441

Percentage of Reactors .20

TOTAL

Tested	235,221
Reacted	580
Percentage of Reactors	.25
Percentage of Reactors Based on Cattle Population	.27

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

July, 1942 to June, 1943

July, 1941 to June, 1942

County	No. Animals Under Supervision	No. Animals Reacting	Per Cent Reaction On Total Cattle Pop- ulation	No. Tests Made	Per Cent Reaction On Tests Made	No. Animals Under Supervision	No. Animals Reacting	Per Cent Reaction On Total Cattle Pop- ulation	No. Tests Made	Per Cent Reaction On Tests Made
Atlantic	573	1	.17	583	.17	545	..	..	176	..
Bergen	2,695	..	..	1,083	..	2,681	26	.97	5,068	.51
Burlington	22,833	59	.26	24,995	.24	22,419	104	.46	28,831	.36
Camden	1,728	1	.06	1,912	.05	1,797	1	.06	1,459	.07
Cape May	759	..	..	756	..	793	2	.25	861	.23
Cumberland	7,805	7	.09	7,219	.10	7,394	2	.03	6,868	.03
Essex	2,104	33	1.57	2,971	1.11	2,306	98	4.25	4,302	2.28
Gloucester	5,743	6	.10	6,464	.09	5,630	9	.16	5,940	.15
Hudson	102	..	..	102	..	103	..	..	103	..
Hunterdon	30,487	41	.13	27,524	.15	27,418	38	.14	30,482	.12
Mercer	10,098	13	.13	13,030	.10	10,325	23	.22	10,244	.22
Middlesex	8,072	21	.26	11,364	.18	7,641	41	.54	11,831	.35
Monmouth	10,294	21	.20	10,890	.19	10,148	23	.23	10,974	.21
Morris	12,475	18	.14	13,736	.13	13,142	80	.61	16,063	.50
Ocean	1,526	28	1.83	1,626	1.72	1,496	8	.53	1,977	.40
Passaic	2,612	2	.08	1,737	.12	2,648	12	.45	5,982	.20
Salem	17,822	52	.29	20,702	.25	16,589	54	.33	21,762	.25
Somerset	12,855	57	.44	14,590	.39	12,405	44	.35	13,588	.32
Sussex	34,188	136	.40	40,633	.33	35,729	242	.68	47,783	.51
Union	2,964	..	..	6,281	..	3,564	2	.06	6,913	.03
Warren	24,588	84	.34	27,023	.31	24,254	62	.26	27,670	.22
State	212,323	580	.27	235,221	.25	209,027	871	.42	258,877	.34

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

County	July, 1940 to June, 1941					July, 1939 to June, 1940				
	No. Animals Under Supervision	No. Animals Reacting	Per Cent Reaction On Total Cattle Pop- ulation	No. Tests Made	Per Cent Reaction On Tests Made	No. Animals Under Supervision	No. Animals Reacting	Per Cent Reaction On Total Cattle Pop- ulation	No. Tests Made	Per Cent Reaction On Tests Made
Atlantic	543	5	.92	549	.91	537	6	1.12	818	.73
Bergen	2,940	21	.71	4,428	.47	2,892	16	.55	3,897	.41
Burlington	22,219	146	.66	28,326	.52	22,508	100	.44	25,776	.39
Camden	1,725	3	.17	2,134	.14	1,726	6	.35	1,748	.34
Cape May	772	..	..	828	..	889	..	..	932	..
Cumberland	7,058	14	.20	6,854	.20	6,738	7	.10	5,449	.13
Essex	2,281	26	1.14	2,668	.97	2,209	3	.14	3,556	.08
Gloucester	5,550	7	.13	6,272	.11	5,725	12	.21	5,741	.21
Hudson	113	..	..	150	..	120	1	.83	122	.82
Hunterdon	27,378	116	.42	28,861	.40	27,454	98	.36	31,026	.32
Mercer	9,970	18	.18	13,822	.13	9,570	30	.31	14,087	.21
Middlesex	7,783	25	.32	12,005	.21	7,931	32	.40	11,107	.29
Monmouth	9,813	32	.33	13,757	.23	9,603	84	.87	12,206	.69
Morris	13,147	118	.90	16,526	.71	12,627	22	.17	14,907	.15
Ocean	1,630	3	.18	1,629	.18	1,655	14	.85	1,899	.74
Passaic	2,714	18	.66	3,588	.50	2,739	6	.22	3,565	.17
Salem	16,448	77	.47	21,301	.36	16,323	100	.61	21,939	.46
Somerset	11,957	44	.37	13,327	.33	11,997	34	.28	13,569	.25
Sussex	35,660	270	.76	55,419	.49	34,601	360	1.04	49,407	.73
Union	3,679	19	.52	7,345	.26	3,446	57	1.65	7,495	.76
Warren	24,843	66	.27	31,202	.21	24,897	102	.41	31,446	.32
State	208,223	1,028	.49	270,991	.38	206,187	1,090	.53	260,692	.42

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

July, 1938 to June, 1939

County	No. Animals Under Supervision	No. Animals Reacting	Per Cent Reaction On Total Cattle Pop- ulation	No. Tests Made	Per Cent Reaction On Tests Made
Atlantic	542	1	.18	308	.32
Bergen	2,924	13	.44	3,859	.34
Burlington	22,202	93	.42	26,280	.35
Camden	1,680	7	.42	2,057	.34
Cape May	963	8	.83	1,270	.63
Cumberland	6,728	18	.27	7,705	.23
Essex	2,098	9	.43	4,538	.20
Gloucester	5,423	15	.28	6,243	.24
Hudson	134	..	..	330	..
Hunterdon	27,016	89	.33	28,854	.31
Mercer	9,479	42	.44	13,459	.31
Middlesex	8,046	58	.72	12,597	.46
Monmouth	9,670	137	1.42	11,446	1.20
Morris	12,469	57	.46	13,142	.43
Ocean	1,655	18	1.08	1,768	1.02
Passaic	2,736	14	.51	4,086	.34
Salem	15,832	228	1.44	22,459	1.02
Somerset	12,025	65	.54	13,137	.49
Sussex	33,211	399	1.20	41,666	.96
Union	3,446	23	.67	7,189	.32
Warren	23,722	123	.52	25,681	.48
State	202,001	1,417	.70	248,094	.57

INSHIPPED CATTLE

In recording the number of cattle shipped into New Jersey during fiscal year 1942-43, we have separated the number of steers from the actual dairy and breeding cattle imported. All dairy and breeding cattle brought in, with the exception of calves under six months of age, have been re-bled on arrival. It will be noted from the tables following that the number of animals bled does not correspond with the number released. This is due to the fact that some shipments are held up pending receipt of proper test charts and are not released until such charts are received which is after the close of our books for that particular month.

On retests made of 25,536 animals, 357 or 1.4 per cent gave a positive reaction to the Bang's test and were either returned to the state of origin or sent to slaughter. This is an increase in the per cent of reaction found over the last fiscal year when 26,230 animals were tested with 181 or 0.69 per cent reactors resulting.

The greatest number of imports were received this year from Wisconsin. Of 9,028 animals retested from this state, 64 or 0.71 per cent were removed because of a positive reaction to the retest made in New Jersey. Next in line came Canada, from which point 4,020 consigned to New Jersey were retested with 63 or 1.57 per cent giving a positive reaction.

Good dairy replacement animals have been very difficult to obtain during the past year. The fact that western herds, whose production in previous years went almost entirely into butter and cheese factories, now have available a good dry or fluid milk market has made their owners quite independent with a consequent higher price for the few good animals offered for sale.

RECORD OF BLOOD TESTS MADE ON INSHIPPED ANIMALS

July 1, 1942 to June 30, 1943

Origin	No. Lots Bled	No. Cattle Bled	No. Reactors Resulting and Per Cent	
Canada	300	4,020	63	1.57
Connecticut	7	12	1	8.33
Delaware	15	65	..	...
Georgia	4	11	..	...
Illinois	3	4	..	...
Indiana	12	292	..	...
Kansas	1	1	..	...
Kentucky	4	9	..	...
Maine	1	2	..	...
Maryland	188	1,120	34	3.04
Massachusetts	10	30	..	...
Michigan	106	2,562	29	1.13
Minnesota	9	196	..	...
New Mexico	3	23	..	...
New York	381	3,322	87	2.62
North Carolina	3	16	..	...
Ohio	105	1,840	41	2.23
Oklahoma	1	11	..	...
Pennsylvania	341	2,631	32	1.22
Rhode Island	2	2	..	...
Tennessee	3	22	..	...
Vermont	4	19	1	5.26
Virginia	33	297	5	1.68
West Virginia	1	1	..	...
Wisconsin	340	9,028	64	.71
Total	1,882	25,536	357	1.40

Following is a summary of the cattle shipped into New Jersey by months, those condemned on tuberculin test and those shipped out of the state during the year ending June, 1943.

Month	Number of Cattle Shipped into New Jersey	Number of Cattle Condemned on Tuberculin Test	Number of Cattle Shipped out of New Jersey
July	2,795	21	66
August	3,176	64	28
September	1,939	40	64
October	3,221	46	92
November	2,177	55	69
December	2,536	31	35
January	2,077	46	118
February	1,348	51	32
March	1,496	47	63
April	1,735	66	90
May	1,821	47	134
June	2,060	66	55
Total	26,381	580	846

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

1938-1939	1939-1940	1940-1941	1941-1942	1942-1943
25,968	26,040	29,650	26,905	26,381

IMPORT CATTLE RECEIVED FROM VARIOUS STATES RELEASED FOR DAIRY AND BREEDING PURPOSES, 1942-1943

Origin	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
Canada	419	500	242	311	350	231	212	114	226	261	424	463	3,753
Connecticut	...	1	...	...	3	...	1	...	3	2	2	...	12
Delaware	...	13	...	2	...	9	11	10	6	9	1	2	63
Georgia	...	...	...	1	...	...	...	...	...	...	2	...	3
Illinois	...	...	...	...	...	...	3	...	...	...	...	1	4
Indiana	46	47	23	49	...	31	...	31	29	36	...	...	292
Kansas	...	...	...	...	...	...	...	1	...	...	...	...	1
Kentucky	...	...	...	5	...	...	4	...	...	...	...	...	9
Maine	...	...	...	...	...	...	...	...	1	1	...	...	2
Maryland	235	212	58	117	41	64	37	77	63	54	37	125	1,120
Massachusetts	...	...	...	10	7	...	1	...	...	9	1	...	28
Michigan	309	409	268	427	113	227	162	75	79	97	165	210	2,541
Minnesota	...	1	26	53	27	20	...	...	...	...	50	19	196
New Mexico	...	...	...	...	...	...	...	...	...	...	...	23	23
New York	479	408	227	464	298	208	155	209	163	249	165	204	3,229
North Carolina	...	2	...	...	...	...	...	...	...	1	13	...	16
Ohio	219	356	146	269	111	152	159	...	34	115	78	179	1,818
Oklahoma	...	...	...	...	...	11	...	...	...	...	...	...	11
Pennsylvania	427	373	259	223	212	172	172	138	91	237	122	156	2,582
Rhode Island	...	...	...	2	...	...	...	...	...	...	...	...	2
Tennessee	...	...	...	...	...	...	...	...	...	8	14	...	22
Vermont	...	...	...	...	5	12	...	1	...	...	1	...	19
Virginia	29	48	1	5	11	30	21	...	46	10	33	44	278
West Virginia	...	...	...	...	...	...	...	1	...	...	...	...	1
Wisconsin	595	806	689	1,183	960	1,032	832	440	493	472	713	634	8,849
Total	2,758	3,176	1,939	3,121	2,138	2,199	1,770	1,097	1,234	1,561	1,821	2,060	24,874

FEEDER STEERS IMPORTED, JULY, 1942 TO JUNE, 1943

Origin	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
Idaho	..	..	..	..	463	296	189	190	158	...	...	...	1,296
Illinois	37	..	..	..	...	...	...	...	...	34	31	...	102
Lancaster	..	..	..	..	...	52	101	24	130	209	445	737	1,698
Maryland	..	..	..	54	...	...	97	61	96	15	20	...	343
Michigan	..	..	..	..	...	...	...	...	...	...	24	125	149
Minnesota	..	..	..	..	...	...	...	...	...	...	40	...	40
New Mexico	..	..	..	..	...	...	...	...	...	...	88	276	364
New York	..	..	..	..	13	...	...	...	...	...	...	...	13
Ohio	..	..	..	..	...	...	...	...	8	14	...	15	37
Pennsylvania	..	..	..	46	7	...	...	...	...	41	15	18	127
Texas	..	..	..	..	...	...	...	...	...	70	140	74	284
Virginia	..	..	..	..	19	41	21	...	...	...	10	...	91
Total Steers Imported	37	..	..	100	502	389	408	275	392	383	813	1,245	4,544
Total Dairy and Breeding Cattle Imported	2,758	3,176	1,939	3,121	2,138	2,199	1,770	1,097	1,234	1,561	1,821	2,060	24,874
Total Dairy, Breeding and Feeding Cattle Imported	2,795	3,176	1,939	3,221	2,640	2,588	2,178	1,372	1,626	1,944	2,634	3,305	29,418

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CATTLE SHIPPED OUT OF THE STATE DURING THE FISCAL YEAR, 1942-1943

Month	Number of Lots From Herds Under Supervision	Number of Animals From Herds Under Supervision
July	25	66
August	12	28
September	25	64
October	48	92
November	29	69
December	16	35
January	24	118
February	16	32
March	22	63
April	29	90
May	67	134
June	21	55
Total	334	846

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

July 1, 1942 to June 30, 1943

Month	Calves	Sheep	Cows	Bulls	Hogs	Steers	Total
July	4,579	12,100	2,083	1,269	633	207	20,871
August	7,653	12,889	2,025	633	498	253	23,951
September	8,805	9,911	2,467	270	902	195	22,550
October	12,669	5,454	2,592	365	859	135	22,074
November	15,030	13,560	2,610	299	99	57	31,655
December	10,942	2,962	2,013	357	...	46	16,320
January	8,418	779	1,098	185	263	1,109	11,852
February	7,142	801	672	89	176	844	9,724
March	4,460	2,440	1,819	466	69	254	9,508
April	2,192	919	1,699	345	238	37	5,430
May	2,297	1,127	1,318	138	139	52	5,071
June	2,304	1,429	1,478	88	206	102	5,607
Total	86,491	64,371	21,874	4,504	4,082	3,291	184,613

LIVESTOCK AUCTION SALES MARKETS

Veterinary supervision of the Harris Sales Company Auction Market has been continued throughout the year. The work completed at this point for the year follows.

Number of Cattle Checked	Number of Cattle Tuberculin Tested	Number of Cattle Ear Punched for Slaughter
11	Inshipped 3,062 Local 818	2
Number of Swine Treated		
Single	Double	Total
250	2,082	2,332

TOTAL SALES REPORTED AT HARRIS SALES COMPANY AUCTION MARKET

July 1, 1942 to June 30, 1943

Cows	Calves	Sheep	Swine	Horses	Sheep	Poultry
4,206	10,292	2,234	9,781	2,477	1,535	422
Goats	Ducks	Bulls	Lambs	Eggs	Reactors	
102	7	1,026	212	4,602 dozen	311	

All livestock passing through the Harris Sales Company Auction Market is inspected for health by the veterinarian assigned to this market and no unhealthy livestock is permitted to be offered for sale.

BANG'S DISEASE CONTROL

Because of the acute shortage of dairy cattle, progress in our Bang's disease or brucellosis control program has been somewhat retarded. Owners were reluctant to dispose of heavy milking animals even though they gave a positive reaction to the test for brucellosis. This has necessitated the switching of some herds from a Plan I and II program providing for the payment of indemnity, to a Plan III program.

This brought up the question of whether health officials would be willing to accept milk for human consumption emanating from positive animals. A meeting called by the Milk and Meat Committee of the New Jersey Health Officers' Association was attended and the whole program of control explained to them. They agreed not to prohibit the sale of milk from any herd operating under the supervision of this bureau for the eradication of brucellosis, providing such milk was sold for a pasteurized supply. This has been of great assistance to our farmers who are honestly endeavoring to reduce infection in their herds but are unable at the present time to dispose of reactors for slaughter.

For the past fiscal year, state indemnity has been paid on 584 reactors with a total value of \$21,426.36, as compared with 973 reactors and \$33,939.26 for the previous year.

The number of fully accredited Bang's-disease-free herds in the state on June 30, 1943 was 739 as compared with 335 on June 30, 1942.

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, 8,242 tests have been conducted on such animals. In addition, 1,000 tests have been made on goats, 11 tests on horses, 43 tests on swine, 375 tests for milk whey titre and three tests on dogs.

Private practitioners have submitted 1,107 samples from herds not under supervision for the control of Bang's disease and 229 tests have been conducted on animals residing out of the state.

During the year, a total of 81 herds, comprising 2,079 animals, were informatively tested for Bang's disease. Of this number, 233 or 11.22 per

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cent gave a positive reaction; 58 or 2.79 per cent gave a highly suspicious reaction; 162 or 7.33 per cent gave a slightly suspicious reaction, and 1,634 or 78.67 per cent gave a negative reaction.

Initial tests have been conducted on 220 herds of 2,638 cattle with 201 reactors resulting or 7.62 per cent.

In a further effort to assist breeders, dairymen and farmers in the control of brucellosis a plan was devised which provides for the use of vaccine on animals of all ages in badly infected herds. This plan is suggested only in herds where the percentage of reaction and the history of abortion indicate that no other available program would serve the purpose and eventually remove all infection from the herd. The actual vaccination work in such herds will be delegated by this bureau to a private practitioner selected by the owners, and the bureau is obligated to conduct a blood test annually to determine the progress in the control of brucellosis made in the herd through the adult and calfhood immunization program.

With the addition of vaccination of adult animals to our armamentarium of attack on brucellosis, it appears at the present writing that a well-rounded program is now being offered to New Jersey cattle owners which should enlist wholehearted support.

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

June 30, 1943

County	Number of Herds Under Supervision	Number of Animals Under Supervision	Number of Herds Fully Accredited	Number of Animals in Herds Fully Accredited
Atlantic	231	554	192	324
Bergen	9	216	6	199
Burlington	43	1,660	20	723
Camden	28	310	16	184
Cape May	189	732	131	511
Cumberland	87	1,367	47	711
Essex	6	324	3	20
Gloucester	36	908	27	676
Hudson	...	...	...	...
Hunterdon	52	2,268	31	1,125
Mercer	93	2,626	58	988
Middlesex	38	2,985	17	193
Monmouth	72	1,885	37	922
Morris	64	3,544	28	1,301
Ocean	3	5	2	4
Passaic	3	276	1	40
Salem	49	1,425	20	408
Somerset	138	3,723	81	2,061
Sussex	15	1,096	5	271
Union	13	200	4	78
Warren	27	976	13	252
State	1,196	27,080	739	10,991

**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, 1942 to June, 1943

STATE DEPARTMENT OF AGRICULTURE

County	<i>No. of Reactors Appraised</i>			<i>Appraised Value</i>			<i>Total Amount Paid to Owners (Salvage, State and Federal Indemnity)</i>			<i>Average Amount Paid Owners Per Head</i>		
	Reg.	Gr.	Total	Reg.	Gr.	Total	Reg.	Gr.	Total	Reg.	Gr.	Total
Atlantic	..	13	13	\$...	\$ 1,540.00	\$ 1,540.00	\$...	\$ 1,402.76	\$ 1,402.76	\$...	\$107.90	\$107.90
Bergen	2	..	2	430.00	...	430.00	384.03	...	384.03	192.02	...	192.02
Burlington	2	21	23	375.00	2,840.00	3,215.00	338.32	2,532.75	2,871.07	169.16	120.61	124.83
Camden	..	3	3	...	375.00	375.00	...	348.70	348.70	...	116.23	116.23
Cape May	..	14	14	...	1,775.00	1,775.00	...	1,641.51	1,641.51	...	117.25	117.25
Cumberland	9	11	20	1,530.00	1,400.00	2,930.00	1,355.69	1,325.11	2,680.80	150.63	120.46	134.04
Gloucester	3	10	13	565.00	1,100.00	1,665.00	514.58	1,025.68	1,540.26	171.53	102.51	118.48
Hunterdon	15	5	20	2,795.00	670.00	3,465.00	2,490.71	643.31	3,134.02	166.05	128.66	156.70
Mercer	11	26	37	1,975.00	3,390.00	5,365.00	1,797.10	3,206.10	5,003.20	163.37	123.31	135.22
Middlesex	5	165	170	915.00	21,790.00	22,705.00	827.24	20,271.93	21,099.17	163.45	122.86	124.11
Monmouth	16	13	29	3,450.00	1,910.00	5,360.00	3,083.29	1,749.56	4,832.85	192.71	134.58	166.65
Morris	28	53	81	5,780.00	8,205.00	13,985.00	5,095.02	7,290.36	12,385.38	181.97	137.55	152.91
Ocean	..	1	1	...	175.00	175.00	...	142.50	142.50	...	142.50	142.50
Passaic	..	6	6	...	845.00	845.00	...	772.66	772.66	...	128.78	128.78
Salem	18	37	55	3,225.00	4,425.00	7,650.00	2,971.03	4,179.11	7,150.14	165.06	112.95	130.00
Somerset	22	46	68	4,300.00	6,625.00	10,925.00	3,816.64	5,925.17	9,741.81	173.48	128.81	143.26
Sussex	9	1	10	1,675.00	175.00	1,850.00	1,494.31	172.50	1,666.81	166.03	172.50	166.68
Union	..	1	1	...	145.00	145.00	...	138.82	138.82	...	138.82	138.82
Warren	10	8	18	2,160.00	1,185.00	3,345.00	1,892.68	1,067.95	2,960.63	189.27	133.49	164.48
Total	150	434	584	\$29,175.00	\$58,570.00	\$87,745.00	\$26,060.64	\$53,836.48	\$79,897.12	\$173.74	\$124.05	\$136.81

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

July, 1942 to June, 1943

County	<i>No. of Reactors Appraised</i>			<i>Amount of Salvage Received</i>			<i>Amount of State Indemnity Paid</i>			<i>Amount of Federal Indemnity Paid</i>		
	Reg.	Gr.	Total	Reg.	Gr.	Total	Reg.	Gr.	Total	Reg.	Gr.	Total
Atlantic	..	13	13	\$..	\$ 777.75	\$ 777.75	\$..	\$ 381.11	\$ 381.11	\$..	\$ 243.90	\$ 243.90
Bergen	2	..	2	164.21	..	164.21	132.89	..	132.89	86.93	..	86.93
Burlington	2	21	23	155.00	1,336.76	1,491.76	110.00	751.62	861.62	73.32	444.37	517.69
Camden	..	3	3	..	217.31	217.31	..	78.84	78.84	..	52.55	52.55
Cape May	..	14	14	..	997.89	997.89	..	388.54	388.54	..	255.08	255.08
Cumberland	9	11	20	481.38	946.05	1,430.43	522.80	227.45	750.25	348.51	151.61	500.12
Gloucester	3	10	13	272.74	654.26	927.00	146.13	222.86	368.99	95.71	148.56	244.27
Hunterdon	15	5	20	1,000.09	510.04	1,510.13	897.43	79.97	977.40	593.19	53.30	646.49
Mercer	11	25	37	917.85	2,287.22	3,205.07	528.57	551.38	1,079.95	350.68	367.50	718.18
Middlesex	5	155	160	388.50	12,851.50	13,253.00	263.25	4,462.75	4,726.00	175.49	2,944.68	3,120.17
Monmouth	16	13	29	1,424.00	1,032.50	2,456.50	1,013.00	438.75	1,451.75	646.29	278.31	924.60
Morris	28	53	81	1,989.76	3,999.25	5,989.01	1,895.07	2,102.07	3,997.14	1,210.19	1,189.04	2,399.23
Ocean	..	1	1	..	60.00	60.00	..	57.50	57.50	..	25.00	25.00
Passaic	..	6	6	..	511.48	511.48	..	166.75	166.75	..	94.43	94.43
Salem	18	37	55	1,701.53	2,950.65	4,652.28	761.67	737.15	1,498.82	507.73	491.31	999.04
Somerset	22	45	68	1,610.82	3,278.76	4,889.58	1,344.55	1,673.03	3,017.58	861.27	973.38	1,834.65
Sussex	9	1	10	682.51	160.00	842.51	496.22	7.50	503.72	315.58	5.00	320.58
Union	..	1	1	..	107.99	107.99	..	18.50	18.50	..	12.33	12.33
Warren	10	8	18	781.49	625.41	1,406.90	689.23	279.78	969.01	421.96	162.76	584.72
Total	150	434	584	\$11,572.98	\$33,317.82	\$44,890.80	\$8,800.81	\$12,625.55	\$22,426.36	\$5,686.85	\$7,893.11	\$13,579.96

**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**

December 16, 1940 to June, 1943

STATE DEPARTMENT OF AGRICULTURE

County	<i>No. of Reactors Appraised</i>			<i>Appraised Value</i>			<i>Total Amount Paid to Owners (Salvage, State and Federal Indemnity)</i>			<i>Average Amount Paid Owners Per Head</i>		
	Reg.	Gr.	Total	Reg.	Gr.	Total	Reg.	Gr.	Total	Reg.	Gr.	Total
Atlantic	..	48	48	\$..	\$ 5,315.00	\$ 5,315.00	\$..	\$ 4,819.00	\$ 4,819.00	\$..	\$100.40	\$100.40
Bergen	2	1	3	430.00	100.00	530.00	384.03	96.28	480.31	192.02	96.28	160.10
Burlington	41	45	86	6,620.00	5,415.00	12,035.00	5,905.34	4,884.33	10,789.67	144.03	119.13	125.46
Camden	..	3	3	..	375.00	375.00	..	348.70	348.70	..	116.23	116.23
Cape May	..	52	52	..	5,845.00	5,845.00	..	5,334.82	5,334.82	..	102.59	102.59
Cumberland	19	72	91	2,890.00	8,325.00	11,125.00	2,578.65	7,608.92	10,187.57	135.72	105.68	111.95
Essex	..	15	15	..	1,400.00	1,400.00	..	1,305.92	1,305.92	..	87.06	87.06
Gloucester	8	31	39	1,365.00	3,170.00	4,535.00	1,251.96	2,934.64	4,186.60	156.50	94.67	107.35
Hudson	..	..	..	..	..	..	..	..	..	..	..	..
Hunterdon	31	21	52	5,465.00	2,630.00	8,095.00	4,907.85	2,418.18	7,326.03	158.32	115.15	140.89
Mercer	42	161	203	7,050.00	18,835.00	25,885.00	6,375.26	17,457.36	23,832.62	151.79	108.43	117.40
Middlesex	72	428	500	11,445.00	51,945.00	63,390.00	10,304.81	47,980.11	58,284.95	143.12	112.10	116.57
Monmouth	38	61	99	7,035.00	7,465.00	14,500.00	6,341.88	6,803.75	13,145.63	166.89	111.54	132.78
Morris	83	132	215	15,410.00	17,210.00	32,620.00	13,593.75	15,394.23	28,987.98	163.78	102.98	134.83
Ocean	..	1	1	..	175.00	175.00	..	142.50	142.50	..	142.50	142.50
Passaic	..	7	7	..	925.00	925.00	..	848.49	848.49	..	121.21	121.21
Salem	25	169	195	4,485.00	19,125.00	23,610.00	4,102.49	17,799.03	21,901.52	157.79	105.32	112.32
Somerset	60	140	200	10,475.00	17,175.00	27,650.00	9,256.10	15,598.35	24,854.45	154.27	111.42	124.27
Sussex	44	10	54	7,265.00	1,240.00	8,505.00	6,434.88	1,134.33	7,569.21	146.25	113.43	140.17
Union	..	6	6	..	645.00	645.00	..	598.15	598.15	..	99.69	99.69
Warren	52	55	107	9,790.00	6,680.00	16,470.00	8,549.90	6,077.55	14,627.45	164.42	110.50	136.71
Total	518	1,458	1,976	\$89,725.00	\$173,905.00	\$263,630.00	\$79,986.93	\$159,584.64	\$239,571.57			
Average				\$ 173.21	\$ 119.28	\$ 133.42	\$ 154.41	\$ 109.45	\$ 121.24	\$154.41	\$109.45	\$121.24

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

December 16, 1940 to June, 1943

County	No. of Reactors Appraised			Amount of Salvage Received			Amount of State Indemnity Paid			Amount of Federal Indemnity Paid		
	Reg.	Gr.	Total	Reg.	Gr.	Total	Reg.	Gr.	Total	Reg.	Gr.	Total
Atlantic	..	48	48	\$..	\$ 2,598.01	\$ 2,598.01	\$..	\$ 1,359.47	\$ 1,359.47	\$..	\$ 861.52	\$ 861.52
Bergen	2	1	3	164.21	77.68	241.89	132.89	11.16	144.05	86.93	7.44	94.37
Burlington	41	45	86	2,333.00	2,581.76	4,914.76	2,143.50	1,416.61	3,560.11	1,428.84	885.96	2,314.80
Camden	..	3	3	..	217.31	217.31	..	78.84	78.84	..	52.55	52.55
Cape May	..	52	52	..	2,947.93	2,947.93	..	1,448.51	1,448.51	..	938.38	938.38
Cumberland	19	72	91	1,022.44	4,485.77	5,508.21	933.77	1,881.24	2,815.01	622.44	1,241.91	1,864.35
Essex	..	15	15	..	846.86	846.86	..	276.55	276.55	..	182.51	182.51
Gloucester	8	31	39	697.26	1,758.51	2,455.77	333.86	705.73	1,039.59	220.84	470.40	691.24
Hudson	..	..	..	..	..	..	..	..	..	..	..	..
Hunterdon	31	21	52	2,153.44	1,524.68	3,678.12	1,655.75	552.63	2,208.38	1,098.66	340.87	1,439.53
Mercer	42	161	203	3,012.51	10,720.94	13,733.45	2,018.73	4,056.97	6,075.70	1,344.02	2,679.45	4,023.47
Middlesex	72	428	500	4,605.30	28,378.59	32,983.89	3,419.85	11,785.69	15,205.54	2,279.69	7,815.83	10,095.52
Monmouth	38	61	99	3,051.00	3,773.50	6,824.50	1,992.00	1,845.75	3,837.75	1,298.88	1,184.50	2,483.38
Morris	83	132	215	4,988.47	8,066.18	13,054.65	5,210.57	4,570.95	9,781.52	3,394.71	2,757.10	6,151.81
Ocean	..	1	1	..	60.00	60.00	..	57.50	57.50	..	25.00	25.00
Passaic	..	7	7	..	566.48	566.48	..	179.25	179.25	..	102.76	102.76
Salem	26	169	195	2,187.99	11,345.88	13,533.87	1,148.74	3,889.47	5,038.21	765.76	2,563.68	3,329.44
Somerset	60	140	200	3,614.21	8,782.06	12,396.27	3,430.33	4,197.52	7,627.85	2,211.56	2,618.77	4,830.33
Sussex	44	10	54	2,471.58	636.82	3,108.40	2,396.59	301.57	2,698.16	1,566.71	195.94	1,762.65
Union	..	6	6	..	364.14	364.14	..	140.41	140.41	..	93.60	93.60
Warren	52	55	107	3,056.29	3,379.45	6,435.74	3,366.78	1,650.17	5,016.95	2,126.83	1,047.93	3,174.76
Total	518	1,458	1,976	\$33,357.70	\$93,112.55	\$126,470.25	\$28,183.36	\$40,405.99	\$68,589.35	\$18,445.87	\$26,066.10	\$44,511.97
Average				\$ 64.40	\$ 63.86	\$ 64.00	\$ 54.41	\$ 27.71	\$ 34.71	\$ 35.61	\$ 17.88	\$ 22.52

The following summary indicates the amount of state indemnity paid for reactors resulting from the Bang's test during the year ending June 30, 1943.

Class of Cattle	Number of Animals	Amount Paid
Registered animals	150	\$ 8,800.81
Grade animals	434	12,625.55
Registered and Grade	584	\$21,426.36

Average State Indemnity Paid Per Head:

Registered animal	\$58.67
Grade animal	29.09
Registered and Grade	36.69

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, 1943.

Class of Cattle	Number of Animals	Amount Paid
Registered animals	150	\$11,572.98
Grade animals	434	33,317.82
Registered and Grade	584	\$44,890.80

Average Salvage Received Per Head:

Registered animal	\$77.15
Grade animal	76.77
Registered and Grade	76.87

The following summary indicates the amount of federal indemnity paid for reactors resulting from the Bang's test during the year ending June 30, 1943.

Class of Cattle	Number of Animals	Amount Paid
Registered animals	150	\$ 5,686.85
Grade animals	434	7,893.11
Registered and Grade	584	\$13,579.96

Average Federal Indemnity Paid Per Head:

Registered animal	\$37.91
Grade animal	18.19
Registered	23.25

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)	\$79,897.12
Average amount received per head by owners for Bang's reactors	\$ 136.81

GOATS

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

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

County	TUBERCULOSIS				BANG'S DISEASE			
	Under Supervision		Fully Accredited		Under Supervision		Fully Accredited	
	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals
Atlantic	1	4	...	...	2	17	1	13
Bergen	13	77	8	63	17	119	9	62
Burlington	3	15	...	...	3	17	...	...
Camden	6	78	2	12	8	57	3	28
Cape May	1	1	...	...	...	...	...	...
Cumberland	6	66	3	63	4	47	3	46
Essex	4	24	2	20	5	21	2	5
Gloucester	16	97	7	53	12	80	3	23
Hudson	...	...	...	...	...	...	...	...
Hunterdon	12	56	2	9	12	49	2	12
Mercer	4	78	1	72	4	80	2	78
Middlesex	6	27	2	8	6	41	3	29
Monmouth	22	131	10	61	24	145	10	68
Morris	45	342	15	206	57	385	22	234
Ocean	...	...	...	...	1	3	...	...
Passaic	6	74	4	52	6	73	6	73
Salem	3	15	2	12	...	...	...	...
Somerset	7	181	2	155	12	179	2	136
Sussex	1	26	1	25	1	25	1	25
Union	2	20	2	20	4	41	4	41
Warren	3	21	...	...	5	30	2	9
State	161	1,333	63	831	183	1,409	75	880

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

July 1, 1942 to June 30, 1943

County	Number of Herds Tested	Number of Goats Tested
Atlantic	..	...
Bergen	10	60
Burlington	3	18
Camden	3	6
Cape May	..	...
Cumberland	3	52
Essex	2	3
Gloucester	4	41
Hudson	..	...
Hunterdon	8	25
Mercer	2	78
Middlesex	4	26
Monmouth	20	122
Morris	9	133
Ocean	..	...
Passaic	5	77
Salem	..	...
Somerset	8	329
Sussex	..	...
Union	2	20
Warren	..	...
Total	83	990

PHYSICAL EXAMINATIONS CONDUCTED ON COWS FOR NEW JERSEY OFFICIAL GRADES OF MILK

Under the supervision of the Bureau of Animal Industry, 16,627 physical examinations for health were completed by private veterinary practitioners during the year ending June 30, 1943. Condemnations were fewer this year than formerly, 98 being condemned and 544 removed from production for treatment.

The number of herd examinations was 22.42 per cent less than a year ago.

Following is a summary of the examinations made during the year 1942-1943.

Month Made	Number of Herd Exam- inations	Number of Animals Examined	Number of Animals Condemned	Number of Animals Isolated	Number of Animals Passed
July	15	468	16	25	427
August	10	221	1	11	209
September	7	166	...	7	159
October	10	221	...	8	213
November	213	5,063	21	147	4,895
December	91	2,678	22	78	2,578
January	1	7	...	...	7
February	4	115	...	6	109
March	41	1,073	7	68	998
April	154	5,162	23	131	5,008
May	52	1,360	8	58	1,294
June	4	93	...	5	88
Total	602	16,627	98	544	15,985

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POULTRY INSPECTION

Throughout the year we have continued to maintain a representative in Newark to inspect all poultry arriving in car and truckload lots in that area at the poultry terminals. During the year, the shipments totalled 2,278 carloads. As there are approximately 4,000 birds in a car, there were in the neighborhood of 9,112,000 birds inspected. Of this number, about 66,832 birds were condemned as being unfit for human consumption and were immediately destroyed. The estimated weight of the condemned birds was 270,256 pounds.

Following is a summary of the number of carlots of poultry received during the year and the months in which they were released.

Month	Carlots arriving Pennsylvania Railroad and Poultry Market, Newark
1942	
July	181
August	226
September	279
October	201
November	204
December	182
1943	
January	196
February	148
March	180
April	164
May	172
June	145
Total	2,278

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	181	226	279	201	204	182	196	148	180	164	172	145
New York	274	252	260	330	375	366	317	195	149	239	135	159
Total for New Jersey							2,278					
Total for New York							3,051					

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

July 1, 1942 to June 30, 1943

Origin	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
Alabama	..	..	..	..	..	..	..	..	..	..	..	..	..
Connecticut	7	13	12	13	7	3	3	2	..	1	1	2	64
Delaware	43	32	60	44	48	37	45	41	90	91	71	52	654
Georgia	..	..	..	..	..	..	..	..	..	..	..	..	..
Indiana	5	5	5	4	4	6	1	3	..	1	..	1	35
Illinois	..	..	..	..	..	7	8	..	..	..	..	1	16
Iowa	..	..	2	..	4	1	2	..	..	..	..	..	9
Kentucky	3	1	3	2	..	..	1	..	..	..	..	..	10
Maine	1	..	..	2	..	..	..	..	..	..	..	..	3
Maryland	10	4	4	7	6	3	8	9	8	17	36	23	135
Massachusetts	9	12	17	14	13	11	8	1	..	..	..	..	85
Mississippi	..	..	..	..	..	..	..	..	..	..	..	..	..
Missouri	..	..	..	..	..	..	1	..	..	..	..	..	1
Nebraska	..	..	..	..	3	1	..	..	..	..	..	2	6
New Hampshire	5	4	3	6	3	2	..	..	..	..	..	..	23
New Jersey	36	56	56	38	33	28	30	20	9	5	9	13	333
New York	7	19	28	14	8	9	5	4	2	2	..	1	99
North Carolina	6	5	6	3	7	8	14	12	13	13	7	10	104
Ohio	..	..	..	..	..	1	..	..	..	..	..	..	1
Pennsylvania	28	46	47	32	25	23	20	18	9	6	9	10	273
Rhode Island	1	..	3	2	4	5	1	..	1	..	..	..	17
South Carolina	..	..	..	..	..	..	..	..	..	..	..	..	..
South Dakota	4	4	5	..	11	9	6	2	1	..	..	2	44
Tennessee	2	4	..	..	..	2	11	8	6	3	4	4	44
Virginia	14	21	28	20	28	26	32	28	41	25	35	24	322
West Virginia	..	..	..	..	..	..	..	..	..	..	..	..	..
Washington, D. C.	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	181	226	279	201	204	182	196	148	180	164	172	145	2,278

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POULTRY CONDEMNED AT POULTRY TERMINALS

July 1, 1942 to June 30, 1943

Month	Number of Birds Condemned	Approximate Weights in Pounds
1942		
July	5,650	21,690
August	4,203	16,912
September	7,146	28,584
October	4,811	19,244
November	3,808	18,808
December	4,605	18,500
1943		
January	4,575	18,295
February	4,082	16,328
March	8,656	34,624
April	4,827	19,388
May	5,484	21,936
June	8,985	35,946
Total	66,832	270,255

PULLORUM DISEASE CONTROL

The second school for flock testing agents was conducted this year under the United States Poultry Improvement Plan. Sixteen additional agents were approved for this work.

Six of the hatcheries in the state make use of their own agents in the pullorum testing work, and by the field method have tested a total of 236,880 birds with 1,872 or 0.79 per cent giving a positive reaction.

Bureau representatives have supervised the work done by the flock testing agents and 2.28 per cent or 5,392 of the number of birds bled by them for field test were check-tested in our laboratory, with but 49 disagreements resulting.

Bureau representatives continued to bleed flocks operating under state supervision. Blood was drawn from 75,368 birds and tested in the field by the whole blood method; 1,107 of these birds or 1.47 per cent gave a positive reaction. In addition 8,160 birds were bled for the tube method alone and 274 or 3.36 per cent gave a positive reaction, making the total number of birds tested by bureau representatives by both field and tube method 83,528, with 1,381 or 1.65 per cent giving a positive reaction.

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

July 1, 1942 to June 30, 1943

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	3,695	15	.41	...	..	..	3,695	15	.41
Burlington	12,328	109	.89	...	..	..	12,328	109	.88
Camden	...	...	...	...	..	..	...	..	..
Cape May	...	...	...	...	..	..	...	..	..
Cumberland	2,518	29	1.15	...	..	..	2,518	29	1.15
Essex	...	...	...	...	..	..	...	..	..
Gloucester	7,952	40	.50	...	..	..	7,952	40	.50
Hudson	...	...	...	...	..	..	...	..	..
Hunterdon	5,387	501	9.30	3,377	70	2.07	8,764	571	6.52
Mercer	9,694	78	.80	1,534	52	3.39	11,228	130	1.16
Middlesex	4,290	53	1.24	...	..	..	4,290	53	1.24
Monmouth	7,688	125	1.63	2,553	96	3.76	10,241	221	2.16
Morris	7,544	54	.72	...	..	..	7,544	54	.72
Ocean	1,507	10	.65	696	56	8.05	2,203	66	3.00
Passaic	3,165	42	1.33	...	..	..	3,165	42	1.33
Salem	...	...	...	...	..	..	...	..	..
Somerset	2,043	28	1.37	...	..	..	2,043	28	1.37
Sussex	5,036	21	.42	...	..	..	5,036	21	.42
Union	1,119	...	...	...	..	..	1,119	..	..
Warren	1,402	2	.14	...	..	..	1,402	2	.14
Total	75,368	1,107	1.47	8,160	274	3.36	83,528	1,381	1.65

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HOGS INOCULATED AS A PROTECTION AGAINST CHOLERA INFECTION, BY MONTHS

July, 1942 to June, 1943

Vaccinations Made by Private Veterinarians

Month	Number of Hogs Given Single Treatment	Number of Hogs Given Double Treatment
July	12	688
August	1	317
September	3	299
October	113	250
November	..	496
December	..	858
January	..	250
February	..	295
March	..	184
April	..	287
May	17	1,236
June	..	1,025
Total	146	6,185

HOGS INOCULATED AS A PROTECTION AGAINST CHOLERA INFECTION

July, 1942 to June, 1943

Vaccinations Made by Private Veterinarians

County	Number of Hogs Given Single Treatment	Number of Hogs Given Double Treatment
Atlantic	18	445
Bergen	..	...
Burlington	113	101
Camden	..	...
Cape May	..	1,967
Cumberland	..	310
Essex	..	...
Gloucester	..	118
Hudson	..	...
Hunterdon	..	422
Mercer	..	72
Middlesex	3	681
Monmouth	12	1,254
Morris	..	178
Ocean	..	147
Passaic	..	...
Salem	..	...
Somerset	..	219
Sussex	..	...
Union	..	225
Warren	..	46
State	146	6,185

ANTHRAX

In April, the annual immunization of livestock in Salem County was carried out in cooperation with the county agricultural agent's office and 1,077 cattle and 74 horses were given protective inoculations of intradermal anthrax vaccine. No positive cases of anthrax were diagnosed in this section where in years past the disease was most prevalent.

In June of this year, one positive case of anthrax was diagnosed in a calf owned by the Hechalutz Farm, Hightstown, New Jersey. This calf was five weeks old and after failing to respond to home treatment died within 24 hours. One of the members of the Farm Colony persuaded the rest of the members that the meat was safe to consume, providing that the calf had not died of an infectious disease. The carcass was dressed out and placed in refrigeration with other foodstuffs. The rest of the colony refused to eat the meat unless it could be proved that the animal did not die as result of an infectious, communicable disease. They sent the lungs, liver, spleen and intestinal tract to our laboratory for examination. Results indicated that the animal had died of anthrax.

When the results of the examination were disclosed, we immediately communicated with the State Board of Health which detailed a representative to the farm to look after the health of the persons involved in the case.

The shed in which the animal was housed was pulled down, and the carcass and all the contents of the refrigerator were removed in non-leakable containers to the structure and burned. A dog, several cats and a goat which had access to the farm and area in which the calf was staked were all destroyed. All other animals were immunized with anthrax vaccine. The disinfection of the house, as well as the health of the colony members, was left to the Board of Health representative.

In July of this year, Dr. John B. Hagenbuch, of Lawrenceville, was called to Brianbaru Farm, Harlingen, to administer to an animal which had become suddenly ill. Shortly before his arrival the animal died. Dr. Hagenbuch autopsied it and, on examining the spleen, thought it showed evidence of anthrax. He brought the ears and section of the spleen to our laboratory and examination indicated that it was positive for anthrax.

Anthrax spore vaccine was purchased immediately and all cattle, horses and swine on the premises were protectively immunized. No further losses were reported.

In November, two additional positive cases of anthrax were diagnosed, one in a cow owned by the Pennington Dairy, Pennington, and a second in a hog owned by Fred Burd, of Pennington. The remaining livestock on both premises were protectively immunized against the disease.

EQUINE INFECTIOUS ANEMIA

In July of this year a private practitioner in Red Bank, Dr. Frank G. Du Buy reported a peculiar disease in a horse on a farm owned by Charles

Leonard, of Tinton Falls. Bureau representatives made several trips to the farm to make an investigation and material was obtained for laboratory examination.

The symptoms displayed by the animal were those found in cases of swamp fever, a disease common in the Dakotas, but seen on only two previous occasions in New Jersey.

The laboratory examinations of the blood confirmed the diagnosis of infectious anemia made at the time of the visits to the farm. This is a virus disease of horses, and affected horses recovering from the disease serve as permanent reservoirs of infection. Mosquitos and biting flies serve as vectors to transmit the infection to susceptible horses. For this reason, the infected animals were destroyed and observations made on other horses on the premises, but no further evidence of the disease was noted.

This disease was diagnosed about a year previous in horses owned by the Leesburg Prison Farm. The horses on this farm are still under quarantine as we are making a study of the disease at this point.

No new cases have been reported since July, 1942.

CALFHOOD VACCINATION

As the result of a conference of bureau representatives, private practitioners, health officers, and members of the staff of the New Jersey Agricultural Experiment Station with Secretary Allen, it was decided to re-write the rules and regulations governing calfhood vaccination. This was done and submitted to the Board of Agriculture and received their approval on June 17, 1943. These regulations follow:

RULES AND REGULATIONS COVERING CALFHOOD VACCINATION

1. Before permission may be obtained for the use of calfhood vaccination, all cattle on the farm of the applicant must be blood tested for brucellosis (Bang's disease).

The blood samples shall be drawn by an accredited veterinarian employed by the applicant and shall be submitted to the New Jersey Department of Agriculture, Bureau of Animal Industry Laboratory, for examination.

The test selected by the owner may be an informative test or an official test. For explanation of tests, see B.A.I. Form 292.

NOTE: In an informative test the identity of animals tested is not determined and, therefore, no restrictions are issued on reacting animals under such test. On an official test, identification of the blood samples and the animals from which they come is made known, and under the law it becomes mandatory for the Department to issue a quarantine on reacting animals. The quarantine simply means that animals may not be sold or have their location changed from the farm, without written authorization from the Chief of the Bureau of Animal Industry.

2. When permission is granted for the use of Strain 19 Brucella vaccine, the farmer agrees to the following conditions:

- (a) Only calves between the ages of five and eight months may be vaccinated under this program. (The preferable age is six months.)
 - (b) A written report of the administration of vaccine must be made to the Bureau of Animal Industry within five days of the use of the product. Such report shall be made and sent in on blanks furnished by the Department and shall give the name and address of the owner, the tattoo tag or registration number of the calf, its sex, the age of the animal at the time of vaccination, the name of the veterinarian who administered the vaccine, the serial lot number of vaccine used, the dose administered, the method of administration, the name of the manufacturer and the expiration date of the vaccine.
 - (c) Because of the fact that vaccinated animals are reactors to the test for brucellosis, the law provides that they shall be restricted on the owner's premise until they give a negative reaction to the test. Written permission for the movement or disposition of the restricted vaccinated animals may be obtained from the Chief of the Bureau of Animal Industry.
 - (d) An animal shall be automatically released from restriction whenever it is negative to test for brucellosis conducted in the New Jersey Bureau of Animal Industry Laboratory.
 - (e) All dairy and breeding cattle maintained in herds where permit for the use of calfhooed vaccination has been granted must be submitted to test for brucellosis once in each calendar year. This annual test shall be conducted by the Department without charge to the owner.
 - (f) The expense of administering vaccine shall be borne by the owner.
3. The Department shall supply to the owner's veterinarian the necessary tubes and charts for the collection of blood and the recording of test results and all agglutination tests shall be conducted in the Bureau of Animal Industry Laboratory without charge.
4. INDEMNITY: Calves which have been properly vaccinated under a departmental program for the control of brucellosis which provides for the payment of indemnity (Plan II), may be eligible to indemnity should they show a positive reaction 18 or more months following vaccination. Eligibility must be established through the records of approved vaccination on file in the Bureau of Animal Industry office of the Department of Agriculture.
5. No animals vaccinated when more than eight months of age shall be eligible to indemnity.
6. Permit for the use of calfhooed vaccine shall be issued to both the herd owner and to his chosen veterinarian in accordance with Article 5 of Title 4, paragraphs 107-112 of the Revised Statutes.

7. FAILURE TO COMPLY WITH THESE REGULATIONS SHALL CONSTITUTE CAUSE FOR REVOCATION OF PERMIT.
8. Recommended Procedure:
 - (a) *Brucella* vaccine deteriorates rapidly if not properly refrigerated. See that the vaccine used on your calves is of proper dating and has been satisfactorily handled.
 - (b) To insure that your calves are immunized it is advisable to have a blood sample drawn and a test conducted at the time the animal is treated and another test made of the blood of the treated animal 21 to 30 days following vaccination. At this time, if the animal has been properly vaccinated, it will be positive to the test for brucellosis.

MASTITIS

A little more than a year ago it was determined to make available to the dairymen and veterinarians of the State the facilities of the Bureau of Animal Industry Laboratory in connection with the bacteriological diagnosis of quarter samples of milk. This program was started because there was a decided need for accurate information to assist in guiding veterinarians in the application of new agents for the treatment of specific infections of the udder.

Because of the reduced personnel in our laboratory, brought about through the war effort, it was felt that no advertising should accompany this service and that the program should be allowed to develop without incentive of this nature. Last year we reported the completion of examination of 5,292 samples of milk. Incorporated in this group were all but one of our institutional herds. During the past fiscal year, this program has grown, at times taxing the personnel facilities of our laboratory. A total of 19,716 samples were submitted for test. This is an increase of 272.56 per cent over the number of samples tested a year ago. Of the 19,716 samples tested, 4,312 or 21.87 per cent disclosed streptococcal infection, 2,145 or 10.88 per cent staphylococcal infection, 13 or 0.07 per cent *Coli* infection, 19 or .10 per cent were not in condition to test on arrival, 2 or 0.02 per cent disclosed *corynebacterium pyogenes* and 13,225 or 67.08 per cent were negative.

ENCEPHALOMYELITIS

We have not had any definite diagnosis of encephalomyelitis in the state during this fiscal year, although vaccination of horses as a protection against this much dreaded disease by private veterinarians is reported as follows:

County	Number Horses Vaccinated
Cape May	112
Cumberland	53
Gloucester	10
State	175

STALLION LICENSES

During the 1943 calendar year, to date, \$98 has been collected in fees for stallion licenses. The initial license fee is \$5 and annual renewals, \$2.

The following tables indicate the registration by breeds as well as by counties.

STALLIONS LICENSED, BY BREEDS

July 1, 1942 to June 30, 1943

<i>Breed</i>	<i>Number Registered</i>
Belgian (purebred)	6
Morgan (purebred)	3
Percheron (purebred)	6
Saddle (purebred)	3
Spanish (purebred)	1
Suffolk (purebred)	2
Thoroughbred (purebred)	11
Grades*	2
Total	34

*Includes one Percheron and one whose breed is not known.

STALLIONS LICENSED

July 1, 1942 to June 30, 1943

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

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WORK DONE IN THE BUREAU LABORATORY

Following is a record of the work completed in the Bureau of Animal Industry Laboratory for the fiscal year beginning July 1, 1942 and ending June 30, 1943:

BANG'S DISEASE

Samples received	91,584
Insufficient sera	117
Broken samples	38
Tests set	91,446
Tests read	91,292
No. positive	2,204
No. highly suspicious	796
No. slightly suspicious	4,087
No. hemolyzed	384
No. negative	83,821

INSHIPPED ANIMALS

Samples received	25,827
No. insufficient sera	12
No. broken	44
Tests set	25,771
Tests read	25,771
No. positive	376
No. hemolyzed	19
No. negative	25,376

VACCINATED ANIMALS

Samples received	8,442
No. insufficient sera	25
No. broken	8
No. tests set	8,409
No. tests read	8,399
No. positive	822
No. highly suspicious	271
No. slightly suspicious	1,189
No. hemolyzed	159
No. negative	5,958

PULLORUM DISEASE

Samples received	15,859
Insufficient sera	287
No. tests set	15,572
No. tests read	15,572
No. positive	1,310
No. suspicious	236
No. hemolyzed	882
No. contaminated	109
No. negative	13,035

MILK SERA TEST

Samples received	316
No. tests set	316
No. tests read	316
No. positive	23
No. highly suspicious	3
No. slightly suspicious	5
No. negative	285

HOTIS TEST (MASTITIS)

Samples received	19,716
No. streptococci	4,312
No. staphylococci	2,145
No. coli	13
No. unsatisfactory	19
No. cornebacterium pyogenesis	2
No. negative	13,225

BACTERIOLOGICAL, MICROSCOPIC AND POST MORTEM EXAMINATION

Animal	No.	Material	Condition Suspected	Findings
Avian	3	Entire birds (ducks)	Unknown	Botulism
Avian	12	Chicks	Unknown	Coccidiosis
Avian	2	Turkeys	Unknown	Coccidiosis
Avian	2	Chickens	Unknown	Unable to determine
Avian	1	Chickens	Unknown	Infectious coryza
Avian	31	Chickens	Pullorum disease	Negative
Avian	2	Chickens	Unknown	Chronic coccidiosis
Avian	3	Chickens	Pullorum disease	Pullorum disease
Avian	123	Chicks	Pullorum disease	Negative
Avian	1	Entire bird	Range paralysis	Negative
Avian	1	Entire bird	Unknown	Intestinal hemorrhage
Avian	1	Entire bird	Depluming mite	Negative
Avian	44	Chicks	Pullorum disease	Pullorum disease
Avian	2	Young chickens	Unknown	Coccidiosis
Avian	1	Pullet	Unknown	Coccidiosis
Avian	1	Chick	Pullorum and coccidiosis	Pullorum disease
Avian	1	Chick	Pullorum and coccidiosis	Unsatisfactory for examination
Bovine	2	Ear and spleen	Anthrax	Positive for anthrax
Bovine	1	Peritoneum, spleen and ear	Unknown	Negative for infection
Bovine	3	Ears	Anthrax	Negative for anthrax
Bovine	2	Lung, liver and lymph gland	Tuberculosis	Bovine tuberculosis
Bovine	1	Placenta	Brucella abortus	Negative
Bovine	1	Placenta and fetus	Brucella abortus	Negative
Bovine	1	Feces, intestinal material	Unknown	Negative for infectious nature

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Animal	No.	Material	Condition Suspected	Findings
Bovine	1	Ear, liver and spleen	Anthrax	Anthrax
Bovine	1	Muscle tissue	Unknown	Malignant oedema (gas gangrene)
Bovine	1	Urine	Infectious pyelonephrosis	Infectious pyelonephrosis (kidney infection)
Bovine	1	Fecal samples and small intestines	Unknown	Infectious enteritis
Bovine	1	Vaginal discharge	Trichomonads, streptococci	Negative
Bovine	3	Fetus	Brucella abortus	Negative
Bovine	2	Vaginal discharge	Trichomoniasis	Negative
Bovine	2	Internal organs	Parasitic infestation	Nodular disease
Bovine	1	Fetus	Brucella abortus and trichomoniasis	Negative
Bovine	1	Fetus	Cause of abortion	Vibrio fetus
Bovine	1	Fetus	Cause of abortion	Negative for trichonomas and Brucella abortus
Bovine	1	Mummy fetus	Brucella or vibrio	Positive for vibrio fetus
Bovine	1	Milk sample	Total bacteria count	Total bacteria count 25,000 consisting of staphylococci and streptococci
Bovine	1	Lung, liver and spleen	Unknown	Anthrax
Bovine	1	Spleen, liver, lung and kidney	Arsenic spray poisoning	Negative
Bovine	2	Calf stomach	Brucellosis	Negative for Brucellosis
Bovine	1	Lymph gland and lung	Tuberculosis	Negative
Bovine	1	Fecal sample	Parasites	Tapeworms and coccidiosis
Canine	2	Cultures of spleen and blood	Unknown	Coliform organisms
Canine	1	Pup carcass	Unknown	Unsatisfactory for examination
Equine	12	Vaginal swabs	Streptococci	Negative
Equine	6	Cervical swabs	Streptococci	Positive for streptococci
Equine	2	Cervical swabs	Streptococci	Negative
Equine	6	Vaginal swabs	Routine examination	Positive for streptococci
Equine	1	Fetus	Salmonella-abortive equinia	Negative

STATE DEPARTMENT OF AGRICULTURE

Animal	No.	Material	Condition Suspected	Findings
Ovine	5	Feca samples	Parasites	Roundworms and tapeworms
Porcine	2	Entire animals	Unknown	Enteritis
Porcine	1	Entire pig	Unknown	Gastro-enteritis
Porcine	1	Ear, liver and spleen	Unknown	Anthrax
Porcine	1	Entire hog	Unknown	Hog cholera
Porcine	1	Entire pig	Unknown	Hog cholera (Escherichia coli)
Porcine	1	Internal organs	Unknown	Intestinal infection
Porcine	2	Internal organs	Unknown	Hog cholera
Porcine	1	Kidney, liver, heart, bladder, spleen, lymph glands and stomach	Hog cholera	Specimen decomposed, unable to make examination
	1	Dead rabbit	Unknown	Unsatisfactory for examination
	1	Unknown	For identification	Fly larvae
	11	Stained pullorum antigen	Examination for purity and routine testing	Recommended for routine testing
	7	Ticks	Identification	Dermacentor variabilis (common wood ticks)
	1	Garbage feedings	Salt poisoning	Salt poisoning

BUREAU PERSONNEL

During the past year there have been a number of changes in personnel in the Bureau of Animal Industry staff. The sad occasion of Doctor H. K. Berry's death on January 24, 1943, removed from our staff one of our old, trusted employees who had been in service with the Department since 1918. Doctor Berry was an ardent worker who had a grasp of the farm problems of the people in the territory in which he served. He was well liked by the farm people. Finding a replacement for him was a doubly difficult task at this particular time, due to the shortage of available veterinarians for state regulatory work.

As a replacement for Doctor Berry we have added to our staff Dr. H. Alexander Roney who is conducting tuberculin tests in all herds in Bergen County.

During the past year, Dr. Ryland Croshaw of Columbus entered the Army as a lieutenant in the Veterinary Corps. Dr. Herbert Jenne, former employee in Bang's disease control work in South Jersey and more recently engaged in relief duty in the laboratory in the absence of Major Johnston, entered the service of the country as a Naval ensign. Dr. John W. Walker, who was in

charge of the control of brucellosis in the Hunterdon-Warren County area resigned from the bureau to take a more lucrative position in the veterinary field in industry.

The services of Dr. P. F. Cosgriff have been obtained and he is now employed on the tuberculosis control program in charge of the Mercer County area. We are still short of a veterinary director for the laboratory, a field agent in Gloucester County on tuberculosis control, and a field agent in the Hunterdon-Warren County area in control of brucellosis. A number of contacts have been made with veterinarians relative to the filling of these positions and the demand is so great for their services that we have, up to date, been outbid for them by other agencies.

At the same time, during the past year, the value of livestock has risen to such a point that farmers are calling for veterinary service in an increased number of instances where apparently heretofore they have endeavored to treat minor ailments and, in some instances, major ailments themselves without veterinary assistance. This, plus the fact that very few young men are available for practice in the state has very materially increased the demand made upon existing veterinary practitioners in carrying out the programs of disease control by the Department.

It is felt that the United States armed forces are well supplied at the present time with veterinary personnel and it is hoped that in the future a greater number of graduates of the veterinary colleges will be available for services both in the federal and state regulatory divisions of the Bureau of Animal Industry.

Throughout the nation, it is felt by those in Selective Service that members of the veterinary profession should be reserved for call for service as trained veterinarians in the United States Army, and that until their services are needed in this respect that they should be left in civilian life to administer to the ailments of the nation's livestock.

Report of the Bureau of Markets

WARREN W. OLEY, *Chief*

The agricultural situation has changed greatly since the war began. Within a very few years, the country has changed from a situation dominated by lack of employment in industry and surpluses in agriculture, to a surplus of employment opportunities and a scarcity of the many of the foods needed by the consuming public and our armed forces.

For two years after the invasion of Poland, we saw little effect on the prices of food or other household needs. In the summer of 1941, the effect of industrial activity began to be apparent in increased agricultural production costs. As soon as the Lend-Lease Act became really effective, we began to realize that the supply of certain foods for home needs would be limited.

On April 28, 1942, Leon Henderson promulgated the General Maximum Price Regulation as one of the first steps in combating inflation under the Emergency Price Control Act. On October 2, 1942, Congress, following a threat of action by the President, passed "An Act to aid in stabilizing the cost of living." Under this act, Leon Henderson issued "Temporary Maximum Price Regulation 22," which drastically affected New Jersey marketing work in milk products, eggs, poultry, white potatoes and onions.

Within the borders of our own state, we have seen a greatly stepped-up purchasing power. Well over eight billion dollars in major war supply contracts have been placed in New Jersey. Most of this huge sum has been paid out in wages. In our neighbor states, New York and Pennsylvania, the situation is similar. These two states are our greatest markets for farm products outside our own borders.

Our farmers have had to compete with this industrial development in the labor market, and have also had to produce in the face of scarcity of needed equipment and supplies. Demand for nearby-grown supplies of all foods has been heavy, and the economic law of supply and demand as it affects prices has been replaced in many cases with rules and regulations made by man.

Consequently, our farmers have faced situations in which some prices, which may be fair to the country as a whole, are definitely unfair under New Jersey conditions. Our state has a very important dairy and poultry industry, for which, our farmers must import huge quantities of feedstuffs.

In the early part of the war effort, the official policy was to step up production of livestock, dairy and poultry products. These were well adapted for Lend-Lease shipment, since they supplied high nutrient values

in proportion to the cargo space used. Agricultural planners, however, did not give due consideration to feed needs. Today, livestock numbers in the entire country are outstripping our feed-growing capacity.

Later marketing orders by OPA have affected sales of several vegetables and small fruits. These commodities, like poultry and eggs, are sold in large volume over our auction markets. The cooperative marketing associations which operate these auctions have taken a leading part in attempting to have pricing orders so drawn or amended that our producers could carry out government requests for increased production without unfair financial disaster to themselves.

Our cooperative marketing organizations in New Jersey were organized in peacetimes. Some were developed in the so-called prosperous days in the twenties, but many were born after hard times hit the agriculturists of this state. The specific need may have been different at the time of organization, but as times changed the directors of these organizations so shaped their policies that great progress has been made to meet the needs of the membership. Set up on a democratic basis, they afford to thousands of farmers in New Jersey an opportunity to work together for the common good. Hundreds of these farmers have an active part in planning for the welfare of the general membership. These men have the confidence of the mass of farmers and have been elected as directors to work for the good of the association. In times such as these, they often have to fight program battles for them. They do much to preserve the independence and thus the morale of the New Jersey farmer.

All of the emphasis is now on winning the war. But in the postwar period, our cooperatives, if given an opportunity, will contribute greatly toward a sounder agriculture by providing a workable pattern for solving many of the problems which are sure to develop.

Cooperatives of the auction type are in a serious position today. They have built up their influence through services by which producer members have obtained more money for the products offered for sale. The OPA regulations act as a leveler of prices in times of shortages. Because of these price restrictions the auctions have lost a large amount of business. Sales are made with much less restrictions on outside markets where supervision is impossible. It is hoped that a means may be found so that these cooperatives may continue their services without loss in revenue to their members so that in the postwar period they will be found as a going concern ready and able to solve the problems of efficient distribution.

Our bureau has worked closely with these cooperatives associations. It has also cooperated to its fullest extent with the Federal government agencies, and with the many other agricultural agencies, both public and private.

The outlined project work of the bureau naturally has been affected by the war. There have been some changes in personnel. Some individuals are now in the armed forces. Others have found employment elsewhere. The

work, however, has been carried on, we think, in an efficient manner. The following pages outline the efforts and accomplishments of the bureau and of those commodity organizations which we have helped to develop. In our report of these organizations and cooperatives, as well as of our own work, we supplement the reports of former years.

CROPS AND MARKETS INFORMATION SERVICE

The work of the crops and markets information service is closely related to all other projects of the Bureau of Markets. Its scope is widespread and covers the entire field of agriculture. Information is gathered and disseminated on practically all phases of New Jersey farming, including dairying, poultry raising, general crops, fruits and vegetables. Special studies connected with the service often form the basis for other types of work carried on in the bureau.

Work on the project during the past year was carried on with very few changes other than those made necessary by the war. No new work was undertaken, for reasons of economy, but a few revisions were necessary to operate efficiently. As in the past, the major share of the project consisted of issuing weekly summaries. These covered a wide field and were of interest to all branches of agriculture.

Daily information on fruits and vegetables was obtained during the active harvesting and marketing season for fruits and vegetables in cooperation with local offices of the War Food Administration at New York and Philadelphia. As for several years past, special services were rendered to the fruit and vegetable auction markets of the state. Some special work was also conducted for the egg and poultry auction markets. In addition, special services were rendered to the farmers' markets of Newark and Paterson.

As stated in last year's report, the fiscal year covers parts of two crop-growing seasons. Services during the first half of the fiscal year were in connection with the midseason and late crops of the 1942 season, while work during the last six months covered the early crops of the 1943 season. Therefore, any statements concerning the condition or progress of the crop must be qualified by the time of movement.

DAILY MARKET REPORTING

As in previous years, the work of securing and distributing daily market quotations on fruits and vegetables was continued in conjunction with the facilities of the War Food Administration's offices at New York and Philadelphia. This method of a cooperative project has proved to be the most economical possible, and prevents any overlapping of services. A small share of the salary of the men in charge of work at each market is paid by the State of New Jersey, and in return for this outlay, these cooperative employees collect special information and data on New Jersey crops during the active marketing season.

The fruit and vegetable market at New York City is the barometer of values for fruit and vegetable prices at local markets throughout the state. For this reason, a special early morning report is secured from the local office of the War Food Administration throughout the active season. Normally this type of service is started late in April and continued until frosts end the season about October 15. As stated in previous annual reports, the daily prices and condition of the market are secured from the cooperative employee at New York, and relayed to the county agricultural agent's office at Bridgeton, as well as some of the produce auction markets in the southern part of the state. This information has widespread use, with the Bridgeton office alone reporting 65 to 75 calls daily for these prices, during the active shipping period.

During the harvesting period for white potatoes, the Philadelphia office furnishes a daily report of prices and the general condition of the market. In addition, the man in charge of the work there secures and forwards to Trenton a summary of carlot shipments, primary destinations and shipping point prices of New Jersey potatoes as well as market prices. This information is then redistributed to leading growers and shippers in all parts of the state.

WEEKLY MARKET SUMMARIES

The major part of the project consists of writing weekly summaries. Two of these are carried on throughout the year, while others are of a seasonal nature. The two all-year reports are entitled "Market Conditions" and the "Weekly Market Review."

The object of "Market Conditions" is to present to growers and shippers of New Jersey, information on conditions in other leading commercial fruit and vegetable areas of the United States, in order that they may market their produce to advantage, by having up-to-date knowledge of the general situation for the particular crop in which they are interested. It has been the policy to issue three of these reports each week, and to attempt to cover thoroughly the acreage, yield, production, carlot movement, truck movement and other pertinent facts connected with an individual crop, rather than to present only sketchy data on several crops. This report continues to be quite popular, and has been widely used by leading growers and shippers as well as government officials and state marketing men in other parts of the country.

During the past year a total of 153 reports were issued. These included: white potatoes, 43; apples, 31; sweet potatoes, 26; peaches, 15; asparagus, 12; strawberries, 8; tomatoes, 7; onions, 6; lettuce, 3, and spinach, 2. A separate report is issued for each commodity, and growers receive summaries only for those crops in which they are interested. As in the past, no attempt was made to increase the mailing list. The general policy has been to let the reports speak for themselves, and all additions have come from requests on the part of growers and dealers.

The 1942 white potato season was generally successful. Yields were relatively good, and quality was reported as excellent by most growers. The acreage available for 1943 was much larger than the preceding year, with the state, as a whole, increasing plantings by about 25 per cent.

Demand for sweet potatoes was slow early in the fall, but as the season progressed, trading became very active and prices at the latter part of the deal were among the highest on record. Yields were good and the total production was about 30 per cent larger than the preceding season. The very short supplies of white potatoes and the general firmness in the produce market, due to poor growing weather in the southern states during January, February and March, were the principal reasons for the firmness of the sweet potato situation.

The fruit growers of the State had a relatively successful season. Yields of both peaches and apples were quite heavy, and demand and prices continued active throughout the season. Summer apples and a few early varieties of peaches sold slowly, but fall and winter varieties of apples and the main varieties of peaches returned good prices to the growers. The outlook for peaches and apples for 1943 is not so good as last season, with the potential production considerably smaller. Peach production is indicated by preliminary surveys at 75 per cent of 1942, while apples range between 65 to 75 per cent of last season's heavy production. The strawberry crop in 1943 was very light, due to a smaller acreage and only fair yields.

Asparagus harvesting was late in getting underway this spring, due to unfavorable weather conditions, but yields were generally good and acreage harvested was probably the largest ever recorded in this state. A larger share than usual went to the canneries. Onions were unsatisfactory for several reasons. The acreage was smaller in 1943, due to scarcity of "sets". Yields were only fair in South Jersey, due to poor growing conditions. Prices were set by the OPA ceiling regulation and much confusion resulted from this action. Tomatoes moved fairly well, but some government buying was necessary during the peak of the 1942 market season. Lettuce moved fairly well for the late 1942 crop, but yields from spring plantings were rather light in 1943. Spinach was in heavy supply this spring, 1943, and during the peak period prices were so low that some acreage was abandoned in the northern market gardening areas.

The "Weekly Market Review" was issued regularly throughout the year. As stated in the heading of this report, it is a summary of prevailing prices of leading agricultural products of New Jersey at the major eastern markets. Its contents include prices of grains, feedstuffs, eggs, poultry, livestock, and fruits and vegetables.

It was very difficult to obtain quotations on grains and feedstuffs during the latter part of the year, due to various restrictions which have been placed on trading in these commodities at terminals and organized exchanges. In many instances, it has been necessary to substitute or omit quotations

entirely. In general, the grain and feed situation continued firm with supplies quite scarce throughout the East.

Eggs moved well throughout the year with prices relatively favorable to poultrymen, in spite of firm feed prices. During the early part of the year, supplies at the country auctions and also nearby terminal markets were much heavier than the preceding year; but toward the close, supplies at these points dropped materially, due to government price ceilings and other restrictions. Poultry of all kinds was in very good demand, with dealers at most markets reporting that they were unable to fill all their needs. Livestock prices were likewise firm at the country auction markets of the state. Demand was very active, due to the general meat shortage existing during the spring months of 1943.

During the active harvesting and marketing season, three seasonal reports are issued. They are: "Auction News," "New Jersey Fresh Produce," and "New Jersey Truck Crop News."

Publication of the "Auction News" began several years ago, as an attempt to promote sales through these outlets, to inform the produce buyers of fruits and vegetables moving from this state, and to try to get them to secure these supplies in New Jersey during our active season. The first issue goes out when early greens are ready, usually around April, and continues until the season ends, around October 15. The cost of the paper and all mailing costs are paid for by the various auction markets. The mailing list is made up of buyers or potential buyers, with the markets themselves furnishing a large share of this mailing list. At the beginning of the 1943 season, the list was completely revised in order to adjust the list to wartime conditions. Some of the buyers in distant cities were dropped and more from nearby sections added. It was felt that the gas and tire situation did not warrant bringing buyer's long distances during the period of the war.

"New Jersey Fresh Produce" is the title of a seasonal report issued for the farmers' markets of Newark and Paterson. Its purpose is the advertising of these two important outlets in the northern part of the state. The cost of paper is paid for by the markets themselves. The mailing list consists of wholesalers, jobbers and retailers located in the New York metropolitan area. A weekly report is published for Newark, while a bi-weekly report goes out for the Paterson market.

"New Jersey Truck Crop News" is the third seasonal report issued. This report is published in cooperation with the agricultural statistician's office of the United States Bureau of Agricultural Economics at Trenton. The object of this report is to give growers an idea of the progress of crops in various sections of the state, as well as competing areas. At the close of the year, the mailing list was made up of approximately 1,200 fruit and vegetable growers, as well as shippers, dealers and the press. As this is a cooperative project with the United States Department of Agriculture, it is mailed out under a government frank.

SPECIAL STUDIES

As stated in last year's report, a bulletin on various fruits and vegetables was prepared and turned over to the printer. This report was released early in the 1942-1943 fiscal year, under the title of "Facts and Figures on Fruits and Vegetables Fresh From the Farms of New Jersey." The inclusion of this material into one booklet has proven valuable, and it is a ready source of data on various crops of the state.

During the past year, a similar booklet has been worked on, for competing states. It is felt that material of about the same nature as that presented in Circular No. 336 will be of great value both to members of the office staff and others connected with the production and marketing of agricultural products. It is hoped that this material will be completed early in the 1943-1944 fiscal year.

ANNUAL POTATO SUMMARY

The 1942 potato deal in New Jersey was generally successful in spite of the handicaps and hardships encountered because of the war. The acreage grown was somewhat larger than 1941, but yields were not so heavy, especially for Cobblers and Chippewas, and the total production fell short of the previous season by approximately 200,000 bushels.

Weather conditions during the planting period were favorable and the bulk of the acreage went into the ground at the normal time. Planting continued to the middle of April, with a few growers reporting that they finished around April 20. Immediately following the planting period, in late April and early May, it turned unusually dry, and this resulted in rather uneven stands in many sections. As the season progressed, conditions improved somewhat and vine growth appeared excellent late in June. However, this condition failed to show a true picture of the situation. In the case of Cobblers and Chippewas, it turned out that growing conditions during the critical period of setting tubers for these two varieties were unfavorable, and yields turned out much lighter than anticipated earlier by the majority of the growers. Katahdins, a later maturing variety, yielded well, and the heavy output of this variety did much to make the past season a successful one.

The total acreage was increased by about 1,000 acres over the preceding year, with the estimate placed at 56,000 acres. The acreage of the early commercial crop showed no change from the previous season with 48,000 acres planted both years.

Due to the light yield of Cobblers, the output per acre of the total and early commercial crops failed to equal that of the preceding season. The average yield for the total crop was placed at 181 bushels per acre, compared with 188 bushels in 1941. The early commercial crop's yield was estimated at 185 bushels compared with 195 bushels the preceding season. These figures are state averages, and many of the best growers exceed these by a wide margin. It is not unusual for a good grower to exceed 275 bushels per acre. The lighter yields more than offset the increase in acreage, and the total crop production was slightly under that of 1941. The estimate placed

the total crop at 10,136,000 bushels compared with 10,340,000 bushels the preceding year. The early commercial crop showed a sharper decrease, with the estimate placing it at 8,880,00 bushels compared with 9,360,000 bushels the year before.

The crop made rapid growth, and some early plantings were ready for harvesting by July 4. However, general digging did not commence until the second week of July. Demand was good during the greater part of the deal, with prices at shipping points higher than the preceding two seasons by a fairly wide margin. The period of heaviest movement, as shown by the record of rail and truck shipments, occurred during the second week of August, or somewhat earlier than 1941. Heavy shipments continued throughout August and most of September. The chief factor in the market during October was the placing of this crop under temporary price ceilings on October 5. This action by the OPA caused a considerable amount of confusion in the minds of growers and shippers. These temporary ceilings remained in effect for approximately a month, with the permanent regulations going into effect on November 9 for shippers and wholesalers, and on November 12 for retailers.

In contrast to the past few seasons, when the bulk of the crop was moved to market by truck, this past year saw the largest percentage of the commercial crop shipped by rail. According to reports of the United States Department of Agriculture, the rail shipments this past season, from July 11 to December 25, amounted to 6,452 cars. Reports of leading shippers on truck movement indicate that during the corresponding period these amounted to 5,718 carlot equivalents. On the basis of these figures, it is estimated that 53 per cent of the crop was shipped by rail, while 47 per cent was moved by truck. During the 1941 deal it was estimated that approximately 88 per cent was shipped by truck. This reduction in truck movement was brought about by the lack of gasoline and rubber, and shows that the growers and shippers made real efforts to conserve these vital war materials during the past season. During short periods of the shipping season, there was a shortage of cars. In general, the shippers met the situation, and very little of the crop was lost because of these handicaps.

Due to the fact that the railroad was used to a larger extent than in previous seasons, there was some change in the distribution picture compared with 1940 and 1941. As usual, the New England States formed good outlets during the first part of the deal. New York State and Pennsylvania were also used extensively, both by rail shippers and truckers. The most satisfactory part of the deal was the better outlets to the Midwest, with unloads in Ohio, Illinois and Michigan cities being the largest since 1937. The southern states were the largest purchasers, but the pattern of distribution was somewhat different from preceding seasons. There was a greater concentration in some of the states, and many markets took a larger number of cars, while outlets to the smaller cities were less than previously. This was probably due to the fact that no relief buying in New Jersey by the government occurred this past season. Another feature of the situation was the large purchases made by the military forces. The list of camps on the primary desti-

nation table is lengthy and includes a large share of the posts in the eastern half of the country.

Prices at the opening of the deal ranged from \$2.25 to \$2.40 per 100-lb. sacks, at shipping point; but by the time harvesting became general, this had declined to \$1.85 to \$2.00. Demand was rather slow during the latter part of July and early August, and during the period of peak shipments the f.o.b. prices were mostly \$1.50 to \$1.65. After the middle of August the market became stronger and prices advanced for a short period to \$1.75 to \$2.10. After this rally, the market again weakened and, in early September, most prices ranged from \$1.55 to \$1.65. Another rally took place around September 20, and from that time until the temporary price ceiling regulations went into effect, the price advanced steadily to \$1.95 to \$2.00. Due to confusion and lack of definite knowledge as to what was permitted under these regulations, the market slumped to around \$1.85, and remained close to that level throughout the month of October. Toward the close, the market went back to \$1.95 to \$2.00 and, at the time the permanent ceiling rules went into effect, the market was fairly well stabilized at these figures.

WEEKLY SHIPMENTS OF NEW JERSEY POTATOES—1942

(Carlot Equivalents)

Week Ending	Rail	Truck (1)	Total
July 4	..	19	19
11	108	103	211
18	560	284	844
25	695	351	1,046
Aug. 1	441	416	857
8	738	494	1,232
15	188	293	481
22	465	360	825
29	514	404	918
Sept. 5	447	361	808
12	286	299	585
19	372	344	716
26	361	325	686
Oct. 3	348	171	519
10	196	208	404
17	122	196	318
24	128	176	304
31	164	202	366
Nov. 7	121	160	281
14	95	134	229
21	54	108	162
28	19	80	99
Dec. 5	10	66	76
12	6	94	100
19	14	48	62
26	..	22	22
Total	6,452	5,718	12,170

Note: Rail figures secured from U.S.D.A. reports from Common Carriers, for commercial movement; truck figures, by courtesy of 20 leading potato dealers in central and southern sections of the state.

(1) Truck figures converted on basis of 300 sacks per car to October 1, and 360 sacks during October, and 450 sacks for November 1 to end of the year.

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.

The dairy industry in New Jersey, during the fiscal year ending June 30, 1943, found itself impeded, harassed and discouraged by the regulations imposed by the various war regulatory boards. While certain boards requested increased production of essential foods for our people and our allies, others, by limitation of needed supplies, decreased the opportunities to produce efficiently. New Jersey farmers are to be commended for the way they have responded in spite of these discouraging circumstances. They have lost much of their skilled labor to the armed forces and to war industry, with which they cannot compete in wages paid employees; their costs of production have been increased not only by labor but by uncontrolled prices for what they have to purchase; when they try to replace worn-out machinery, they find there are few replacements available. And, in spite of rising costs and other factors beyond the producers' control, the price control agency (the OPA), has not allowed the Milk Control Board to increase the price of milk. The unfavorable relation between the price received and the cost of production has for the first time in many years caused a decline in production in the State of New Jersey, this in the face of demands for more milk to meet the needs of the civilian population, the Army, and for export under the terms of the Lend-Lease Act. As the year closed, production was about 6 per cent less than for the first six months of 1942, while sales were up approximately 13 per cent.

One of the most discouraging features of the dairy industry picture is the failure of the Federal authorities to recognize New Jersey's importance as a milk-producing state. It is true that because of its size, New Jersey does not produce the volume of milk that is obtained from large neighboring states, but the New Jersey supply is an important one. The peculiar needs of our dairymen have not been recognized, although promises have been made on several occasions that our situation would receive immediate attention. Dairy farmers of New Jersey have received no increase in price since January, 1942.

Many other factors make the dairy picture in New Jersey very gloomy. Looming feed shortages make a further reduction in production inevitable. Here again Federal control is at fault. It is now more profitable to hold grain supplies, such as corn, in the Middle West for hog and beef production than it is to ship them east for dairy production.

The problem of replacements is of mounting importance. For many years New Jersey has depended upon the Midwest for a majority of its replacements. The higher price paid for milk and dairy products in the Midwest has made it impossible to secure quality replacements at a reasonable cost. Another phase of this problem is the disposal of large numbers of heifer calves at the livestock auctions of the state, due to the high price paid for veal calves. During the fiscal year just ended, 27.5 per cent more calves were sold over the three principal livestock auctions than were sold during the previous year. Every heifer calf sold at the present time means one less replacement for 1945-1946.

It becomes more apparent, as the war progresses, that an active Agricultural Planning Committee, similar to the one now functioning in New York State, is badly needed in New Jersey. As never before, a long-time planning program for the production and marketing of agricultural products is essential. There is a readily apparent lack of information as to the real picture on the dairy farms of the state, and this information should be collected and coordinated in a long-time program formulated for the dairy industry at this time.

NEW JERSEY OFFICIAL GRADES

The New Jersey official grades continue to be the principal project of the milk marketing work. For the first time since the inception of the grades, there was a decrease in the volume of milk under department inspection. This was due to several reasons, the principal one being the difficulty of meeting high quality standards under wartime conditions.

Use of the New Jersey grades is elective. They are used by dealers who choose to have their supply under the supervision which grading entails, and who agree to pay an inspection fee covering not only their own plant but the producer inspection. These vary from 35 cents to 50 cents per 1,000 quarts produced daily, dependent upon volume. The fees are paid entirely by dealers and involve no fee expense to the producers of graded milk.

At the close of the fiscal year there were 41 dealers processing 84,959 quarts of milk daily under the New Jersey official grades. Of these 41 dealers, 12 sold raw milk only, 16 sold pasteurized milk only, and 13 dealers sold both raw and pasteurized milk. The volume of milk distributed was 89 per cent pasteurized and 11 per cent raw.

Of these 41 dealers operating under the supervision of the Department of Agriculture, 21 are purchasing dealers, 15 are producer-dealers, and five both produce and purchase milk. The number of producers involved in the production of this milk is 282.

When the New Jersey official grades were established, a rigid herd inspection system was introduced and, at the present time, serves as a model for several other inspection agencies, both within and without the state. During the fiscal year ending June 30, 1943, this involved the inspection of 18,256 cattle, the work being supervised by the supervisor of dairy products stand-

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ardization, and all field work paid for by fees collected from cooperating dealers.

The accompanying table indicates the physical examination of cattle, by counties, during the fiscal year 1942-1943, and the results of those examinations.

PHYSICAL EXAMINATION OF CATTLE, FISCAL YEAR 1942-1943
BY COUNTIES

County	Number of Herd Examinations	Number of Animal Examinations	Number of Animals Passed	Number of Animals Isolated	Number of Animals Condemned
Bergen	4	113	103	7	3
Burlington	150	3,706	3,566	109	31
Cumberland	4	142	131	11	..
Essex	4	280	273	7	..
Gloucester	3	29	29	..	..
Hunterdon	119	4,082	3,978	86	18
Mercer	12	316	309	7	..
Middlesex	2	19	19	..	..
Monmouth	28	988	936	49	3
Morris	91	3,375	3,282	91	2
Ocean	3	36	36	..	..
Salem	58	1,423	1,353	62	8
Somerset	64	2,372	2,271	69	32
Sussex	5	261	255	6	..
Warren	46	1,114	1,098	14	2
Total	593	18,256	17,639	518	99

SUMMARY

Number of herds examined.....	593
Number of herds in which all animals were passed.....	333—55.16%
Number of herds in which animals were excepted.....	260—43.84%
Number of animals passed.....	17,639—96.62%
Number of animals isolated.....	518— 2.84%
Number of animals condemned.....	99— 0.54%

Another requirement of the New Jersey official grades for milk is the physical examination twice each year of all employees of farms producing New Jersey Grade A Raw milk and of employees of bottling plants handling the New Jersey grades of milk. This involved the physical examination of 632 individuals, and medical certificates containing the history of these examinations are now on file in the Department of Agriculture. Each man taking these medical examinations was required to be examined by a physician twice during the year and pronounced by the examining physician a safe individual to handle milk. When the individual has met these requirements, a card of identification is furnished to that effect. Laboratory examinations of specimens submitted by physicians in connection with these physical examinations were made by the New Jersey Department of Health.

The importance of microscopic analysis of samples of milk in determining causes of defect is amply demonstrated by the methods used in policing the New Jersey grades. By this method, much of the guesswork is taken out of

the routine work; and, while this procedure, being more complete, is incidentally more expensive than ordinary methods of control, the results justify the extra effort. During the 12 years of close microscopic supervision of the New Jersey official grades for milk, not one case of infectious disease has been traceable to this milk supply. During the year, 2,743 samples were collected for analysis.

Field work of the New Jersey official grades is self-supporting. 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 averaged \$36.65 daily, and the total income collected for the fiscal year was \$13,378.74.

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. To conserve space, only certain key years are used as a barometer:

	1931-32	1937-38	1940-41	1942-43
Number of cooperating dealers	30	62	53	41
Number of producers	102	184	380	282
Daily production of milk	24,709	55,848	96,420	84,951
Number of cows examined semi-annually	2,864	5,582	9,467	9,128
Number of employees examined semi-annually	259	525	503	316
Samples collected for analysis	401	1,816	2,481	2,743
Average daily fee	\$12.35	\$22.91	\$34.65	\$36.65

The New Jersey Official Grade Milk Dealers' Association, composed of cooperating dealers, has been active in promoting the sale of these grades of milk. While no active advertising program was conducted during the year just closed, due to the fact that the shortage of milk made such a program unnecessary, they have continued the check-off system whereby each producer and dealer enrolled in the advertising program contributed one cent for each 40 quart can of milk, the proceeds being placed in a reserve fund for use when necessity arises. The reserve fund now amounts to \$2,215.85.

HACKETTSTOWN LIVESTOCK AUCTION MARKET

The supervisor of dairy products standardization continued his close association with the Livestock Cooperative Auction Market Association of North Jersey, Inc., at Hackettstown.

This market, during the fiscal year ending June 30, 1943, did a gross business of \$1,117,429.80. As of July 1, 1943, out of profits a reserve fund of \$8,401.53 had been set up. In addition, they erected an addition of 80 feet to their plant at a cost of \$7,500, and a modern office building at a cost of approximately \$7,000, all paid for.

The amount of business done by the Hackettstown market continues to increase. The gross sales for the first half of 1943, as compared with 1942, show an increase of 87 per cent; membership shows an increase of 41 per

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cent. Total head sold for the same period shows an increase of 50.5 per cent; calves, an increase of 57 per cent; cows, 13 per cent and swine, 40 per cent. Other classes of livestock also increased accordingly.

The Hackettstown auction has assets, as of July 1, 1943, of \$31,105.41, of which land, buildings and equipment comprise \$20,377.49.

The following table shows gross sales by months for the past fiscal year as compared with sales for the corresponding months of the previous fiscal year.

SALES AT HACKETTSTOWN BY MONTHS

	1942-1943			1941-1942	
	Number of Animals Sold	Gross Sales		Number of Animals Sold	Gross Sales
July, 1942	1,589	\$ 58,037.59	'41	1,408	\$35,801.10
August	1,767	66,141.56		1,287	33,134.99
September	2,778	84,498.63		1,739	39,495.91
October	2,130	78,813.36		1,873	47,518.87
November	2,289	85,942.95		1,626	41,454.31
December	2,980	127,586.27		1,871	47,628.28
January, 1943	2,561	112,801.21	'42	1,722	51,333.79
February	2,758	112,770.51		1,653	48,626.08
March	3,209	127,160.02		2,266	66,901.75
April	2,435	93,384.32		1,632	54,729.61
May	2,196	82,727.17		1,375	46,939.67
June	2,691	87,566.21		1,892	62,409.12
Total	29,383	\$1,117,429.80		20,344	\$575,973.48

SPECIAL SERVICES

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. Briefs for a price increase were presented by him at a hearing before the Milk Control Board on December 28, 1942, and at a hearing before the OPA at Newark on January 22, 1943. Two meetings of the Northeastern Dairy Conference were attended and the supervisor took part in the programs.

Three conferences were held with the Quartermaster Corps in Washington, D.C., and Governors Island relative to the use of New Jersey official grade milk in army encampments located in New Jersey.

A special report on a plan for the raising of dairy cow replacements was prepared by the supervisor of dairy products standardization.

The supervisor also served as a representative of the New Jersey Junior Breeders' Fund, Inc., on a committee 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.

Under the auspices of the Office of Defense Transportation, a State Dairy Industry Transportation Coordinating Committee has been set up, the purpose of the committee being to formulate a plan under which the dairy industry can continue to operate in spite of shortages of tires, gasoline

and labor. County committees have been set up in the dairy counties to make a survey of the situation and these county committees will submit their reports to the general committee with their recommendations. The membership of this committee consists of producers, distributors, milk haulers, with representatives of the State War Board, the Dairymen's Council, the College of Agriculture, State Board of Health, Milk Control Board and the Department of Motor Vehicles. The supervisor of dairy products standardization serves as chairman of the State Committee.

The Bureau of Markets continued to cooperate with the New Jersey Dairymen's Council, and members of the staff of the bureau attended all meetings.

FRUIT AND VEGETABLE MARKETING

The program of this division of the bureau was carried out with little change during the year. Our work has continued with emphasis on the development of marketing facilities for farmers. This has been carried out through the service of shipping point and processing plant inspections under grade standards promulgated by the Department as authorized by state law. Practically all grades and standards used are the uniformly recognized Federal or U.S. grades. We also have worked closely with the many marketing associations in the organization and development of which the bureau has played an important part. This phase of the work was extended during the year by the organization of one more cooperative auction market, at Washington, N. J.

As was anticipated at the end of the last fiscal year, the curtailment of supplies of gasoline, tires and hauling equipment resulted in a sharp increase of distribution by rail shipments of important crops produced in volume in New Jersey. Many of the orders promulgated by federal war agencies likewise tended to increase rail distribution. Price regulations of the Office of Price Administration have been based largely on grade designation. Because of these developments, the bureau has received many more demands for help. In some cases, the help has been in the nature of explanations or interpretations of grades specified, and, in others, actual inspection and certification of the grade specified.

The increased use of recognized grades in the packing and selling has widened market outlets and brought better returns through the ability to select distant markets in need of our supplies. The use of grades has minimized the possibility of disputes over shipments between buyer and seller, and has aided in quick settlement of accounts.

INSPECTION WORK

An efficient and competent inspection service is maintained in the Bureau of Markets for certification of the quality and/or condition and grade of all fresh fruits and vegetables that may be shipped to markets throughout

the United States and Canada for commercial consumer trade, or sold to the U. S. Government for use by our armed forces and those of our allies, or for Lend-Lease shipments, or delivered to processors for canning, freezing or dehydrating.

The inspection service, with the exception of the state supervisor, is self-supporting. Salaries of inspectors and other expenses are paid from fees collected from growers, shippers, processors and other users of the service. The value of this service can be attested to by the increase in applicants from year to year, and even though the present world conflict has closed European and other foreign markets to export trade, we still continue to show yearly business increases. These increases are largely due to the fact that all government purchases of fruits and vegetables must be accompanied by certificates of inspection, and to increased applications from processors of agricultural products.

CERTIFYING FRESH PRODUCE

APPLES

During the fiscal year 1942-1943, 454 carloads of apples were inspected and certified by the bureau. Included were 240 carloads purchased by the U.S. Agricultural Marketing Administration. These were distributed for use in the school lunch program, for relief, or stored under state lot numbers for Lend-Lease shipment.

During the harvesting season, low market prices and a general feeling by the growers that prices would increase, resulted in a less-than-normal movement of apples into trade channels and a greater movement to storages. Sharp increases in prices during the late winter and early spring months proved that the growers were right. The quality of fruit and keeping quality were generally good, and holdings in storage were mostly disposed of at good prices to growers in the early and late spring. In addition to inspections of apples under the U.S. Standards, the Department also inspected and certified 21 carloads and 76 trucklots, covering 33,226 field boxes of "cider apples," in accordance with the terms of a contract between producer and processor.

WHITE POTATOES

The potato harvest during the summer of 1942 got off with a good start. Prices were generally satisfactory and shipments were heavy during the first weeks of the digging season. The only delays in the harvest were caused by periods of rainy weather during the first part of the season, and in early October when movements lagged, due to unsettled government price ceiling regulations. The price ceiling imposed was the first one to affect directly fruits and vegetables, and the result was a serious reduction in returns to growers. This condition was temporary and was corrected when more favorable interpretations were made effective. The order served to lengthen our shipping season.

The larger part of the crop was moved before the price ceiling became effective. The volume stored, however, was large enough to enable local dealers to supply their trade quite late in the year. The quality was exceptionally good; and growers and dealers had little difficulty in maintaining prices. Premiums offered on excellent quality and large sizes were often obtained. The main damage to defective stock was caused by wire worm, sunburn and scab. Some 500 to 600 carloads in excess of the estimated production for New Jersey were shipped.

Inspection by 10 to 16 inspectors assigned to this work more than doubled those of 1941. The total 1942 inspections and certifications were 2,941, which included 2,021 carloads, and in addition 920 truck and storage lots, covering 207,722 100-lb. sacks, as compared to a total of 1,328 inspections in 1941.

SWEET POTATOES

One of the most important crops in New Jersey is sweet potatoes. While part of this crop is shipped during the harvesting season, most of it goes into storages equipped with heating devices for the purpose of maintaining an even temperature. In these storages, the potatoes go through a self-curing process, which is mainly an elimination of part of their moisture content. This drying out also produces better quality in the texture of the flesh and results in greater sweetness in the taste.

Prices received by dealers for the greater part of the 1942 crop shipped during the winter months were satisfactory, but during the early and late spring months of 1943, prices soared and growers and dealers received \$8 to \$10 per bushel for that portion of their crop that was left.

Our department was called on to inspect and certify only 13 carloads and six l.c.l. shipments. The l.c.l. shipments involved 1,450 bushel hampers.

OTHER VEGETABLES

In addition to the inspection of such products as apples, white potatoes and sweet potatoes, our inspectors were called on to certify carlots or l.c.l. shipments of such products as spinach, cabbage, snap beans, peaches, carrots, lettuce, onions, beets and shipments of mixed vegetables. Most of the inspections on these commodities were made for the U. S. Agricultural Marketing Administration; however, 30 cars of spinach were inspected for export to Canada and one car of cabbage for commercial shipment. A total of 11,095 packages of the above products were inspected for truck shipments during the 1942-1943 season, not including inspections at auction markets upon which no certificates are issued.

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TEN-YEAR RECORD OF SHIPPING POINT INSPECTIONS BY PRODUCTS

Product	33-34	34-35	35-36	36-37	37-38	38-39	39-40	40-41	41-42	42-43
Apples	91	94	333	160	391	579	672*	611	100	609**
Beans	162	91	17	43	3	1	1	..	..	7
Beets	..	..	..	..	..	..	..	..	1	3
Cabbage	..	..	1	..	..	..	..	..	1	1
Carrots	..	..	..	..	..	..	..	..	..	3
Corn	1	..	..	..	..	..	..	..	3	..
Cucumbers	..	..	1	..	..	..	..	..	..	..
Eggplant	..	..	..	..	..	..	..	..	1	..
Lettuce	..	..	..	..	..	..	..	..	..	1
Lima beans	75	1	..	3	..	..	..	..	..	..
Mixed fruit	1	..	..	..	..	..	..	..	..	..
Mixed vegetables	..	..	..	..	..	..	..	..	..	4
Onions	223	36	55	42	61	9	3	8	1	2
Peaches	2	..	..	1	..	..	49	26	1	1
Pears	5	..	16	..	1	2	..	..	..	..
Peas	20	2	2	..	..	..	..	..	..	..
Peppers	18	3	..	..	..	..	..	..	..	..
Potatoes	20	40	121	323	5,180	1,972	397	2,264	1,328	2,941
Spinach	1	..	..	..	..	1	6	3	8	30
Strawberries	125	1	1	1	..	..	..	..	..	..
Sweet potatoes	..	..	..	..	45	..	62	9	29	19
Total	744	268	547	573	5,681	2,564	1,190	2,921	1,473	3,621

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

**Includes 97 certificates issued on "cider apples according to contract."

CANNERY CROPS INSPECTION

ASPARAGUS

The spring of 1943 was cold and damp. Plans for inspection of asparagus at canneries and for quick-freezing were made early in April. Because of the threatened shortage of inspectors, the processors requested the bureau to supply men early enough to insure them that the necessary personnel be on hand when needed. As early as April 19 we had a small force available, but the cold weather retarded the crop to such an extent that work was not commenced until the last of the month.

Right at the start the growers ran into difficulties. Labor for harvest was scarce and some of the imported labor was untrained and inefficient. The growers also experienced difficulties from natural sources.

The greatest damage to early asparagus was caused by high wind and blowing sand. The spears are tender when they emerge from the soil and grow very rapidly. Sand blown by high winds cuts these tender shoots and causes scars and strictures which result in badly crooked spears. The first period of hot weather brought swarms of asparagus beetles. In some areas the infestation was the greatest ever experienced. Unfavorable weather made poor conditions for dusting. However, with much difficulty, the beetles were brought under control, and reappearances were only spasmodic and localized throughout the remainder of the season.

In spite of early season difficulties, the season's average grades showed that better quality was delivered to processors in 1943 than in 1942. A study made of inspectors' certificates shows that in 1943 the asparagus delivered to processors graded 30 per cent, N. J. No. 1, Large; 39 per cent, N. J. No. 1, Medium; 2 per cent, N. J. No. 1, Small; 7 per cent, Culls, and 22 per cent, Butts. In 1942 the grade was 25 per cent, N. J. No. 1, Large; 39 per cent, N. J. No. 1, Medium; 3 per cent, N. J. No. 1, Small; 8 per cent, Culls, and 25 per cent, Butts.

The increase in prices paid by processors for the 1943 crop, together with better quality, and closer cooperation and better understanding between representatives of the department and members and officials of the New Jersey Asparagus Growers' Association and their field representative, gave rise to the most amiable relations ever existing between growers and inspectors, and favorable expressions of satisfaction with our grading service were frequently voiced by both growers and processors.

There were 23 regular licensed inspectors assigned to the 16 receiving stations representing nine processors. This is an increase of nine inspectors, two processors and five receiving stations over the 1942 season.

All canners and receiving stations continued the receipt of asparagus through the month of June, but only two continued through the week ending July 3. The estimated volume of asparagus inspected, based on average weights of boxes checked, was 34,690,645 pounds.

The following table shows the results of the cannery asparagus grades for the 1943 season.

ASPARAGUS RESULTS 1943 SEASON

Week Ending		Loads 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
May	1	429	27	47	1	3	22
	8	3,049	26	45	2	6	21
	15	4,630	33	35	2	7	23
	22	4,427	32	37	2	6	23
	29	4,286	33	39	2	5	21
June	5	4,779	30	41	3	5	21
	12	4,378	30	37	2	7	24
	19	4,444	26	41	2	8	23
	26	3,435	22	38	2	14	24
July	3	489	23	33	1	16	27
Season		34,346	30	39	2	7	22

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 processors of peas in the East, both for quick freezing and canning, last year requested that the bureau furnish an inspector to supervise their system of grading, and with their cooperation, work out a fast, accurate and reliable

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method of determining grades that 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 being used in grading peas for processing. A detailed explanation of this work and the results obtained were given in last year's annual report. In short, the experiment was successful and a satisfactory method was worked out. However, since the results obtained were based on peas grown in a season which was relatively dry, and since the 1943 season was just the opposite, or wet, it was thought best to continue the experiment this year. The same procedures were followed throughout this season and results obtained were equally as satisfactory as in 1942.

The processor has expressed a desire to use the method and procedure in grading all of his 1944 crop of peas. The work will be done by regular licensed inspectors assigned by the Bureau of Markets.

TOMATOES

The 1942 cannery tomato inspection work started earlier than usual with 10 processors signing contracts with the department to furnish men to do the grading and certifying of farmers' lots of tomatoes delivered for processing.

Although there was an increase in acreage of tomatoes for processing over the 1941 season, growers suffered an acute shortage in production following excessive rains of extremely heavy proportions in late July and early August, which is a critical period for cannery tomatoes. The resulting damage was a quick defoliation of plants and considerable loss, due to excessive growth cracks followed by black mold and decay, and a general infestation of anthrasnose. The weather following the rains in early August was perfect for ripening. This, together with forced ripening from defoliated plants, caused a veritable flood of deliveries to processors, which in most cases was in excess of their plant capacity. This necessitated many hours of waiting in long lines at the processing plants, and not only added to loss in weight, but contributed to a considerable lowering in grade.

The average grades for the season were low. The 1942 season averages were 55 per cent, U. S. No. 1; 42 per cent, U.S. No. 2; and 3 per cent, culls.

STATE DEPARTMENT OF AGRICULTURE

SUMMARY 1942 CANNERY TOMATO SEASON AND
COMPARISONS WITH FORMER YEARS

Week Ending	Total Tons	U. S. No. 1 Per Cent	U. S. No. 2 Per Cent	Culls Per Cent
Aug. 1	2,710	65	33	2
8	8,940	62	36	2
15	21,781	54	43	3
22	27,910	51	45	4
29	48,943	55	42	3
Sept. 5	36,682	56	40	4
12	16,140	56	41	3
19	11,234	56	40	4
26	3,559	48	47	5
Oct. 3	1,434	50	46	4
10	30	44	52	4
Total	179,363	55	42	3

Seasons	Total Tons	U. S. No. 1 Per Cent	U. S. No. 2 Per Cent	Culls Per Cent
1942	179,363	55	42	3
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

The bureau has cooperated closely during the year with all city farmers' markets and the shipping point markets. Some assistance has also been given roadside market operators and other selling agencies. The effect of the war has been felt on these markets. Some of the less essential vegetables have been reduced in volume through incentives given in the production of the more essential foods. Greater buying power in nearby towns and cities has increased the activities of trucker-buyers close to consumer areas. Large volumes of some vegetables and fruits have been brought right on the farm. In a few cases, the ceiling prices that have been ordered have resulted in greatly reduced sales at established markets where ceiling orders are enforced, with a corresponding increase in sales from farmers direct to buyers who have come to the farm with offers of higher prices than those authorized by the OPA. Among these fruits and vegetables are onions, cabbage, lettuce and raspberries.

It has also been noted that fewer trucker-buyers have come into the state from long distances. Those who have come seem especially pleased that they are able to obtain their needed supplies from concentration points, such as the auctions. The auctions are strategically located on good highways and

conveniently located to nearby large cities. They have done much to aid buyers in obtaining loads as needed and quickly as possible.

The markets have also cooperated among themselves. In earlier years there was a tendency to try to steal each other's buyers. Considerable rivalry was evident. Today, it is not uncommon for one market master, who cannot complete a buyer's load, to send him to a nearby market where he knows a supply of the needed commodity can be obtained.

The markets have developed this friendly feeling through their state organization, The Cooperative Marketing Associations in New Jersey, Inc. Monthly meetings have been held by this organization throughout the active growing season. Seven such meetings have been held during the year. At these meetings, the market managers and the delegate directors have met with representatives of the bureau and the College of Agriculture, and discussed problems pertaining to marketing and production. The state association has been active in helping solve many package and grading problems as well as labor and transportation problems. The chief of this bureau has been secretary of the state association since its organization several years ago.

The bureau has maintained a service to the 12 auctions by detailing the services of an experienced man as an aid to these markets. He has attended 55 directors' meetings and nine annual meetings during the year. In addition, he has made 176 visits to the auctions during their operating hours, and aided the managers in their many problems. He has also supervised the inspection service as established on some of these markets.

In the spring of 1943, aid was given to a group of Warren County farmers, who expressed a wish to establish an auction market in the northwestern section of the state. The auction market supervisor, together with the chief of the bureau, aided in the incorporation of this group. Assistance was given in selecting a site for the market, which was established at Washington, N. J. Later our representative drew the plans for the buildings and supervised their construction. As in the case of all new enterprises of this kind, a great deal of time was given to this market in order that it be started properly. The first sale was held late in June.

In order that a better picture of the activities of the produce auctions may be given, this report indicates in the following table the operations of the auctions for calendar year. For purposes of comparison, the figures for the 1941 season are also shown.

STATE DEPARTMENT OF AGRICULTURE

SUMMARY OF SALES AT FRUIT AND VEGETABLE AUCTION MARKETS

Market	Season of 1942		Season of 1941	
	Number of Packages Sold	Value of Sales	Number of Packages Sold	Value of Sales
Beverly	260,968	\$205,504.95	235,251	\$149,773.37
Cedarville	397,380	568,102.75	366,383	507,675.87
Glassboro	489,434	479,254.68	580,200	416,736.87
Hammonton	75,867	165,121.92	121,315	215,230.12
*Hightstown	470,133	437,296.52	452,241	308,521.41
Landisville	432,120	499,264.20	467,799	418,870.84
Newfield	12,898	15,837.37	20,872	17,203.07
Pedricktown	160,571	244,188.32	120,786	198,067.87
Rosenhayn	7,789	26,687.15	12,201	30,736.58
Swedesboro	1,179,308	1,322,251.41	1,067,869	1,159,349.71
Vineland	465,699	419,928.32	469,613	323,180.51
Total	3,952,167	\$4,383,437.59	3,914,530	\$3,745,346.22
Average price per package, 1942				\$1.109
Average price per package, 1941				0.958
Per cent of increase in price per package, all commodities				15.76
1942 over 1941				

*Figures for Hightstown are auction sales only and do not include sales made by the manager, which amounted to 35,417 packages selling for \$50,096.71 in 1942, and 57,549 packages selling for \$30,962.38 in 1941.

A partial report of the activities of produce auction markets for the 1943 season, up to July 1, shows that while the volume this year is far below the volume for the first half of 1942, the value of sales is much greater. This reflects the much higher prices in vegetables and small fruits prevailing as the fiscal year closes. The corresponding figures are as follows:

1st Six Months	Packages Sold	Value of Sales
1943	733,457	\$1,967,393.41
1942	941,790	1,659,020.22

In last year's report, for the first time we prepared a table showing the principal commodities sold at the fruit and vegetable auction markets and the volume in 1941. For the purposes of comparison we have prepared a table which gives the same information for 1942. We have broken down the volume classed as miscellaneous to show the amount of eight additional commodities. These commodities have been sold in previous years, but were not thought of enough importance to list separately.

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PRINCIPAL COMMODITIES SOLD AT FRUIT AND VEGETABLE AUCTION
MARKETS, COMPARISON OF VOLUME IN 1942 WITH 1941

Commodity	Unit	1942	1941
Apples	Bushels	72,718	84,059
Asparagus	Crates, dozen bunches	473,432	446,958
Beans, snap	Bushels	191,942	170,400
Beans, lima	Bushels	90,536	69,109
Beets	Dozen bunches	36,158	41,423
Blackberries	Crates, 24 quarts	9,059	22,101
Broccoli	Bushels	45,821	46,108
Cabbage	Bushels	27,164	...
Cantaloupes	Bushels	45,425	42,679
Carrots	Dozen bunches	24,962	79,284
"	Bushels	4,389	...
Cauliflower	Bushels	8,915	...
Corn, sweet	Bushels or sacks	68,478	101,223
Cucumbers and pickles	Bushels	209,791	251,812
Dandelion	Bushels	40,200	27,716
Eggplants	Bushels	109,243	118,387
Lettuce	Crates, 2 dozen	47,655	57,478
Okra	Climax baskets, 12 quarts	9,762	...
Onions	Sacks, 50 lbs.	89,675	115,249
Parsley	Bushels	15,045	...
Peaches	Bushels	165,806	178,908
Peas	Bushels	3,196	3,652
Peppers	Bushels	664,974	581,454
Potatoes, white	Sacks, 100 lbs.	143,003	147,057
Potatoes, sweet	Bushels	253,998	225,005
Raspberries	Crates, 36 pints	33,392	37,205
Scallions	Bushels	3,155	...
Spinach	Bushels	3,031	...
Squash	Bushels	9,199	8,445
Strawberries	Crates, 24 quarts	64,919	73,563
Tomatoes	Climax baskets	688,900	684,989
Watermelons		13,925	...
Miscellaneous	Packages	292,054	332,348

CITY FARMERS' MARKETS

The Atlantic City Market has continued sending to us weekly reports covering commodities sold and prices received. The Newark Farmers' Market has sent in weekly a very complete report covering all commodities by volume, but has not given prices. These reports are valuable in the office because they show the distribution of farmers' products. For many years, similar reports were obtained from the Trenton Farmers' Market. This year, due to increased duties and lack of personnel, the Trenton reports were discontinued.

During the year the Atlantic City Market sold 363,971 bushels of produce, 146,735 dozens of eggs, and 68,925 pounds of poultry. Gross sales amounted to \$518,760.90. Sales volume on this market was also below volume of the preceding year, although the money received by the farmers was about the same.

Sales on the Newark Farmers' Market were considerably below the sales during the previous fiscal year. There were 10,652,029 bunches of vegetables

sold as compared with 13,210,239 in the 1941-1942 year. Packaged fruits and vegetables amounted to 2,403,168 as compared with 2,775,937 in 1941-1942. Sales of miscellaneous products, such as watermelons, horse-radish, flowering plants and bedding plants were also proportionately lower.

The chief of the bureau has met during the year with the directors of these markets and attended their annual meetings.

MISCELLANEOUS

The bureau has been actively represented at meetings of the Northeastern Potato and Vegetable Council. Meetings are held in New York monthly. Many problems affecting New Jersey are discussed. This strong organization has been recognized by several war agencies and the U. S. Department of Agriculture as representing the northeastern states. Washington representatives of these agencies are usually in attendance. The Council has been quite successful in obtaining some modifications in OPA orders where they appear to be detrimental to farmers of the Northeast.

The bureau has cooperated with county fair associations and with the New Jersey State Fair. Exhibits have been erected and men have been present to attend and explain these exhibits.

POULTRY PRODUCTS MARKETING

The marketing program in poultry and eggs has continued during the year along lines that have been developed over a period of years. Our work in the development and use of grades for both eggs and live poultry, and our promotional program have been changed somewhat by existing conditions. The operation of the poultry improvement plan and the enforcement of the fresh egg law have seen little change. Two years ago the work in this project was divided so that the two chief inspectors would have greater responsibility in the lines of work assigned to them, thus relieving the supervisor of much detail work, and giving him more time for building a program that would serve our poultry interests to a great extent when things get back to normal, and especially when the reconstruction period immediately after the war comes.

POULTRY PROMOTION WORK

Under the plan for carrying on the poultry work most efficiently, the supervisor is more directly concerned with that part of the poultry products marketing program which is officially stated to be "to build up a reputation and to develop a practical and economical marketing method for New Jersey eggs and poultry." Cooperation is also given in the other two projects, the poultry standardization and certification program in charge of one chief inspector; and the inspection program, for enforcement of egg and poultry grades and the fresh egg law, in charge of the other chief inspector. Both of these programs dovetail with the marketing and promotional activities of the supervisor.

Looking back over the past year, during which arbitrary and authoritative command over all phases of food distribution was taken by the Federal Government, the principal efforts of the supervisor were invested in assisting the poultry producers, their markets, and their buyers to resist Federal encroachment upon their economic lives. Our original plans, at the opening of the year, were to use the war period for the further development of New Jersey and nearby markets for New Jersey eggs and poultry, further strengthening consumer preference for these products fresh from New Jersey flocks, with the thought that the market insurance thereby achieved would help to cushion the economic blows that are inevitable after the war. Instead, the peculiar economics and marketing theories evolved at Washington made it necessary to shelve these plans, and to change our program of work to help insofar as possible in the struggle for economic survival faced by the established markets. Under such circumstances, the impossibility of convincing producers that it is desirable to invest in advertising appropriations to secure their markets' future is readily apparent. Postwar planning has little appeal to those who are concerned over immediate handicaps of wartime production, and the selling of products for sufficient money to maintain operations.

Last July, the major problem on the live poultry markets of New Jersey was the volume of offerings, the second largest in the history of the state auction system. So great was the volume that, although price was not seriously reduced because the large supply of poultry was in great demand as a result of the red meat shortage which was then growing acute, manpower and coop shortages were the immediate handicaps on the markets. Twelve months later, in spite of the fact that chick hatches and poultry production had increased tremendously under the promise of continuing favorable prices, the problem became one of such short supplies of poultry that the markets had to resort to rationing. From a record of 742,183 pounds of live poultry sold in July, 1942, the public auction marketings dropped to 221,860 pounds in June, 1943, with a further decline in prospect. Private selling, at prices generally conceded to be beyond the Federal "ceiling," therefore branded as "black market" trading, accounted for this slump in offerings publicly. It should be noted that, with poultry production at least 15 per cent above 1942, the volume of poultry sold should have been correspondingly higher instead of lower.

The "black market" attraction to poultry producers developed slowly in the beginning, after the maximum price order was promulgated in December, 1942. An earlier experimental order, principally concerning turkeys, preceded the poultry order. A slight drop in auction market volume occurred immediately, and increased as the proselyting of producers from their regular marketing channels became more common among buyers. The word passed that poultry was worth more than the government maximums allowed, and much poultry was withheld from the public markets, to await the farm-to-farm buyer. Within three months, volume was off one-quarter, and within six months, it was more than two-thirds below last year. These facts were

constantly placed before the Office of Price Administration and the War Food Administration, both of whose ends were being defeated, along with the purposes of the farmers' cooperatives and of this department. Violations of OPA prices were increasing costs of living; maldistribution of food according to who would pay the highest price was injuring the WFA program; and the auction markets, which depend upon large volume to provide sufficient income to maintain their services were suffering great damage that lessened their efficacy in the orderly marketing and distribution of food. Dealers who insisted upon legitimacy were forced to close their businesses.

Independent of efforts being put forth by the regional and national organizations which serve the poultry industry, the supervisor obtained a conference with the regional administrator of OPA and his poultry staff. Earlier, the supervisor had attended a conference in Washington with OPA and FDA officials and members of the poultry and egg trade. Many other conferences and meetings on the same subject were held, some local in scope, others state-wide, several regional. The effects originally anticipated, and later realized after the order was in operation, were outlined to the Federal men, and were well known to them. That they persisted in issuing the orders and later in refusing to modify the prices or the regulations applicable, except to make them more inequitable, must be taken as proof that the federal policy was to permit a demoralization of orderly marketing procedure in order to attain some result that in Washington is considered to be more essential to winning the war. Official actions by organizations of poultrymen, including resolutions, plans for remedial measures, published statements of protest, correspondence and conferences with the authorities, were of no avail. The personal conference with the regional administrator was equally unproductive of results, except to confirm that the Federal government was definitely committed to the policy of the inequitable price order.

Experience with the poultry market problem led to a conclusion that the same thing would occur in the egg market as soon as supplies ran short, if an order companionate in policy to that which determined the poultry order were to be prepared for eggs. This advice, too, was not accepted, and at the end of the fiscal year there were many indications that the "black marketing" of eggs was following the pattern already cut out for poultry. Means of combating this new threat to the cooperative markets have been devised, but their efficacy remains to be proved. The power of the high dollar is apparently greater and more immediate than that of loyalty and concern for the future.

The first and temporary egg ceiling order, effective October 3, 1942, was generally favorable to the New Jersey producer. In fact, because of its generalities and flexibilities, and because it used a relatively high price basing period (originally a 60-day order, covering the period October 3 to December 3, but later extended until March) it had the effect of raising egg prices beyond what normally was expected. During the five months of its operation, producers benefited materially to the extent of the inflationary

influence of a high ceiling. There was some evidence pointing to special advantage to be gained under this order by producers who marketed their eggs cooperatively, particularly at auction; and this influenced a trend toward cooperative marketing which for several months, at least, brought many new members to the cooperatives.

The new, permanent egg ceiling order of March 6, 1943, faulty as it was in its original form, and impossible of either practical compliance or enforcement, was not unfavorable to the producer on the basis of prices. The inequities of this order lay in its terms and conditions of sales. These were incompatible with the New Jersey grades and standards, and in conflict with the auction method of sale. Still, by an official interpretation that the wholesale grades of eggs were not governed by the pricing schedule, the New Jersey auctions and bargaining cooperatives were able to sell their eggs without a ceiling. This, at a time when eggs were in great demand as a substitute for rationed meat, resulted in the wholesale purchase of eggs at prices higher than the retail ceilings, and the consequent "squeeze" of narrow margins upon distributors. Many claimed they handled eggs at a loss, such as in the case of the chain stores whose managements were required by consumer demand to continue to supply eggs even without profit. Many independent egg handlers were forced out of business, some permanently.

As the fiscal year ended, OPA had determined upon a plan to save the egg trade, but at the expense of the poultry farmers. Announced to become effective July 12, 1943, a price "rollback" was the solution advanced. Under the forthcoming order, the retail level of egg prices was to be maintained, with prices marked down in each step of distribution back to the farmer. An average loss of income, by comparison with producer prices in late June, of \$3.00 per case of eggs was anticipated. The loss per case to New Jersey poultry producers would be greater than to producers nationally because traditionally the price of New Jersey fresh eggs is greater than that of imported eggs; yet this factor was not provided for in the forthcoming price schedule, which has a national basis and no allowance of local advantage.

Every means of preventing the disastrous rollback on producers was attempted, by the poultry producers, their markets and their organizations, with cooperation of this agency of state government. The fear was expressed that the reduced price would discourage production of eggs, would lead to liquidation of flocks, and result in the same "black marketing" of eggs which already had occurred in poultry meat. The very fact of the timing of the rollback order was an issue, it being held that the government was breaking faith in the middle of the poultry rearing season with producers who had confidently increased their flocks at the request of the government to meet wartime production goals. The danger to the morale of the entire agricultural population, resulting from this unfortunate timing of the rollback, looms as important psychologically as the financial loss does economically.

Lacking the apparent authority to "roll-up" egg prices to relieve the squeeze on the trade, the only alternative thereafter being the rollback on

producers, OPA was committed to the course of "holding the line against inflation," laid down by the President. In view of this, all efforts to dissuade the Federal price-fixing authorities from their policy in this case were useless.

Promotional activities, which were originated by the supervisor, and those of cooperating agencies in which we participated, included a wide variety of projects, some of which are listed below:

Approximately 120 photographs, whose subjects included baby chicks, laying flocks, turkeys, eggs, poultry farm scenes, groups of industry leaders, and individual producers, were made, principally for press release purposes.

The first annual New Jersey Egg Grading and Packing Contest, in two divisions (for 4-H Club and vocational agriculture students) was conducted in connection with New Jersey Agricultural Week.

To acquaint "fresh egg" producers with the new wartime product, dried egg powder, which many believe may become highly competitive with shell eggs through advertising to consumers after the war, demonstrations of its uses and "tastings" of the cooked product were presented before three large meetings, with a combined attendance of 275, and before smaller groups.

Three radio appearances were made by the supervisor, and assistance was given to cooperating persons participating in five other radio programs on the subject of poultry products.

Special cooperation was given at various times during the year to Northeastern Poultry Producers' Council, an organization of poultrymen from 13 northeastern states, at conferences in New York City, Washington, D. C., and Trenton. One full week was devoted to the annual convention of this organization in New York City, at which the supervisor was in charge of press and radio information.

Cooperation was given to the Newark Museum in the preparation of an exhibit of the poultry and egg industry in New Jersey.

During the mid-winter egg shortage, when Army Quartermaster Corps needs for eggs resulted in a threatened requisition of the entire supplies of several New Jersey cooperatives, assistance was given to the producers' organizations to relieve the danger of such action to their markets. Through consultation with the Army representative, a plan was worked out whereby the New Jersey markets would offer bids on Army needs, all agreeing to share in the total supplies required.

A strain on the relations between the two authorized users of the State Certified Egg seal (New Jersey Poultry and Egg Cooperative Marketing Association, and New Jersey Federated Egg Producers' Cooperative Association) developed through a misunderstanding of an agreement concerned with soliciting each other's customers. Several conferences of those in authority remedied the situation, and the nominally pleasant relations between the organizations were preserved.

Lectures on New Jersey poultry and fresh eggs, in particular, with information about the state's agriculture in general included, were given

before nine audiences of consumers, at meetings of local defense councils, service clubs and civic organizations. The lectures were in the form of "chalk talks," combining comic illustration with the factual information we are seeking to teach the consumer. This type of lecture has been very well received, largely because of the ability of the supervisor in illustrating by drawings the facts he wished to put across. A lecture on marketing New Jersey farm products was given before the final assembly of Rutgers Short Course students.

In cooperation with L. Bamberger & Co., a Newark department store, a demonstration-display on fresh eggs was prepared, and set up in the grocery department for two weeks. Services of a fresh egg law inspector were loaned to staff the display, and to demonstrate candling and inspection technique. More than 2,000 consumers were given individual demonstrations, and a large amount of informational literature was distributed. One tangible result of the project was that the store put in an egg department.

Cooperating with the Jersey Chick Association, that organization's guide to sources of New Jersey chicks and poults was converted into a handbook of information on the fundamentals of chick brooding, poultry keeping and marketing. Preparation of copy and printing were handled by the supervisor. Assistance was also given the New Jersey Council in its advertising of Jersey chicks.

As secretary of the New Jersey Poultry and Egg Cooperative Marketing Association, the supervisor was active in many meetings and projects of this organization.

POULTRY STANDARDIZATION

The past season has been the biggest the department has experienced in the poultry standardization work. There was a shortage of manpower, but due to the willingness of those working with us, more birds were banded than ever before in the State of New Jersey.

The poultry division cooperated with the United States Department of Agriculture for the eighth year in administering the National Poultry Improvement Plan. Contracts for continuing this cooperation for the 1943-1944 season have been signed by the department. The work continued to improve in its effectiveness. The set-up of flock selecting and pullorum testing agents is working out satisfactorily. This program will assist greatly in carrying on the greatly increased poultry improvement work in New Jersey during the war; however, it has required more supervision by regular department employees in training the agents and checking their work. A conference and examination for the preliminary qualifying for flocks selecting and pullorum testing agents were held in Trenton. The College of Agriculture has assisted the bureau in this conference and has signified willingness to continue its help for the fall season.

The eighth year for administering the National Poultry Improvement Plan 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 were as follows:

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

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

Because of the demand for more poultry on the farms, the hatcheries have had much difficulty in obtaining good hatching eggs. Prices for such eggs have averaged about nine cents a dozen over last year's prices. Hatcheries having their own flocks and producers of hatching eggs have had a profitable year. Those hatcheries purchasing a large percentage of their eggs from out-of-state sources have had great difficulty in filling their incubators. There has been considerably more demand for Record of Performance cockerel chicks than were produced in the state. Out-of-state supplies were also limited because of the increase demand at all sources.

Twice during the year the federal supervisors came to New Jersey to check on our work as coordinators and to observe the work as carried out. In each case they were well pleased with results obtained.

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.

N. J.-U. S.	1942-43	1941-42	Per Cent Changes in 1943
Number of flocks cooperating	611	665	— 8.12
Total number of breeders	328,198	275,874	+18.97
Number of hatcheries cooperating	42	41	+ 2.44
Hatchery capacity cooperating	3,413,312	3,985,688	—14.36
Number of birds in Pullorum stages only	68,236	51,185	+33.31
Number of birds in Approved stages only	180,733	146,925	+23.01
Number of birds in Certified stages only	74,779	69,117	+ 8.19
Number of birds in R. O. P. Trapnest Project	2,171	1,692	+28.31
Number of females in R. O. P. breeding pens	870	815	+ 6.75
Number of R. O. P. chicks and cockerels sold	3,371	4,905	—31.27
Per cent of birds reacting to the pullorum test	1.04	1.35	—22.96
Number of flock inspections	37	246	—84.96
Number of hatchery inspections	64	85	—24.71
Number of R. O. P. inspections	20	33	—39.39
Number of farm visits	104	326	—68.10

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

County	No. of Flocks	N. J.-U. S. Certified				N. J.-U. S. Approved				N. J. -U. S.				Totals
		Pul. Tested	Pul. Con- trolled	Pul. Passed	Pul. Clean	Pul. Tested	Pul. Con- trolled	Pul. Passed	Pul. Clean	Pul. Tested	Pul. Con- trolled	Pul. Passed	Clean Pul.	
Atlantic	24	657	10,669	...	...	1,235	9,862	...	...	567	...	...	...	22,990
Bergen	10	...	...	...	...	1,597	1,260	...	...	33	160	...	630	3,680
Burlington	15	...	4,329	...	...	366	6,264	1,389	...	...	...	...	...	12,348
Cape May	11	...	8,843	...	...	...	9,760	...	...	...	...	...	...	18,603
Cumberland	132	405	20,498	...	1,077	404	37,914	...	...	788	7,121	...	...	68,207
Gloucester	14	493	4,722	...	5,105	...	6,979	...	...	...	306	...	...	17,606
Hunterdon	21	217	...	...	...	4,585	4,799	...	...	301	...	61	...	9,963
Mercer	60	...	1,967	...	...	1,338	15,025	222	1,545	538	364	...	...	20,999
Middlesex	8	...	1,342	...	...	...	1,617	1,790	...	1,722	...	...	...	6,471
Monmouth	39	...	...	...	...	1,486	8,395	...	...	1,606	8,429	...	...	19,916
Morris	9	23	...	...	...	1,275	6,714	...	...	...	...	...	...	8,012
Ocean	52	13	6,879	...	...	952	4,676	...	...	7,283	20,521	...	...	40,324
Passaic	5	...	...	...	...	...	1,207	...	...	...	2,057	...	...	3,264
Salem	82	...	3,569	...	...	1,674	16,912	...	...	2,974	10,084	...	...	35,213
Somerset	11	...	1,119	...	...	858	2,764	...	...	...	...	...	...	4,741
Sussex	9	...	...	...	...	499	1,093	602	709	...	564	...	1,105	4,577
Warren	2	...	...	...	...	...	1,866	...	...	...	...	...	...	1,866
Out-of-state	107	421	2,430	...	...	3,368	17,727	...	...	...	1,022	...	...	24,968
Total	611	2,229	66,367	...	6,181	19,637	154,839	4,003	2,254	15,812	50,628	61	1,735	323,748

NUMBER OF BIRDS HANDLED, BY COUNTIES AND BREEDS

County	No. Flocks Handled	S. C. White Leghorns	Rhode Island Reds	Barred Rocks	White Rocks	New Hamp- shires	Jersey Black Giants	White Wyan- dottes	Black Mi- norcas	Brah- mas	Tur- keys	Guineas	Pullorum Testing Only	Totals
Atlantic	24	18,294	2,674	13	...	2,030	...	...	81	...	...	...	...	23,092
Bergen	10	1,060	1,135	124	370	410	...	...	...	...	...	...	792	3,891
Burlington	15	4,467	...	1,109	1,771	4,371	901	...	...	...	...	...	...	12,619
Cape May	11	10,862	6,044	...	...	1,782	...	...	...	...	...	...	...	18,688
Cumberland	132	36,564	2,601	1,160	2,283	18,521	...	69	411	436	...	...	6,566	68,611
Douchester	14	8,742	4,209	946	196	3,088	...	240	...	...	...	...	306	17,727
Essex	21	4,611	713	184	500	3,799	...	...	...	...	61	...	235	10,103
Gloucester	60	1,660	689	8,447	230	8,852	384	...	20	...	71	90	577	21,020
Hampden	8	1,828	...	1,702	...	1,320	...	...	...	...	...	...	1,771	6,621
Hampshire	39	9,864	...	4,996	...	1,772	291	...	...	...	...	...	3,206	20,129
Hartford	9	5,617	808	...	196	583	...	...	80	...	...	...	756	8,040
Herk Co.	52	39,053	...	1,021	...	690	...	...	...	...	...	...	...	40,764
Massachusetts	5	1,101	301	665	...	...	...	...	...	...	...	...	1,281	3,348
Medford	82	12,220	1,059	3,630	3,816	1,344	...	...	300	...	...	...	14,441	36,810
Monmouth	11	3,154	393	820	...	556	48	...	...	...	...	...	...	4,971
Norfolk	9	2,356	...	...	...	797	...	...	...	...	...	...	1,491	4,644
Orange	2	1,430	...	...	...	490	...	...	...	...	...	...	...	1,920
Out-of-state	107	786	690	9,627	1,861	4,986	...	...	5,572	...	...	...	1,678	25,200
Total	611	163,669	21,316	34,444	11,223	55,391	1,624	309	6,464	436	132	90	33,100	328,198

*Banded by flock selecting agents, supervised by New Jersey Department of Agriculture.

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AUCTION MARKETS

The events of the past fiscal year should be recorded as a phase in the evolution of poultry and egg marketing. During the 13 years we have seen and assisted the uniting of individual interests to improve marketing practices. The auction type of cooperatives were the result of this unity and they have succeeded only because they were needed and the methods of operation were practical. As this year closes, one sees the operations of these cooperatives badly disrupted, and some feeling exists that the end of the cooperative is in sight. The things that gnaw at the foundations of these cooperatives to-day are "black markets" and the unrest that is associated with governmental regulation which may weaken the loyalty of cooperative members.

The poultry industry, not only in New Jersey but throughout the country, is gradually feeling the effects of economic changes that develop out of wars. There are unbalanced price controls, shortages of feed, manpower, supplies, and a variety of other items that contribute as a whole to the forces that bring about economic changes. Such forces appear brutal, even destructive, but only because time has permitted our practices to acquire an appearance of permanence and a feeling of security. If left undisturbed, they become stagnant or decay.

Our marketing set-up as a whole is sound, and it now rests with the leaders of the poultry industry, not the government, to hold to that which has given the industry strength and let that which ceases to contribute to progressive marketing fall by the way. The poultry industry in New Jersey has come to the point where an analysis should be made of its operations.

There is, in a process of development, a tendency to revert to the methods of marketing that existed in New Jersey before the auctions were organized, which were the cause of establishing cooperative markets to eliminate the evils of such practices. Cooperative markets must continue for the very reasons they were established. How well they succeed depends upon their willingness to act and their ability to sense the changes that improve or destroy. They must place themselves in a position to grasp that which is constructive and lasting for the benefit of the greater number of poultrymen.

Even though many poultrymen look at the dark side of the present situation, it is believed by those of us directly concerned with the auctions that they will continue to function and to serve their large membership. Actually there has been a great increase in membership during the year. The following table shows the entire membership by counties for all five of the cooperative auctions.

STATE DEPARTMENT OF AGRICULTURE

AUCTION MARKET MEMBERSHIP, BY COUNTIES

County	Flemington Auction	Hightstown Auction	Mount Holly Auction	Paterson Auction	Vineland Auction	Totals
Atlantic	...	...	6	...	198	204
Bergen	2	...	...	102	...	104
Burlington	6	37	512	...	...	555
Camden	2	2	27	...	14	45
Cape May	...	...	...	...	37	37
Cumberland	1	...	...	...	453	454
Essex	6	1	...	16	...	23
Gloucester	2	1	2	...	143	148
Hudson	...	...	...	1	...	1
Hunterdon	2,144	...	...	...	...	2,144
Mercer	205	285	1	...	...	491
Middlesex	59	171	1	1	...	232
Monmouth	8	326	...	...	...	334
Morris	83	...	...	103	...	186
Ocean	3	87	10	1	1	102
Passaic	2	...	...	109	...	111
Salem	...	...	...	...	121	121
Somerset	450	5	...	...	...	465
Sussex	19	...	...	105	...	124
Union	41	...	...	2	...	43
Warren	340	...	...	33	...	373
Total	3,383	915	559	473	967	6,297
1941-42	3,130	815	559	473	785	5,762
Difference	+253	+100	...	...	+182	+535

Not only have the associations grown in membership, but the volume of business transacted has shown a great increase. This is best illustrated by the table headed "Progress in Poultry and Egg Auction Sales." In this table we give the volume of sales of both eggs and poultry and the combined value for the past 10 years. It should be noted that while egg sales were up, poultry sales showed a sharp decrease. This is explained by the fact that the government regulations on egg prices did not become effective until the close of the year, while poultry regulations became effective in December. Some poultry producers turned to "black markets" months ahead of the trend that way in the sellers of eggs.

PROGRESS IN POULTRY AND EGG AUCTION SALES

Year	Number Cases of Eggs	Number Crates of Poultry	Pounds of Poultry	Total Combined Value
1942-43	707,019	106,846	5,182,047	\$10,532,535.03
1941-42	632,570	135,620	6,533,89	8,003,928.58
1940-41	532,249	122,679	5,854,245	5,429,696.92
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	2,598,942.69
1934-35	177,908	47,845	2,307,996	2,022,357.29
1933-34	144,322	37,060	1,808,495	1,335,292.49
Total	3,888,833	898,624	43,109,935	\$45,214,355.57

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In the table "Summary of Egg and Poultry Auction Markets," we show the volume and value of sales at each of the cooperative markets and the total of all sales for the fiscal year.

STATE GRADES AT AUCTION MARKETS

The state wholesale grades for eggs continued in effect at the auctions during the year. The chief inspector, who supervises the use of grades regularly, checked the work of the inspectors at the auction markets and was satisfied that the requirements of the grades were uniformly applied. In addition, many directors' meetings were attended by representatives of the bureau.

A new type of egg carton seal to be applied to eggs packed under the state certified egg program was developed. This was the result of the turn to mechanical equipment as a labor saver in the cartoning of eggs. The Federated Egg Producers' Cooperative Association requested the change first and was soon joined in the request by the New Jersey Poultry and Egg Cooperative Marketing Association, Inc.

SUMMARY OF EGG AND POULTRY AUCTION MARKETS

July, 1942 to June, 1943

Market	Cases of Eggs	Value of Eggs	Crates of Poultry	Pounds of Poultry	Value of Poultry	Total Value
Flemington	230,352	\$2,996,634.05	51,383	2,473,295	\$ 631,240.16	\$ 3,627,874.21
Hightstown	129,627	1,708,177.18	13,531	669,283	157,177.15	1,865,354.33
Mount Holly	33,131	424,701.22	13,209	670,818	185,850.13	610,551.35
Paterson	49,806	648,734.83	9,988	501,437	121,229.96	769,964.79
Vineland	264,103	3,450,520.25	18,735	867,214	208,371.10	3,658,891.35
Total	707,019	\$9,228,767.53	106,846	5,182,047	\$1,303,868.50	\$10,532,636.03
Average price per case, 1942-43						
		\$13.05	Average price per pound, 1942-43			
" " " "		1941-42	" " " " 1941-42			
		10.54				
					\$0.252	
					0.205	

COOPERATIVE MARKETS SUMMARY

The general operation conditions have not changed materially during the year. Used egg cases are not too plentiful and new ones are being put out to producers to relieve the condition. Experienced help continues to be scarce. The Vineland Auction, particularly, has employed high school boys to some extent and these boys will be returning to their studies in the fall.

The distribution of poultry and eggs to the buyers at all the cooperatives is rationed on a basis comparable to last year's purchases. This means that buyers receive only part of their needs and must either carry rationing to the consumer or find more supplies elsewhere.

Perhaps the one thing causing a heavy demand for fresh eggs at the markets is the cold storage regulation that went into effect in May. This regulation required that nearly all eggs in storage were to be offered to the government if they remained there after May 20. In view of this, there are very few eggs in storage that can be drawn upon to supplement fresh eggs. The reason for having the storage regulation is that the original egg price regulation outlined the price of eggs for a twelve month period; therefore, buyers could see exactly what eggs would be permitted to sell for in the fall, and knowing storage charges, etc., could determine the paying price in the spring, particularly when such prices were not controlled. This being the case, spring prices on wholesale purchases rose to a figure equal and in some cases greater than the price that could be charged the retailer during that period.

NEW JERSEY FRESH EGG LAW

The fresh egg law has been in operation in this state for nine years. In recent years a decided improvement in egg marketing as it affects the consumer has been observed. Distributors have recognized the advantages of selling high quality eggs as fresh and consumers have been able to buy with greater confidence.

As we are entering the tenth year, there is a tendency noted on the part of some jobbers to claim more for the eggs they supply to retailers in terms of quality than the eggs offered justify. We call this up-grading. It has been brought about by the regulations making it mandatory in many cases to mark the grade on the packages and invoices, and to use definite grades as a means of establishing prices. Egg prices have not reached the high levels of World War I. Neither have they reached high levels sometimes obtained in periods of scarcity. But prices are relatively high, and because of the restrictions in mark-ups permitted between producers and consumers, one can realize that some dealers are likely to try for prices permitted in higher grades. As a result, our inspectors have begun to find many more violations. These are noted principally as a much larger percentage of standard quality eggs in the Grade A offerings. Grade A meets the requirements of our fresh egg law. It is anticipated that as we enter further into the new year this condition will become worse.

In enforcing the fresh egg law, our men must be practical in their interpretation of the law, but they are also charged with enforcing an act designed to protect the consumer. Our supervisor will watch this situation carefully and take such steps to protect the public as may be necessary.

The work of the inspectors was checked from time to time during the year in order to maintain uniformity of procedure and interpretation of egg quality. In an effort to conserve the use of tires and gasoline, a plan was adopted whereby the inspectors would travel by public conveyance eight or 10 days each month. Although this reduces the number of inspections that can be made, it is not as serious as the consumption of necessary war materials. During the year, inspections were made at 16 wholesale stores, 16,823 retail stores, 113 road-side stands, and on 255 retail sales routes. Total inspections were 17,247, with total violations, including minor cases, of 931.

We include in this report a table entitled "Number of Samples Inspected and Per Cent Violations By Counties." This table shows the distribution of the inspections and the conditions found.

NUMBER OF SAMPLES INSPECTED AND PER CENT VIOLATIONS
BY COUNTIES

County	Independent Stores		Chain Stores		All Stores	
	Number Samples Inspected	Per Cent Violations	Number Samples Inspected	Per Cent Violations	Number Samples Inspected	Per Cent Violations
Atlantic	1,751	1.31	406	6.89	2,157	2.36
Bergen	1,472	7.60	323	9.90	1,795	8.02
Burlington	541	2.21	191	8.90	732	3.96
Camden	2,694	3.22	725	9.51	3,419	4.56
Cape May	161	13.66	57	..	218	10.09
Cumberland	274	0.36	105	6.66	379	2.11
Essex	4,661	2.23	433	4.15	5,094	2.39
Gloucester	460	1.08	163	5.52	623	2.24
Hudson	4,329	3.58	230	2.60	4,559	3.53
Hunterdon	1	...	...	...	1	...
Mercer	102	4.90	30	6.66	132	5.30
Middlesex	556	1.43	99	2.02	655	1.52
Monmouth	274	...	105	0.95	379	0.26
Morris	487	1.64	43	...	530	1.50
Ocean	45	2.22	30	3.33	75	2.66
Passaic	1,856	5.65	216	9.25	2,072	6.03
Salem	96	1.04	10	10.00	106	1.88
Somerset	133	0.75	10	10.00	143	1.39
Sussex	41	...	...	...	41	...
Union	1,404	...	175	8.00	1,579	0.88
Warren	4	...	...	...	4	...
Average		3.04	Average	6.8	Average	3.55

	1942-1943	1941-1942	Per Cent Change
Total inspections made	24,693	27,211	—10.00
Total violations	878	1,041	—8.65
Average per cent violations	3.55	3.7	—0.15

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MISCELLANEOUS

The activities of the New Jersey Turkey Growers' Cooperative Association, Inc. continued about the same as last year. An executive committee was created to act on general policies that would be an advantage to the members. It eliminates considerable time and travel required by the directors. One of our supervisors acts as secretary of this association.

Considerable time and effort has been spent in compiling price information and interpreting regulations covering poultry and egg sales. It seems that there has been much confusion and differences of opinion as to the applicability of the provisions of these orders. Our poultry personnel have taken pains to contact the pricing attorneys attached to the state OPA offices, and obtained from them rulings which the bureau has passed on to market managers and others for their guidance. We have found differences in the rulings among district OPA offices, and have in several instances promptly obtained revisions and uniform orders, thereby helping to eliminate confusion.

The bureau's poultry mailing list was revised during the year in an effort to eliminate those who no longer desired to receive material issued by the poultry division.

Inspectors operating at the cooperative markets were again issued a license in order to carry on their work as authorized individuals responsible to this department in upholding egg and poultry grades.

The New Jersey poultry grades were amended in order to tie in with consumer grades and assist buyers in identifying live poultry eligible for similar consumer grades. New Jersey No. 1 poultry can now be called "Grade A" or "New Jersey No. 1 Grade A" and New Jersey No. 2 can be called "Grade B" or "New Jersey No. 2 Grade B."

Report of the Bureau of Plant Industry

HARRY B. WEISS, *Chief*

STATISTICAL AND RELATED WORK

NEW JERSEY CROP AND LIVESTOCK REPORT

For more than 20 years this bureau has been gathering and interpreting the monthly and annual data on acreages, yields and farm value of various crops grown in the state. Moreover, from time to time livestock statistics also were collected. During the first few years of this work the task was carried on independently, but later an agreement was made with the United States Department of Agriculture to work jointly. The cooperative plan was in effect up to about three years ago, when it became apparent that the bureau's contribution to the joint program was so meagre as to be valueless. Such a condition was considered unsatisfactory and on that account cooperation with the United States Department of Agriculture was severed, July 1, 1943.

During the past year the function of the State Department of Agriculture consisted mostly in publishing the monthly crop and livestock report as well as preparing the analysis on acreage, yield per acre, total production, farm price per unit and total farm value of crops harvested in 1942.

NEW JERSEY FARM PRICES

The monthly and annual price data for 30 important New Jersey farm commodities were gathered, tabulated and interpreted. The index numbers of the prices were calculated. The object was to follow the change in prices from month to month and from year to year.

RELATIONSHIP BETWEEN THE PRICE AND WEIGHT OF EGGS AT FLEMINGTON AND HIGHTSTOWN FARMERS' AUCTION MARKETS

In the fall of 1942 the Office of Price Administration began to gather data which could be used as a basis for controlling the price of eggs. The statistical branch of the bureau cooperated by making studies on relationship between price and weight of eggs sold at Flemington and Hightstown Farmers' Auction Markets. The period of inquiry covered one year from July 1, 1941 to June 30, 1942. There are two market days every week at both markets. Only one market day each week was studied at Flemington and Hightstown. In other words, the sample covered about one-half of all sales at each market. Weight figures are net figures, i.e., only the weight of eggs is taken into consideration; the weight of the container is excluded.

The results of these studies follow:

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FLEMINGTON EGG AUCTION MARKET

Grade A White Eggs

The net weight of grade A white eggs per case of 30 dozens during July 1, 1941-June 30, 1942 ranged, for the practical purpose of this study, from 45 to 60 pounds. The annual numbers of cases of grade A white eggs sold by each weight and the percentage of the total are as follows:

Weight of Case	Number of Cases Sold	Per Cent of Total
48½ pounds	6,104	18.00
49 "	5,971	17.61
48 "	5,238	15.44
49½ "	4,498	13.26
47½ "	3,411	10.06
50 "	2,851	8.41
47 "	1,957	5.77
50½ "	1,424	4.19
46½ "	864	2.55
51 "	668	1.97
46 "	376	1.11
51½ "	243	0.72
45½ "	95	0.28
45 "	45	0.13
52 "	92	0.27
52½ "	36	0.11
53 "	24	0.07
53½ "	8	0.02
54 "	3	0.008
59 "	3	0.008
54½ "	1	0.003
55 "	1	0.003
55½ "	1	0.003
59 "	1	0.003
60 "	1	0.003
Total	33,916	100.000

The dominant weight of a case of eggs during the year was 48½ and 49 pounds. These two amounted to 12,075 cases, or 35.61 per cent of all eggs sold during the year. The 48½, 49, 48, 49½, 47½ and 50 pound cases amounted to 28,073 cases or 82.78 per cent of the annual total. Therefore, the bulk of eggs was concentrated within the range of 2½ pounds namely, from 47½ to 50 pounds net per case. The total number of cases under study was 33,916, which represents about one-half of the grade A white eggs sold during the year July 1, 1941-June 30, 1942.

Only 0.41 per cent of the annual total number of cases of grade A eggs were 45 and 45½ pound cases. About ⅓ of 1 per cent of the total constituted cases from 52½ to 60 pounds. Therefore, these two extremes standing at both ends of the table cannot be used for comparative purposes because, due to their smallness, they are not comparable with the rest. The cases from 46 to 52 pounds, inclusive, where practically all eggs rest, are the basis for

interpretation. The 46 pound cases are taken as a starting point from which the annual difference in price is measured. The results are as follows:

Difference between the stated weight and 46 pound case	Annual difference in cents per dozen of eggs
46½—46 pounds	+ .1945
47 —46 "	+ .4413
47½—46 "	+ .5701
48 —46 "	+ .9188
48½—46 "	+ 1.1475
49 —46 "	+ 1.3729
49½—46 "	+ 1.6781
50 —46 "	+ 2.0508
50½—46 "	+ 2.2973
51 —46 "	+ 2.4974
51½—46 "	+ 2.2353
52 —46 "	+ 1.7973

The average annual premium per dozen of eggs sold in cases of 46½ pounds as compared with eggs sold in cases weighing 46 pounds is .1945 of a cent or about 1/5 of a cent. As the weight increases the premium grows, and a dozen eggs sold in cases weighing 51 pounds commands a premium over 46 pounds of 2.4974 cents, or almost 2½ cents a dozen or nearly 75 cents per case. The increment is not constant. It ranges between the pair of subsequent weights from .1288 of a cent to .3787 of a cent per dozen.

This brief analysis dealing with the most important aspects of the data is applicable also to the monthly figures.

During the months of heavy supply of eggs, such as February, March, April and May, the average premium per dozen eggs is smaller than in the months with smaller supplies, such as November, December, October, August, etc. The February, March, April and May premiums were: .5377, .8328, .6109, and .6033 of a cent, respectively; while the November, December, October and August premiums were 3.5294, 2.7628, 2.5251 and 2.4830 cents, respectively. The price, therefore, follows two old axioms: (1) Supply and demand govern the level of price, and (2) with equal quality of product, the price is determined by the weight of that product.

Fancy Eggs

The net weight of fancy white eggs per case of 30 dozen ranged during the year from 45 to 62 pounds. The annual number of cases of fancy eggs sold by each weight and the percentage of the total are as follows:

Weight of Case	Number of Cases Sold	Per Cent of Total
49 pounds	854	18.03
48½ "	833	17.58
49½ "	706	14.90
48 "	636	13.42
50 "	467	9.86
47½ "	411	8.68
50½ "	270	5.70
47 "	205	4.33

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Fancy Eggs—Continued

Weight of Case		Number of Cases Sold	Per Cent of Total
51	"	119	2.51
46½	"	66	1.39
51½	"	57	1.20
52	"	21	0.44
53½	"	21	0.44
52½	"	18	0.38
46	"	16	0.34
53	"	14	0.30
45½	"	5	0.11
45	"	4	0.09
54	"	4	0.08
61	"	3	0.05
55	"	2	0.04
59½	"	2	0.04
60	"	2	0.04
54½	"	1	0.02
62	"	1	0.02
Total		4,738	100.00

The prevailing weights of fancy eggs are 49 and 48½ pound cases, or the same as for grade A. These two weights contribute 1,687 cases, or 35.61 per cent of the annual total. Again, as in the case of grade A eggs, the bulk of fancy eggs lies between 47½ and 50 pound cases, of which 3,907 cases or 82.47 per cent of the total was sold. The number of cases sold was 4,738 which represents about one-half of the total annual sales.

By reason of the smallness of sales, it is necessary to eliminate from this analysis the extreme figures on both ends of the fancy eggs table and to make comparisons for the data pertaining to the eggs weighing from 47 to 51½ pounds per case. The 47 pound cases of fancy eggs are taken as a base point from which the annual difference, or premium in price, is measured. The results are as follows:

Difference between the stated weight and 47 pound case	Annual difference or premium in cents per dozen of eggs
47½—47 pounds	+ .1408
48 —47 "	+ .5301
48½—47 "	+ .8198
49 —47 "	+ 1.3357
49½—47 "	+ 1.4525
50 —47 "	+ 1.8798
50½—47 "	+ 2.1865
51 —47 "	+ 2.9728
51½—47 "	+ 2.2388

The average annual premium per dozen of eggs sold in cases of 47½ pounds as compared with eggs sold in cases weighing 47 pounds is .1408 of a cent, or about 1/7 of a cent. There is a marked correlation between the weight and the price of eggs. When the weight increases, the price goes up, and when the weight decreases the price declines. The premium between 51 and 47 pound cases is 2.9728 cents a dozen, or approximately 89 cents a case.

When the supply of eggs is strong the weight premium is smaller than when the supply is limited. During February, March and April the peak of production is reached. During these months the premium per dozen ranges from .4896 to .9523 of a cent. October, November and December are the months during which production is lowest. At that time the premium ranges from 3.0405 to 3.5189 cents per dozen.

Annual Difference in Price per Dozen Between
Fancy and Grade A Eggs

Fancy eggs command a premium over grade A eggs. This is true for the annual and monthly averages. The average annual premium of fancy eggs over grade A eggs of the same weight is as follows:

Weight of Case of Eggs	Fancy Eggs Premium over Grade A Eggs (cents)
46½ pounds	+ .1941
47 "	+1.2454
47½ "	+1.6997
48 "	+2.0676
48½ "	+2.0666
49 "	+2.1192
49½ "	+1.8092
50 "	+2.5946
50½ "	+3.8976
51 "	+4.1226
51½ "	+5.0000

As the weight of eggs increases, the premium goes up, and vice versa. The premium for fancy eggs over grade A eggs for the same weight of case, for example, a 46½ pound case, is .1941 of a cent, or about $\frac{1}{5}$ of a cent, while for 51½ pound case the premium is 5 cents.

SUMMARY

(1) The bulk of grade A white eggs, namely 82.78 of the annual total sales was concentrated within the range of 2½ pounds, i.e., from 47½ to 50 pounds per case.

(2) The weight of eggs governs the price. There is very definite correlation between the weight and the price of eggs. When the weight increases the price goes up, and when the weight decreases the price goes down.

(3) The average premium due to the weight ranges from .1945 to 2.4974 cents per dozen for grade A white eggs. The premium is the difference in price between the stated weight and the 46 pound case.

(4) The average premium due to the weight ranges from .1408 to 2.9728 cents per dozen for fancy eggs. The premium is the difference in the price between the stated weight and a 47 pound case.

(5) During the months of limited egg supply the premium is wider or larger than during the months of heavy supply.

(6) Fancy eggs command a substantial premium over grade A eggs.

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HIGHTSTOWN EGG AUCTION MARKET

Grade A Eggs

The net weight of grade A eggs per case of 30 dozen ranged for the practical purpose of our studies from 45 pounds to 58½ pounds. The number of cases of grade A sold by each weight and the percentage of the total are as follows:

Weight of Case	Number of Cases Sold	Per Cent of Total
49 pounds	4,563	19.26
50 "	3,577	15.10
48 "	3,386	14.29
49½ "	2,516	10.62
48½ "	2,308	9.74
47 "	1,453	6.13
50½ "	1,335	5.63
51 "	1,294	5.46
47½ "	1,053	4.44
46 "	536	2.26
51½ "	431	1.82
46½ "	394	1.66
52 "	268	1.13
45 "	185	0.78
45½ "	141	0.60
52½ "	70	0.30
53 "	60	0.25
53½ "	27	0.11
54 "	24	0.10
55 "	21	0.09
55½ "	14	0.06
56 "	12	0.05
54½ "	11	0.05
56½ "	6	0.03
57 "	5	0.02
57½ "	2	0.008
58 "	2	0.008
58½ "	1	0.004
Total	23,695	100.000

It is evident from the data that the prevailing weight of eggs was 49 pounds per case, of which there were 4,563 cases, or 19.26 per cent of the annual total. The 49, 50, 48, 49½ and 48½ pound cases amounted to 16,350 cases, or 69.01 per cent of the annual total. The total number of cases sold during the year was 23,695.

Only 1.38 per cent of the annual total number of cases of grade A eggs were 45 and 45½ pound cases. Less than a fraction of 1 per cent of the total constituted cases from 54½ to 58½ pounds. Consequently these two extremes standing at both ends of the table cannot be used, due to their smallness, as a base for statistical analysis. The cases from 46 to 54 pounds, inclusive, where the bulk of sales lies, are the basis for interpretation. The

46 pound cases are taken as a starting point from which difference in price is measured. The results are as follows:

Difference between the stated weight and 46-pound case	Difference in cents per dozen eggs
46½—46 pounds	+ .1058
47 —46 "	+ .2633
47½—46 "	+ .1922
48 —46 "	+ .5375
48½—46 "	+ .6827
49 —46 "	+1.1931
49½—46 "	+1.2242
50 —46 "	+1.5868
50½—46 "	+1.6874
51 —46 "	+2.0061
51½—46 "	+1.9647
52 —46 "	+2.1826
52½—46 "	+1.7043
53 —46 "	+2.8476
53½—46 "	+3.1305
54 —46 "	+4.2103

There is a difference, or premium of 4.2103 cents per dozen eggs sold in cases weighing 54 pounds as compared with the cases of 46 pounds.

The increase in price per dozen progresses in accordance with the increase in net weight of a case of eggs weighing whole numbers, such as 47, 48, 49, 40, etc., pounds. The positive increment, however, is not constant. It is about $\frac{1}{4}$ of a cent at the beginning of the series and more than $1\frac{1}{4}$ cents at the end of the series. The one-half pound distances in relation to the preceding whole pounds do not always show an increase. On some occasions the one-half pound quantities are lower than the preceding lower one-pound quantities. The reason or reasons for that are not known. Perhaps buyers do not consider a one-half pound difference sufficient to bid a higher price than the preceding whole pound. This is only a guess. Probably there are other more weighty reasons. Another assumption is that the one-half pound distances follow their own pattern of increase in price, with the increases in weight, i.e., whole pound distances as far as increase is concerned act independently from the one-half pound distances and vice versa.

The above given analysis is applicable also to the monthly figures which were tabulated and given to the poultrymen.

When the supply of eggs is abundant as during such months as February, March, April and May, the difference between the price per dozen of eggs of 46½-54 pound cases and a 46 pound case is smaller than when the eggs are scarce, as, for example, during such months as November, December, August and September. The February, March, April and May differences were +0.8516, +0.9237, +0.9222 and +0.9046 cents, respectively; while November, December, August and September differences were +2.6903, +3.3591, +2.2836 and +3.1517 cents respectively. The premium on the weight of eggs is narrower when the supply is strong and wider when the supply is weak.

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Fancy Eggs

The net weight of eggs per case of 30 dozens ranged for fancy grades from 45 pounds to 55 pounds. The number of cases of fancy grade sold by each weight and the percentage of the total are as follows:

Weight of Case	Number of Cases Sold	Per Cent of Total
50 pounds	1,180	20.22
49 "	1,158	19.84
49½ "	678	11.62
48 "	637	10.92
48½ "	450	7.71
51 "	399	6.84
50½ "	392	6.72
47 "	280	4.80
47½ "	159	2.72
52 "	117	2.00
51½ "	116	1.99
46 "	102	1.75
46½ "	72	1.23
52½ "	21	0.36
53 "	17	0.29
54 "	17	0.29
53½ "	14	0.24
54½ "	12	0.21
45 "	7	0.12
45½ "	5	0.09
55 "	3	0.05
Total	5,836	99.72

The prevailing weight of fancy eggs is 50 pounds per case, or one pound heavier than the grade A eggs. The 50-pound cases amounted to 1,180 cases, or 20.22 per cent of the annual total. The three weights, namely, 50 pounds, 49 pounds, and 49½ pounds accounted for 3,016 cases, or 51.68 per cent of the annual total. The total annual sale was 5,836 cases.

For the same reason as in the case of grade A eggs, it is necessary to eliminate from the analysis the extreme figures on both ends of the fancy eggs table and to make comparisons for the data pertaining to the eggs weighing from 47 to 53 pounds per case. The 47-pound cases of fancy eggs are taken as a base point from which difference in price is measured.

The results are as follows:

Difference between the stated weight and 47-pound case	Difference in cents per dozen eggs
47½—47 pounds	+ .4100
48 —47 "	+ .4361
48½—47 "	+ .4854
49 —47 "	+ .9496
49½—47 "	+ 1.2154
50 —47 "	+ 1.8845
50½—47 "	+ 1.8227
51 —47 "	+ 2.4189
51½—47 "	+ 2.6446
52 —47 "	+ 2.8904
52½—47 "	+ 1.5146
53 —47 "	+ 4.9578

There may be discerned two separate movements of prices in this table. One movement belongs to the difference in weight expressed in the whole numbers, and the other to the difference in weight expressed in the one-half pound numbers. The positive increment for the difference between whole numbers, such as difference between 47 and 48 pound cases, between 47 and 49, 47 and 50, etc., is not constant. It is about one-half cent at the beginning of a series, and more than 2 cents at the end of it. The difference in price per dozen eggs weighing 53 pounds and 47 pounds per case is 4.9578 cents. This difference is greater than the difference for grade A eggs. In other words, the positive increment for fancy eggs is larger than for grade A eggs.

The one-half pound difference, such as between 47½ and 47, 48½ and 47, 49½ and 47, etc., follows the same trend as the one pound difference.

The monthly difference between the price of eggs of all weights and 47 pounds reflects the law of supply and demand. When the supply is abundant, as, for example, during February, March and April the difference in price is narrower; on the other hand, when the supply is limited, as for example, during November, December, August and September, the difference in price is wider.

Difference in Price per Dozen Between Fancy and Grade A Eggs

Fancy eggs command a premium over the grade A eggs. This statement is true for the annual and monthly averages. The annual premium of fancy eggs over grade A eggs of the same weight is as follows:

Weight of Case of Eggs	Fancy Eggs Premium over Grade A Eggs (cents)
46 pounds	+ .9275
46½ "	+ .8253
47 "	+ .8176
47½ "	+ 1.2987
48 "	+ .9795
48½ "	+ .8835
49 "	+ .8374
49½ "	+ 1.0721
50 "	+ 1.3786
50½ "	+ 1.2162
51 "	+ 1.4937
51½ "	+ 1.7608
52 "	+ 1.7887

As the weight of eggs increases, the difference, or premium of fancy eggs over grade A eggs increases. For a case of 52 pounds the premium per dozen reaches 1.7887 cents. The monthly figures show about the same trend as the annual figures.

INFLUENCE OF CHANGES IN NEW JERSEY AGRICULTURE
ON THE DAIRY INDUSTRY OF THE STATE

POPULATION GROWTH

One hundred years ago New Jersey was relatively thickly populated. In 1850 one-half million (489,555) inhabitants lived in the state. The number of people residing in the state during 1940 amounted to about 4,160,165. In other words, the population has increased in one century more than 8 times. Especially rapid growth manifested itself from 1900 to 1930. Between 1920 and 1930 almost one million inhabitants were added. The causes of the immense population increase are numerous, the main one being favorable geographic location.

The farm population, on the other hand, increased slowly, and during the last 30 to 40 years has been practically stabilized.

ALL LAND AND IMPROVED LAND IN FARMS

During 1870, the peak year, 2,989,511 acres of land were in farms, or the farm land constituted about 62 per cent of the total land area of the state. Since 1870, however, industrialization and urbanization have drained considerable acreage from the farms. In 1940 only 1,874,402 acres, or about 39 per cent of the land area of the state remained in farms. The decline is about 1,115,000 acres. The rate of disappearance of land in farms during the last 70 years was on the average, about 15,930 acres per year. The rate of annual disappearance was arrested in 1940, when all acreage in farms was about 116,000 acres greater than in 1930.

The acreage of improved land in farms during the peak year, 1879, amounted to 2,096,297 acres, or about 44 per cent of all land area of the state. From this peak year up to 1940 the decline has been continuous, and in 1939 there were 1,156,652 acres of improved land in farms. The downward trend is very pronounced and from 1879 to 1939 it was about 940,000 acres. The annual rate of disappearance of improved land in farms was about 15,670 acres, or about the same as the rate for all land in farms.

When all land in farms and improved land in farms vanish at about the same annual rate, only one conclusion can be made, namely, that the land is either abandoned, or converted into city lots for real estate development or factory sites.

CHANGES IN NEW JERSEY AGRICULTURE DURING THE LAST FIFTY YEARS

A very vital change in New Jersey agriculture has occurred during the last 50 years. Up to about 1890, New Jersey farmers were heavily engaged in the commercial production of grain crops, hay, meat animals and milk. After 1890, however, the character of agriculture began to change. The commercial production of grain crops, hay, and meat animals showed signs of gradual decrease, while vegetable production and poultry raising

were on the increase. Milk production, due to improvements in feeding, breeding and sanitation went up considerably, although the number of cows went down.

The reasons for this change are numerous. The primary reason, however, is the competition of middlewestern states, where grain crops are produced more cheaply than in New Jersey, and another reason—high value of land in New Jersey, which requires the intensive rather than the extensive type of agriculture.

DECLINES IN ACREAGES

ALL HAY—From 1899 to 1939 the acreage of all hay in the state has declined approximately 50 per cent. The decline is continuous from year to year. In 1899, the peak year, there were 419,982 acres cut, while in 1939 only 227,486 acres were harvested.

ALL FIELD CORN—The same is true in regard to field corn. The downward trend in acreage is very pronounced. During the peak year, 1879, the farmers harvested 344,555 acres against 175,003 acres in 1939.

WHEAT—An even more severe decline than in the case of hay and corn took place in the case of wheat. The acreage is diminishing steadily, and in 1939 it was 50,511 acres against 149,760 acres during 1879, the peak year.

OATS—The acreage of oats is declining seriously. In 1879, the peak year, there were 137,422 acres, while in 1939 only 34,228 acres were harvested.

ORCHARD FRUITS, VINEYARDS AND PLANTED NUT TREES (Nurseries excluded)—The decline began about 50 years ago, but during the last ten years it has been especially severe. The farmers possessed 59,191 acres in 1930 against 37,375 acres in 1940.

SWEET POTATOES—Competition with states where the cost of production is considerably lower, drags down the acreage, although the decline is not very severe. During the peak year, 1909, the farmers cultivated 22,504 acres against 14,011 acres in 1939. The decline between the peak year and 1940 is about 38 per cent.

INCREASES

Remarkable progress is being made in the enlargement of the poultry industry. Since 1919 it has been on the upswing, and the increase amounts to about 180 per cent, or the number of chickens raised has been almost tripled. During the lowest year, 1919, there were 3,522,776 chickens raised, while in 1939 the number reached the high figure of 10,039,965.

ALL VEGETABLES FOR SALE—When we speak of all vegetables, white and sweet potatoes are excluded. The acreage of all vegetables for sale is on the upswing. There were 86,227 acres in 1909, while in 1939 the acreage went up to 136,127 acres. In 1934 the acreage was even higher, amounting to 161,556 acres.

WHITE POTATOES—A definite upward trend can be traced in the acreage, although it goes up and down from one census year to another. The lowest acreage registered was in 1929 when 36,963 acres were cultivated, while the highest acreage recorded was in 1919 with 82,533 acres harvested. The 1939 acreage was 50,357 acres.

TOMATOES—The acreage is increasing, although the upward trend is not strong. The lowest acreage of tomatoes for canning and market was harvested in 1939 when 36,957 acres were registered. The highest acreage cultivated occurred in 1934 when 48,252 acres were found.

ASPARAGUS—The acreage is growing rapidly. In 1919 there were 3,603 acres, while in 1939 the acreage reached a peak of 15,069 acres.

LIMA BEANS—The same is true in regard to the lima bean acreage. During the ten-year period, the acreage went up almost four times. In 1929 farmers harvested 3,659 acres against 12,599 acres in 1939. Most of the production is going into canneries.

DAIRYING

After reaching an all time low in 1930 the industry began to recuperate and in 1940 there were 138,764 milk cows against 105,331 cows in 1930, the lowest on record. There was a time, back in 1890, when the number of cows reached the impressive figure of 161,576 head.

Each county had its peak in cow population at one time or another. If we assume that the same peak in most of the counties can be reached again, the cow population of the state can easily reach 200,000 head.

Improvement in feeding, breeding and the sanitary condition of herds has performed a miracle as far as production is concerned. The following table illustrates the point, giving the average annual production of milk per cow:

Year	Average Annual Production per Cow (gallons, or 8.6 pounds)
1890	396
1900	494
1910	432
1920	542
1925	623
1930	776
1935	692
1940	735

Progress is especially noticeable during the recent period, from 1920 to 1940.

NUMBER OF MILK DEALERS (Producer-dealers excluded)—The number of milk dealers on the whole is adequate, except in those counties where the decline in the number of cows was severe. If the number of cows goes up in these counties there is a probability that the number of milk dealers

will increase. The total number of milk dealers' plants (producer-dealers excluded) is 385. They are distributed as follows:

Atlantic County	5	Gloucester County	13	Ocean County	5
Bergen County	23	Hudson County	13	Passaic County	29
Burlington County	22	Hunterdon County	17	Salem County	13
Camden County	11	Mercer County	27	Somerset County	18
Cape May County	1	Middlesex County	23	Sussex County	17
Cumberland County	18	Monmouth County	31	Union County	16
Essex County	25	Morris County	37	Warren County	21

There is a fine opportunity for the further development of the dairy industry in the state.

Similar analyses have been made for each county of the state.

NEW JERSEY PRICES OF HIRED FARM LAROR, FEEDSTUFFS, FERTILIZER MATERIALS AND SEEDS, AND THEIR INDEX NUMBERS, 1910-1942

The annual expense of New Jersey farmers for hired farm labor, feedstuffs, fertilizer materials and seeds constitutes about 80 per cent of the total cost of production. For that reason it is important to determine the price behavior of each of these four items, their components and their totality. The investigation of these problems has been made and printed as a departmental circular. The highlights of the findings are as follows:

The shortage of hired farm labor on New Jersey farms is one of the most important problems facing agriculture during this war. Farmers cannot hire labor in sufficient numbers, because they are not able to compete with the high wage paid by industries. Many farm workers left farm employment and went to the war factories where wages are more attractive than on farms.

For those workers who are willing to stay on farms, New Jersey farmers were paying in 1942 a wage which, on the average, was 133 per cent higher than during 1910-1914, and more than 3 per cent above the 1929 wage, when prosperity and wages were at their peak.

New Jersey farm wages began to climb vigorously in 1941. The 1941 average farm wage was 19.2 per cent above the 1940 average wage. The 1942 average farm wage reached such a height that it surpassed the 1941 wage by 25.3 per cent. In 1943 the farm wage is still rapidly advancing.

The 1942 average New Jersey farm wage was 16 per cent above the average farm wage for the country as a whole.

The wholesale price of feedstuffs showed the same strong upward trend. Between 1939 and 1942 the price went up 53 per cent. The rise was especially steep from 1941 and 1942 when the average wholesale price increased 23 per cent. The upward movement of prices is continuing in 1943.

The price of fertilizer materials does not show as vigorous an upward trend as the price of labor or feedstuffs, yet it refuses to stay at the same level. The increase in price between 1941 and 1942 amounted to 25 per cent.

The price of farm seeds and plants behaved in about the same way as the price of farm labor. Increase in price of all farm seeds and plants was rela-

tively moderate between 1941 and 1942, and amounted to 10 per cent. The jump in price between 1942 and 1943 was 25 per cent. From 1941 to 1943 the increase amounted to 38 per cent. The price of all truck crop seeds and plants during one year from 1942 to 1943 went up 14 per cent, grain and grasses 3.6 per cent, white potatoes 74 per cent, and all seeds and plants combined, 25 per cent.

When the prices of farm labor, feedstuffs, fertilizer materials, seeds and plants are combined, they show that in 1942 they were 87 per cent higher than during 1910-1914 and 26.4 per cent above the 1941 prices.

NEW JERSEY PARITY PRICES DURING JANUARY-AUGUST, 1942

It was necessary to know the parity price for New Jersey vegetables and fruits. This was tabulated, and a brief summary without detailed figures is presented below:

The sole objective of the parity price is to bring the purchasing power of a commodity, which should attain parity, to the 1910-1914 level. In other words, the August, 1942 parity price of wheat (for example) should be such that a farmer who sells it should get in exchange for one bushel of wheat exactly the same quantity of, say barbed wire, as he or his predecessor got during 1910-1914.

The parity price depends on two factors: (1) Actual price received by a farmer per unit of a commodity during the base period, and (2) the index number of prices paid by farmers for commodities bought for living and production. The first factor is constant, the second variable. If the index number of prices paid by farmers goes up, the parity price moves upward; if the index number of prices paid by farmers declines, the parity price goes down.

The Congress of the United States legislated to use August 1909 to July 1914 as a base for the staple commodities which are under parity regulation. Exceptions are white potatoes and tobacco. White potatoes and all types of tobacco, except Burley and flue-cured, have as a base August 1919 to July 1929. August 1934-July 1939 is the base period for these two types of tobacco.

If and when vegetables and fruits are under the parity price regulations, the base period for them may be 1910-1914, or 1919-1929, or some other years. In our tabulation we present two base periods: 1910-1914 and 1919-1929. Such an arrangement permits us to judge New Jersey parity prices on the first prewar base, 1910-1914, and on the postwar (prosperity) period, 1919-1929.

Let us now examine briefly the parity price of each individual New Jersey commodity on a 1910-1914 and 1919-1929 base:

ASPARAGUS—No matter what base period we take, the actual price received by New Jersey farmers during 1942 per crate of asparagus was about 30 per cent below parity.

BEETS—In 1942 beets commanded slightly more than parity on a 1910-1914 base, but less than parity on a 1919-1929 base.

- CABBAGE—Less than both parity periods.
- CANTALOUPE—Less than both parity periods.
- CARROTS—More than both parity periods.
- LETTUCE—Below parity for both periods.
- LIMA BEANS—Less than both parity prices.
- ONIONS—Considerably less than both parity prices.
- PEPPERS—Generally less than the parity prices.
- SNAP BEANS—Less than the parity prices.
- SPINACH—Below the parity prices.
- SWEET CORN—Less than the parity prices.
- SWEET POTATOES—It is impossible to say. The marketing of the new crop begins in September and data are not available yet. During the first eight months of 1942, the actual price was considerably above the parity price for both periods.
- TOMATOES FOR MANUFACTURE—Above parity.
- TOMATOES FOR MARKET—Considerably lower in August, but higher in July.
- WHITE POTATOES—In August the price was considerably below the parities, but in July it was 7 per cent above the 1910-1914 base and 6 per cent below the 1919-1929 base. The legislated base period is 1919-1929, so the 1910-1914 period should be disregarded.
- APPLES—Above the 1910-1914 parity, but in August below the 1919-1929 parity price.
- PEACHES—Below the parity prices.
- STRAWBERRIES—Above the 1910-1914 parity, but below the 1919-1929.
- MILK—Consistently above the parity prices by about 30-35 per cent.
- EGGS—The actual price of eggs during January-July, 1942, was considerably below the parity price on the 1910-1914 basis. Only during August, 1942, the actual price went up 2 per cent above the parity on the 1910-1914 base. Taking 1919-1929 as a base, the same picture prevails, only during August, 1942, the actual price was 7 per cent above parity.
- CHICKENS—The actual price was lower than the parity price on both bases.

CRANBERRY SURVEY

Upon request of the American Cranberry Growers' Association a survey of the production and disposition of the 1942 crop was made. The results were presented at a meeting of the American Cranberry Growers' Association, and they are as follows:

Sales of fresh fruit reported by sales agencies	25,177 barrels
Sales of fresh fruit independent of sales agencies (estimated)	5,000 barrels
Purchases by canning establishments (N. J. berries)	64,913 barrels
Total	95,090 barrels

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These figures indicate a total production in the neighborhood of 95,000 barrels, of which amount 68 per cent was canned.

The following table shows the approximate percentages of the New Jersey crop that were sold as fresh fruit, and that were canned from 1933 to 1942 inclusive:

Year	Per Cent of Crop Canned	Per Cent of Crop Sold as Fresh Fruit
1942	68	32
1941	61	39
1940	44	56
1939	55	45
1938	25	75
1937	54	46
1936	35	65
1935	36	64
1934	15	85
1933	14	86

NEW JERSEY CANNING INDUSTRY DURING 1942

New Jersey firms have canned during 1942 approximately 7,558,940 $\frac{1}{2}$ -dozen cases of No. 10 cans, as compared with 7,553,274 cases in 1941. The 1942 manufacture consisted of 5,148,320 cases of tomatoes and tomato products as well as 2,410,620 cases of asparagus, lima beans, green peas, snap beans, spinach, beets, pumpkins and squashes, sweet corn and miscellaneous commodities.

New Jersey farmers have sold to the canners 290,416.5 tons of tomatoes, asparagus, lima beans, etc., for which they received \$11,524,142.78. The area devoted to canning crops was 97,521 acres.

The acreage, volume, farm value and average price per ton in 1942 were as follows:

Commodity	Acreage (acres)	Volume (tons)	Farm Value (dollars)	Average Price Per ton (dollars)
Tomatoes	40,000	231,937	5,640,883.41	24.32
Asparagus	11,335	14,866	2,292,000.00	148.21
Lima beans	12,632	8,806	1,034,670.00	117.50
Green peas	5,739	3,866	283,281.00	73.27
Snap beans	13,527	4,522.5	439,929.65	97.25
Spinach	2,466	6,793	568,885.00	83.75
Beets	1,217	8,335	162,420.54	19.49
Pumpkins and squashes	2,164	4,289	42,648.78	9.95
Peppers	941	2,256	80,468.40	35.67
Cranberries	6,500	3,246	778,956.00	240.00
Miscellaneous	1,000	1,500	200,000.00	...
Total	97,521	290,416.5	11,524,142.78	...

Some of the tomato crop went to canneries outside of the state and consequently was not reported to us. It is estimated that the crop from about 3,000 acres was shipped to other states. This acreage is included in the total.

Some asparagus also was sent to other states for canning and some canners within the state used it as a flavoring agent without reporting to us. It is estimated that the crop from 500 acres was used in such ways. These 500 acres are included in the total.

NEW JERSEY AGRICULTURE

A manuscript was completed and submitted for printing as a departmental circular entitled "New Jersey Agriculture." This consists of the county and state data on all phases of New Jersey agriculture from 1840 to 1940. The contents of the circular are as follows:

- I Geography, climate, soils, and agriculture of Indians and the first settlers.
- II Total, rural, urban and rural-farm population.
- III Number of farms, land utilization, value of land and buildings, and degree of ownership of farms.
- IV Farm business transactions during 1929 and 1939 by number and type of farms.
- V Grain crops.
- VI Hay and forage.
- VII Vegetables, nurseries, greenhouses, hothouses and maple products.
- VIII Tree fruits, small fruits and berries.
- IX Livestock and livestock products.
- X Poultry and poultry products.
- XI Farm mortgage debt and farm taxes.
- XII Farm facilities and expenditures.
- XIII Miscellaneous statistics.

FORMULA FOR ARRIVING AT COST OF PRODUCTION OF MILK

A field survey of cost of production of milk is too costly and requires a long time for its completion. Therefore, the results of the survey are not current but historical. However, demand is almost always for current, or very recent data, and to satisfy this demand, statistical methods are presented below for dealing with the problem.

In arriving at the approximate cost of production of milk in any given month per 100 pounds, the following two formulae may be used. It would be proper to figure the cost of production for the same period of time by each of the formulae and compare the results.

Formula No.1, developed by Professor L. C. Cunningham of Cornell University, and published on Page 26 of Cornell Extension Bulletin No. 427. "Costs in Dairy Farming," is based upon the average annual expenditure in producing 100 pounds of milk. This expenditure covers 90 per cent of the total annual expenditure.

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Items	Approximate amounts required to produce 100 pounds of milk
Grain	33 pounds
Hay	70 pounds
Silage	100 pounds
Pasture	2.3 days
Labor	2.6 hours

Each of these items should be multiplied by the price of the period (year) under investigation. The sum of the values should be divided by 90 and the result in turn multiplied by 100. The result is the approximate cost of production of 100 pounds of milk. The sum of the values is divided by 90, because grain, hay, silage, pasture and labor constitute 90 per cent of the net cost of production.

The figure thus obtained represents the average cost of production of milk during a given year. In order to get monthly figures within this year, the following procedure should be followed. The average annual cost of production of milk should be multiplied by:

January	128	July	68
February	128	August	88
March	116	September	90
April	102	October	93
May	80	November	126
June	54	December	127

For example, if the average annual cost of production of 100 pounds of milk is \$3.00, the January cost is $\$3.00 \times 128 = \3.84 ; July $\$3.00 \times 68 = \2.04 , etc. This is a formula which also gives the historical, not current, result, because it can be applied only when the year is over and the average annual price of the component parts of the formula, i.e., grain, hay, silage, pasture and labor, is available.

The other formula is an elaboration of the data published on Page 7 of "Trends in Cost of Milk Production," June, 1941, by John W. Carncross of the New Jersey Agricultural Experiment Station. This formula is similar to that of Professor Cunningham, and may be stated as follows:

Items	Approximate amounts required to produce 100 pounds of milk
Grain	30.6 pounds
Hay	29.0 pounds
Silage	74.0 pounds
Pasture	2.3 days (estimated)
Labor	1.92 hours

Procedure in arriving at the average annual cost of production per 100 pounds is the same as outlined in regard to Professor Cunningham's formula. The sum of the values is divided by 67.7 and the result in turn multiplied by 100. The figuring of monthly cost, however, is somewhat different. If, for

example, the average annual cost by the New Jersey formula is \$3.00, these \$3.00 are equal to 2.46. Dividing \$3.00 by 2.46 we get the cost per unity, or one. This cost is \$1.216. In order to get the monthly figures, \$1.216 should be multiplied by:

For January	2.83	For July	2.17
February	2.83	August	2.11
March	2.69	September	2.28
April	2.62	October	2.51
May	1.98	November	2.88
June	2.00	December	2.90

This formula gives the historical, not the current, result.

FORMULA FOR CURRENT DATA

The third formula, developed by this bureau, satisfies the demand for current data on the cost of production of milk. When we have the historical figure on cost of production of milk for a given month in dollars and cents (whether obtained by field survey or through the two formulæ described) we may utilize the index number of cost of production available in our files to arrive at a cost of production during any current month. If, for example, the cost of production of milk per 100 pounds during August, 1941, was \$3.25, and the index of cost of production stood at that time at 95 (1923-1927 = 100), and the index of cost of production during the current month, say, June, 1942, is 103, the June, 1942 cost of production would be $3.25 \times 103 = \$3.60$, or $X = a \times \frac{b}{c}$,

where "a" is the actual historic cost in dollars and cents, "b" the current index number of cost of production, and "c" the index number of cost of production for the indetical time with the actual historic cost in dollars and cents.

The index number of the cost of production of milk on a monthly basis is available in the files of the department from January, 1923, to the present time. This index is based upon the price of concentrates, hay, labor, taxes and price of cows. It covers approximately 61 per cent of the total cost. The items which are not included in the index are silage, 8.7% of the total cost; other roughage 2.0%; pasture 7.3%; building cost and dairy equipment 9.0%; bull service 3.2%, and other expenses 8.8% (veterinary, salt, fire insurance, cow testing expense, electricity, ice, whitewash, fly spray, etc.). These items which are not included in the index, constitute approximately 39 per cent of the total cost and they are not subject to such a wide fluctuation in price as the items included in the index.

MISCELLANEOUS STATISTICAL WORK

Various timely data were gathered and interpreted, such as, for example, milk production and consumption in the state, quantity of feedstuff produced and bought by farmers in the state, egg production and consumption, etc.

NEW JERSEY RETAIL PRICES OF FOODS

The publication of this title 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 chain food stores scattered throughout the state, as it was felt that the retail food trend was the same in independent stores as in the chains. By checking independent stores it became evident that the spread between the two types of stores was becoming greater. It was therefore, to present a true picture, necessary to incorporate independent store prices with our chain prices. This revision was carried back to March 1941. In many cases prices as reported to us were higher than allowed by "ceiling prices" and upon checking it was found that many stores were selling under the law of supply and demand rather than under OPA. These prices were included in our index.

The general monthly trend of all foods has been steadily upward since January 1941, at which time the index stood at 101.2 on an August 1939 base, and reached a peak of 157.0 in May 1943 on the same base. In June 1943 the first downward break was noted, placing the June index at 153.6. This trend continued in July with an index of 148.8.

All foods during July 1943 were 3.17 per cent lower than in the preceding June. All fruits and vegetables were seasonally lower by 12.57 per cent and the OPA rollback of meat prices caused a drop in meats of 4.88 per cent. Other groups showed minor fluctuations both up and down.

During July 1943 all foods were 10.83 per cent higher than July a year ago; 28.48 per cent above July 1941 and 48.76 per cent more expensive than in August 1939, the year before war started in Europe.

We wish to express our thanks to the stores which supplied us with accurate, timely data each month and cooperated with us in other ways.

COST OF LIVING IN NEW JERSEY

The study appearing under this title 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 were from such widely diversified sources, that it was decided to publish it bi-monthly, which has been done since June 1941. It is planned to continue this bi-monthly publication so long as the demand warrants it.

A revision was made in our retail food price index in the early months of this year carrying back to March 1941. Our food index prior to this year was based on chain store prices only, as it was felt that price trends in all stores fluctuated as the chain store prices. With wholesale food supplies becoming restricted, with government buying for war and lend-lease needs, the spread between the chain and independent stores became greater. It was

therefore deemed necessary to incorporate average independent store prices with the average of the chain stores, which has been done.

The mailing list for this publication, as of July 1941 amounted to about 450 addresses. At the present time (July 1943) this list includes about 800 addresses, to which 900 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 called by employees or employers or both to explain our index numbers of cost of living and to interpret its meaning. This personal contact in many cases helped considerably 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 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.

With the starting of the war 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, would have on retail prices, it was decided to use June 1939 as the base period as 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 therefore (with some seasonal changes excluded) definitely may be laid in great part to the above causes.

With the exception of a slight drop in living costs in December 1939, which was the result of the settling of food prices after the war scare buying in September 1939, the general trend in cost of living has been steadily upward. With June 1939 as 100, the index advanced to 129.0 in June 1943. Housing, clothing, and furniture and housefurnishing items went under OPA price control in May 1942, since which time these prices have remained fairly steady. Food, on the other hand, has continued on up, reaching an index of 151.0 in June 1943.

LATE CROP SEED POTATOES IN STORAGE

This study has been made annually since 1937 and is used in connection with seed certification work. Schedules were mailed to 21 cold storage plants, of which 13 reported potatoes in storage.

There were 24,217-100 lb. bags or equivalent in storage in 1943 as compared to 33,782 in 1942 and 29,491 for the five-year average, 1938-1942.

SEED CERTIFICATION AND RELATED WORK

TOMATO SEED CERTIFICATION

The strongly increasing demand for New Jersey certified tomato seed is indicated by the approximate increase of 600 acres certified in 1942 as compared with the preceding year.

During the 1942-1943 fiscal year, 52 seed treatment declaration certificates were issued at various times to three New Jersey seedsmen for validation of shipments to Cuba and Porto Rico. These certificates covered 3,732 pounds of tomato seed, 673 pounds of pepper seed, and 25 pounds of eggplant seed.

TOMATO SEED CERTIFICATION FOR 1942

Name	Acreage Certified, 1942						Total
	Marglobe	Rutgers	Stokesdale	Valiant	Bonny Best	Pritchard	
Joseph White Co.	184	987	164	...	...	...	1,335
Edgar Hurff Co.	413	702	56	...	10	116	1,297
Francis Stokes Co.	339	685	143	1	...	...	1,168
Campbell Soup Co.	70	912	...	...	...	...	982
H. J. Heinz Co.	...	69	...	...	...	...	69
Total	1,006	3,355	363	1	10	116	4,851

Pounds of Seed Certified, 1942

Seedsman	Marglobe	Rutgers	Pritchard	Bonny Best	Stokesdale	Total
Campbell Soup Co.	422	9,492	...	...	...	9,914
Edgar Hurff Co.	12,455	22,148	4,085	452	1,239	40,379
Francis Stokes Co.	17,000	19,000	...	...	5,000	41,000
Joseph White Co.	6,371	30,154	...	...	5,123	41,648
H. J. Heinz Co.	...	448	...	...	...	448
Total	36,248	81,242	4,085	452	11,362	133,389

Tomato Seed Certification from 1921 to 1942
Varietal Distribution of Certified Tomato Seed Acreages

Year	Bonny Best	J.T.D.	Balti- more	Mar- globe	Val- lant	Break o'Day	Stokes dale	Rut- gers	Grothens Globe	Pritch- ard	Glo- vel	Total
1921	84	...	44	...	...	...	...	...	...	...	...	132
1922	87	...	112	...	...	...	...	...	...	...	...	199
1923	103	...	113	...	...	...	...	...	...	...	...	216
1924	117	...	210	...	...	...	...	...	...	...	...	327
1925	344	...	238	...	...	...	...	...	...	...	...	582
1926	274	...	171	...	...	...	...	...	...	...	...	445
1927	207	110	121	431	...	...	...	...	...	...	...	869
1928	208	55	150	329	...	...	...	...	...	...	...	742
1929	133	123	87	360	...	...	...	...	...	...	...	703
1930	363	162	250	620	...	18	...	...	...	...	...	1,413
1931	219	292	106	689	...	127	...	...	...	...	...	1,433
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	1	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
1942	10	...	...	1,006	1	...	363	3,355	...	116	...	4,851

A REVIEW OF THE INSPECTION AND CERTIFICATION WORK OF NEW JERSEY LATE CROP WHITE POTATO SEED IN 1942

General Comments

In contrast to 1941 when the seed crop was curtailed by dry weather, the 1942 season was mostly on the wet side bringing several difficult conditions. Excessive rainfall in late July and August brought late blight (*Phytophthora infestans*) to the young plants in some fields.* The blight appearing on the plants when they were so young and had so little leaf surface destroyed the growing tips and resulted in the abandonment of several lots. These were mostly among those not entered for certification.

The excessive rainfall also packed and caked the soil and when it dried out in September large cracks opened up exposing many of the roots. The resulting setback in some fields proved to be the right condition for early blight (*Alternaria solani*) which soon spread rapidly. Reduced yields from this cause were experienced by many.

Late blight which early in the growing season threatened to be serious, and proved to be in some cases, was brought under control by the majority of growers as soon as regular spraying and dusting were accomplished. However, with the advent of another rainy spell coupled with cooler weather toward the end of the growing period late blight reappeared. At this stage it rained so often that growers could not use their spray equipment because of the miry condition of the fields. This late outbreak of blight was largely responsible for the mahogany rot in the tubers. Generally speaking the tuber rot was in direct proportion to the amount of foliage present late in the season. It is interesting to note that one grower who owns a modern sprayer and who used it an extra number of times had but a dozen pounds of rotted tubers in over 1,700 sacks. This, of course, demonstrates that with enough Bordeaux, protection, properly applied, with properly adjusted nozzles, can control late blight even in the worst years. Other growers who sprayed to a lesser degree had tuber rot in increased amounts varying directly with the fewer number of applications and the poorness of the coverage.

From the standpoint of yield per acre 1942 was well above 1941. A total yield of certified seed potatoes of 103,151 bushels was harvested from 546.15 acres giving an average yield per acre of 189 bushels. This is nearly 60 bushels per acre better than 1941 and about equal to 1940. A glance at the average yield by varieties shows Sebago best at 232 bushels, Green Mountains at 222 bushels, Red Skins next at 219 bushels, Chippewas 198 bushels, better than Katahdins at 183 bushels, Sequoias 175 bushels, Houma 141 bushels and Cobblers at 127 bushels per acre.

Sebagos were outstanding for their resistance to late blight both on the foliage and the tubers. Sequoia tubers appear to be quite susceptible to tuber rot. Houma is susceptible to both early blight and late blight with the other

*See Weather Bureau data at end of report.

varieties classed as intermediate. Katahdins, probably because they had more foliage when blight appeared late had more late blight rot than Chippewas and Cobblers.

Entries were received from 54 growers for a total of 658.41 acres, an increase of 100 acres over 1941. Rejections and withdrawals during the inspection season dropped out 99.41 acres. Some rejections were for excessive leaf roll counts, seed lots not at all suitable as foundation stock. Several lots were rejected because late blight had destroyed the foliage to an extent that a virus count was impossible. Two lots were rejected because of bacterial ring rot. Another grower's field showed scattered plants of stunted and dwarf appearance which proved to be virus in nature. Material from this field was turned over to the Plant Pathology Department of the New Jersey Agricultural Station and the Rockefeller Institute for further study and research. From these Dr. L. O. Kunkel of Rockefeller Institute has effected the transfers of two viruses, tobacco etch and the ring spot strain of the "X" virus. Further studies are under way.

Aphids and leaf hoppers were present in small numbers early in the season becoming fairly heavy in Central New Jersey while in Southern New Jersey the populations failed to increase. Aphids had been heavy on late planted tomatoes early in the year with the expectation that they would then become plentiful on late planted seed potatoes. Where they failed to become heavy, parasites and predators were responsible.

More than half of the entries were planted with home-grown seed, the next largest source being Nova Scotia. Seed from this Province, especially that designated as "foundation seed," has been proving to be particularly suitable. Other lots of tuber unit seed from Maine and New Brunswick likewise have given excellent performance and required a minimum of roguing. Seeds from Prince Edward Island, New York, Michigan and North Dakota were also planted.

Acres Entered for Certification:

County	Acres	Per Cent
Cumberland	482.75	73.32
Middlesex	85.50	12.99
Salem	60.00	9.11
Camden	10.00	1.52
Mercer	3.50	.52
Burlington	6.66	1.01
Monmouth	10.00	1.52
Total	658.41	100.00

Seed Source:

Source:	100-lb. Bags	Per Cent
New Jersey	4,141.5	55.32
Nova Scotia	1,102.4	14.72
Maine	939.0	12.54
Prince Edward Isle	432.5	5.78
New Brunswick	415.5	5.55
New York	372.0	4.97
Michigan	54.0	0.72
North Dakota	30.0	0.40
Total	7,486.9	100.00

Seed Treatment:

Treatment:	100-lb. Bags	Per Cent
No treatment	6,117.0	81.70
Semesan	1,369.9	18.30
Total	7,486.9	100.00

PRODUCTION AND DISTRIBUTION

Certified Crop of White Potato Seed of New Jersey

	1942	1941	1940
Acres of seed certified	546.15	459.10	502.49
Total yield (field run) in bushels	103,151	60,043	95,220
Average yield per acre in bushels	189.0	130.8	189.5
Bags of certified seed sold	25,620	13,137	22,387
Bags sold within the state	25,278	13,043	22,020
Pennsylvania	342	94	367
New York	342	94	220
Bags sold out of state	...	...	147
Bags sold untagged (old sacks used) (tags not allowed)	3,185	1,998	621
Total bags of seed sold	28,805	15,135	23,008
Bags seed unsold December 5	5,615	3,021	10,028
Baskets of seed retained own use	43,248	41,470	47,812
Bushels of seed retained own use	26,919	25,920	29,883

Note: Seed packed and sold in 100 pound bags.

POTATO ACREAGE ENTERED FOR CERTIFICATION, 1942

County	Growers	Chippewas	Irish Cobblers	Katahdins	Red Skins	Green Mts.	Houmans	Sebago	Sequoia	Total
Burlington	1	3.0	1.25	.75	...	...	1.0	.33	.33	6.66
Camden	1	...	...	...	8.5	...	1.5	...	...	10.00
Cumberland	31	190.25	34.75	208.25	17.0	3.5	6.5	20.50	2.00	482.75
Gloucester	...	...	...	...	...	...	...	...	...	...
Mercer	1	...	...	3.5	...	...	...	...	...	3.50
Middlesex	11	26.5	13.0	37.5	...	...	4.5	.5	3.5	85.50
Monmouth	2	...	8.0	2.0	...	...	...	...	...	10.00
Salem	7	27.5	1.0	27.0	...	...	...	4.5	...	60.00
Total	54	247.25	58.00	279.00	25.5	3.5	13.5	25.83	5.83	658.41

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ACREAGE FAILING AND PASSING CERTIFICATION

	Acres	Per Cent
Acreage rejected at first inspection	17.0	2.58
Acreage withdrawn at first inspection	23.91	3.63
Acreage rejected at second inspection	58.5	8.89
Total acreage rejected at end of two inspections	99.41	15.10
Acreage rejected at third tuber inspection	...	...
Acreage rejected and withdrawn three inspections	99.41	15.10
Acreage passing three inspections	559.00	84.90

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
1938	45	355.5	24.47	Idaho Russets	.25
				Cobblers	165.75
				Chippewas	149.75
				Red Skins	18.00
				Green Mts.	16.00
1939	57	584.50	7.44	Katahdins	6.00
				Cobblers	257.25
				Chippewas	178.75
				Katahdins	87.00
				Red Skins	48.00
1940	74	732.99	31.45	Green Mts.	12.00
				Houmas	1.50
				Chippewas	271.53
				Cobblers	252.04
				Katahdins	142.17
1941	59	567.05	19.04	Red Skins	43.50
				Green Mts.	11.75
				Houmas	10.00
				Sebago	2.00
				Katahdins	188.10
1942	54	658.41	15.1	Chippewas	168.50
				Cobblers	157.10
				Red Skins	28.00
				Green Mts.	9.75
				Houmas	9.50
				Sebago	4.00
				Sequoia	2.10
				Katahdins	279.00
				Chippewas	247.25
				Cobblers	58.00
				Sebago	25.83
				Red Skins	25.50
				Houmas	13.50
				Sequoia	5.83
				Green Mts.	3.50

SUMMARY OF INSPECTION RESULTS, 1942

	Burling- ton	Camden	Cumber- land	Mercer	Middle- sex	Monmouth	Salem	Total
Acreage entered	6.66	10.00	482.75	3.50	85.50	10.00	60.00	658.41
Number of growers	1	1	31	1	11	2	7	54.00
Average number of acres per grower	6.66	10.00	15.57	3.50	7.77	5.00	8.57	12.19
Acres rejected first inspection*	1.41	...	3.00	...	24.50	6.00	6.00	40.91
Per cent rejected first inspection	21.20	...	0.62	...	28.65	60.00	10.00	6.21
Acres rejected second inspection	...	.50	52.00	...	2.00	2.00	2.00	58.50
Per cent rejected second inspection	...	5	10.77	...	2.34	20.00	3.33	8.89
Acres rejected third inspection	...	...	...	...	...	...	...	...
Acres rejected total	1.41	.50	55.00	...	26.5	8.00	8.00	99.41
Acres certified	5.25	9.50	427.75	3.50	59.0	2.00	52.00	599.00
Per cent certified	78.8	95.0	88.61	100.0	69.01	20.00	86.66	84.90

*Includes withdrawals.

VARIETAL DISTRIBUTION AND REJECTION AND WITHDRAWALS

Acres Rejected and Withdrawn by Inspections

Variety	Acres Entered	First	Second	Acres Certified
Katahdins	279.00	.75	29.50	248.75
Chippewas	247.25	23.00	9.00	215.25
Cobblers	58.00	14.00	15.50	28.50
Sebago	25.83	.33	4.00	21.50
Red Skins	25.50	...	.50	25.00
Houma	13.50	2.50	...	11.00
Sequoia	5.83	.33	...	5.50
Green Mts.	3.50	...	...	3.50
Total	658.41	40.91	58.50	559.00

SUMMARY OF WEATHER CONDITIONS

	Bridgeton				Hightstown			
	July	August	September	October	July	August	September	October
Number of days during which rain fell	11	11	7	12	13	10	9	15
Heaviest daily rainfall (in inches)	2.20	1.68	1.88	1.49	1.23	1.48	1.15	1.33
Lightest daily rainfall (in inches)	.02	.03	.04	.03	.07	.01	.02	.01
Total rainfall (in inches)	4.42	7.70	2.19	4.76	7.32	3.91	3.32	3.62
Deviation from normal (in inches)	-0.03	+3.03	+0.75	+1.66	+2.40	-1.11	+0.11	-0.08
Average relative humidity at 7:30 A. M.*	77	85	85	86	77	83	85	84
Normal for month at 7:30 A. M.*	73	76	77	75	78	81	80	82
Per cent of possible sunshine*	62	.53	59	49	72	63	65	57
Deviation from normal (per cent)*	-10	+9	-4	-14	+12	+2	...	...
Highest temperature reached	98	92	94	81	98	91	92	82
Average of high temperatures	88.6	83.5	80.5	68.1	86.3	81.5	77.7	66.1
Normal of the high temperatures	87.5	85.3	79.3	68.8	85.3	82.4	76.9	66.0
Lowest temperature reached**	55	49	36	28	51	45	32	31
Average of the low temperatures	66.7	64.4	58.3	48.8	63.7	61.1	54.4	44.9
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 section in southern and central N. J. 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, Oct. 22; Hightstown, Oct. 14. Earliest—Sept. 22 (Both)

Raspberry Plant Inspection

Five nurserymen and growers requested the inspection and certification of raspberry fields so as to meet the special requirements of 14 states. Field inspections of growing plants covering 67 acres were made.

Grain Seed Certification

The work in this project continued to grow during 1943 with increased amounts of seed made available to farmers of New Jersey and nearby territory. The increases were notable in the volume of hybrid corn, soybeans and winter wheat. Some decreases were shown in such crops as open pollinated corn which is given way to hybrid corn and in certain varieties of soybeans which have been replaced by newer and superior varieties. The purchasing of soybeans for the expression of oil and the sale of high protein carrier material for mixing stock and poultry feeds by nearby oil plants has created an unusual interest in soybean varieties. The oil is in strong demand for the war effort and the remaining soybean meal is extremely important in the feeding of animals and has various uses in the preparation of human foods. Since this crop can be easily grown and readily transported to nearby factories it is likely that this crop will show a big increase. Following is a summary of the inspections made and the seed sealed prior to sale:

SUMMARY OF SEED INSPECTION, (1942)

Crop	Number of Growers	Acreage Entered	Acreage Passed	Acreage Rejected	Amount Sealed (bu.)	
					Approved	Certified
Hybrid corn						
No. 4	19	140	140	...	...	4,067
No. 2	18	206	206	...	...	5,677
Open pollinated						
Corn	4	33	33	...	...	152
Spring barley	4	23	23	...	...	258
Oats	9	112.5	112.5	...	...	1,576
Raritan Velvet Bent						
Grass	1	5	5	...	...	483 lbs.
Soybeans						
Harbinsoy	18	377	352	25	...	1,207
Chief	33	456	448	8	881	3,997
Granger	16	103.25	102.5	0.75	359	696
Winter barley	4	50	50	...	...	2,052
Winter wheat	14	352	312	40	...	4,882
Red clover	1	6	6	...	...	7
Total	141	1,863.75	1,790	73.75	1,240	24,571 & 483 lbs.

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Strawberry Plant Inspections

Curtailment of activities due to reduced gasoline and tire supplies necessitated a continued reduction of inspection for the Red Stele disease. Only large growers making a specialty of selling strawberry plants were covered. The list included 5 growers having a total of 10.5 acres. The Red Stele disease was found in a small spot on one grower's farm in an old bed from which plants were not dug.

NURSERY INSPECTION SERVICE

Certificates of inspection were issued beginning September 1, 1942, to a total of 447 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 Infestations
Juniper Scale	92
Spruce Gall Aphid	58
Oyster Shell Scale	34
Rhododendron Lace Bug	29
European Pine Shoot Moth	25
Pine Sawfly (Neodiprion sertifer)	24
Pine Leaf Scale	17
Juniper Webworm	15
Red Spider	15
Bagworm	14
Azalea Lace Bug	12
Euonymus Scale	11
Mealy Bug	10
Sycamore Lace Bug	8
Boxwood Leaf Miner	8
Spruce Twig Aphid	6
Willow Gall	5
Catalpa Sphinx	4
Blueberry Leaf Skeletonizer	3
Elm Leaf Miner	3
European Elm Scale	2
Scurfy Scale	2
Rose Scale	2
San Jose Scale	1
Lecanium Scale	1
Blueberry Twig Girdler	1
Pine Bark Woolly Aphid	1
Poplar Borer	1
White Pine Shoot Weevil	1
Bronze Birch Borer	1
Dogwood Borer	1
Lilac Borer	1

In all there were 160 nurseries in which 408 infestations were found, and in which clean-up measures were required before certificates were issued.

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, 1942 and June 30, 1943, a total of 1,700 such permits were issued.

Dealers' Certificates

Certificates were issued to 52 dealers in nursery stock for the year beginning September 1, 1942. These dealers signed agreements to purchase stock only from listed certified nurserymen.

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 176 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. Thirty-three such calls were made during the year ending June 30, 1943.

European Corn Borer Survey

During August, 1942, arrangements were made with the United States Department of Agriculture to survey, cooperatively, 10 corn plantings in each county of the state, so that the status of the European corn borer might be determined. The same procedure as followed during the past several years was used for the purpose of this survey. In the fall corn fields were sampled in 19 counties of the state so that information as to the status of the population of this insect could be obtained. The survey has been carried on for several years and the same field methods have been used during that time. Thus, it has been possible to compare the actual number of larvae found per 100 plants in each of these counties for several years. Some significant changes have appeared in the past and these have been recorded in the annual reports of this department.

There follows a table showing the borers per 100 plants for each of the counties surveyed for the years 1941 and 1942, together with the average percentage of plants found infested during the 1942 sampling.

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County	Average Number Borers Per 100 plants		Average per cent Plants Infested
	1941	1942	1942
Atlantic	72.8	23.6	12.9
Bergen	108.8	190.6	45.6
Burlington	235.6	273.4	41.6
Camden	121.8	182.7	45.8
Cape May	22.2	21.6	12.8
Cumberland	31.0	99.0	18.8
Essex-Union	101.4	75.8	24.4
Gloucester	82.0	95.8	31.6
Hunterdon	46.2	87.0	36.0
Mercer	610.6	166.4	43.6
Middlesex	457.8	437.0	64.4
Monmouth	167.6	273.8	54.0
Morris	36.0	40.8	14.0
Ocean	94.9	68.7	19.5
Passaic	61.4	154.2	30.4
Salem	111.2	29.4	16.8
Somerset	33.0	112.4	32.4
Sussex	2.8	17.2	7.6
Warren	13.4	32.0	24.8
State average (19 counties)	126.9	125.3	30.4

The small population changes that have occurred in 1942, as shown above, are of no great significance.

Scrap Survey

In early September, 1942 a "spot" survey was made by the nursery inspectors to obtain some definite information as to the amount of scrap on farms over the state of New Jersey. Six types of farms in 15 counties were visited as follows:

Dairy	72
Field	19
Poultry	46
Truck	43
Fruit	28
Potato	22
Total	230

The enumerator classified the scrap materials as "scrap iron," "non-ferrous metals," and "scrap rubber." Over the whole of the state there was a total of 95,820 pounds of scrap iron; 1,175 pounds of non-ferrous metals, and 1,388 pounds of scrap rubber. Thus, there was an average of 428 pounds of all kinds of scrap per farm.

Revocation of Raspberry Disease Quarantine

The quarantine on account of the virus diseases of raspberry (*Rubus* sp.) promulgated on March 24, 1936 was rescinded on November 17, 1942 by the New Jersey State Board of Agriculture. This action was taken because of the finding that the commercial growers of raspberry species were aware of

these diseases and able to take necessary steps to keep the diseases under control. It is felt that this action will result in a saving of gasoline and rubber.

Emergency Food Distribution

In early December, 1942, Mr. C. W. Millburn, Secretary of the New Jersey Metropolitan Area Emergency Control Primary Foods Distribution Committee, requested aid from this department in the assembling of data required in routing food products into the metropolitan area, in case of bombing or similar catastrophes. The committee set up control stations on various main arteries leading into the metropolitan area, and in general organized the control system as set forth by the Metropolitan Defense Transport Committee's subcommittee on Emergency Control of Primary Foods Distribution. In accordance with this request three nursery inspectors were assigned to collection of data. Some 200 firms, dairies and wholesale grocers primarily, had failed to supply the committee with the required information. The inspectors were able to return complete information for 116 of these firms during the month of December.

Milky Disease of Japanese Beetle

Spore dust of this disease has been released over practically all of the State of New Jersey for several years by the Office of Japanese Beetle Investigations of the Bureau of Entomology and Plant Quarantine, United States Department of Agriculture, Moorestown, New Jersey. The actual field distribution during the years 1940 and 1941, during which time 18 of the counties of the state were covered, was done with the cooperation of the Nematode-Rearing Laboratory, of this Department at White Horse. Colonies of disease were established during this period at three and one-half mile intervals, except where the Japanese beetle grub population was negligible. The following table will summarize the spore dust distribution.

Year	Number of Counties	Number of Colony Locations	Total Number of Acres Treated	Pounds of Spore Dust Distributed
1939	6	161	125	220.00
1940	14	256	181	340.00
1941	4	33	507	470.75
1942	1	1	5	10.50

We have no information as to the degree of control that might have been achieved through the use of this disease.

A European Weevil (*Thylacites incanus* L.)

On August 14, 1942, specimens of a weevil at Washington Crossing, taken by Mr. Appel of the State Department of Conservation and Development, were received for identification. The insects had caused some damage in beds of pine seedlings at the State Forest Nursery at Washington Crossing. The injury consisted of feeding damage on the needles of the young stock. Dam-

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age was found on the following: Red pine (*Pinus resinosa*), white pine (*P. strobus*), Scots pine (*P. sylvestris*), Norway spruce (*Picea excelsa* Sitka spruce (*Picea sitchensis*), Douglas fir (*Pseudotsuga taxifolia*), Japanese larch (*Larix k mpferi*) and hemlock (*Tsuga canadensis*).

The insects were identified by Doctor Cazier of the American Museum of Natural History as *Thylacites incanus* L. This insect is a European weevil and only one previous record had been made of its occurrence in the United States, and that was in the State of Missouri. It is quite likely that this insect would have a long list of host plants in this state.

In October we made a survey to determine the extent of the infestation by this weevil. The infestation was limited to the Washington Crossing State Park and the nursery of the State Department of Conservation and Development at that place. A thorough search for feeding damage on ornamental coniferous species within five miles of the boundaries of the Park disclosed no infestations. A map has been filed showing the infested area and the scouted area.

GIPSY MOTH

The Bureau continued gipsy moth control work early in July 1942 with the distribution of 265 assembling cages in Bergen, Warren and Sussex counties. The material for the traps was furnished by the United States Department of Agriculture following the procedure of many years. The cages were distributed under the supervision of the Bureau of Plant Industry. They were visited regularly and taken in the first part of September. No adult gipsy moths were captured. Inasmuch as it was not necessary for the entire gipsy moth force to proceed with the trapping work some scouting was done.

Location of Cages			
	Number of Cages		Number of Cages
BERGEN COUNTY		WARREN COUNTY	
Englewood	15	Blairstown	15
		Hardwick	8
SUSSEX COUNTY		Knowlton	12
Sandyston	30	Pahaquarry	30
Montague	45	Walpack	30
Vernon	27		
Wantage	22		
West Milford	31	Total	265

On completion of the assembling cage work the agents were assigned scouting duty in open country, along roadsides, in orchards, etc. Because of heavy foliage it is not advisable to attempt scouting work in heavy wooded areas, as the view above the first branches is obscured. Owing to strict mileage restrictions the scouting program was planned to save all travel possible and still do a good amount of work in sections where there is a good chance of gipsy moth infestation. As during past years several members of the nursery inspection force were assigned to gipsy moth scouting work,

thus making it possible to cover much additional ground. Inasmuch as these men were stationed over many sections of the state it was necessary to make up small crews to prevent long trips by automobile. In one way this plan worked out rather well, as we were thus able to get a picture of a much larger area. The scouting conditions were good during October and November, but from December to March the weather was quite unfavorable for such work and much scouting time was lost. Very little snow fell, which aided the scouting work, as the ground work could be carried along with the scouting, thus saving the added time required to return to do ground work where necessary. From April to the end of the scouting season in June the weather was favorable and much important work was accomplished. Over 6,000 acres of solid woodland, and more than 20,000 oak, fruit, shade and other trees were inspected for the gipsy moth during the year. No indication of the gipsy moth or the brown-tail moth was found.

Work Plans for Fiscal Year, 1944

The gipsy moth scouting program has been devised to save even more mileage than in 1943. Although no adult male gipsy moths were captured in New Jersey in 1943, several moth were taken in the northwestern part of Yonkers, New York, by federal employees. This area is just across the Hudson River from the Palisades, New Jersey, in the Alpine section. In this area of the state many hundreds of acres of favorable woodland cover the terrain, and a gipsy moth infestation could well be developing there. It is evident that the insect does exist somewhere in the neighborhood and the area must be carefully watched until the infestation has been found and eradicated. It is suggested by the United States Department of Agriculture that heavy trapping will be necessary in this section of both New Jersey and New York state next summer. Two men are expected to be available for scouting work in the Palisades area this season, and they will be assigned work opposite the site of the traps in Yonkers where the male gipsy moths were taken this summer.

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ANNUAL SUMMARY OF SCOUTING AND TREATMENT WORK

	Open Scouted			Woodland Scouted (Acres)
	Fruit Trees	Scattered Trees Oak	Shade	
BERGEN COUNTY				
Englewood Cliffs	456	...	4,799	794
Fort Lee	234	196	2,354	487
Bergenfield	...	...	...	5
ESSEX COUNTY				
West Orange	473	87	1,396	706
HUNTERDON COUNTY				
Holland	490	37	97	558
MERCER COUNTY				
Hopewell	...	...	423	482
MORRIS COUNTY				
Hanover	...	...	46	197
Mendham	456	892	...	203
Randolph	...	132	1,376	1,529
MIDDLESEX COUNTY				
Raritan	125	...	575	74
PASSAIC COUNTY				
Little Falls	130	...	981	423
SOMERSET COUTY				
Branchburg	...	...	50	132
Bridgewater	...	...	435	263
Bedminster	...	...	465	39
UNION COUNTY				
Clark	175	...	1,353	131
Mountainside	...	...	1,290	243
Scotch Plains	75	...	...	107
Total	2,614	1,344	15,640	6,373

All scouting roughly done, that is, when scouting in woodland areas, tree by tree inspection was not attempted. The men worked in lines from 50 feet to 150 feet according to growth. In many cases men were working alone. This was because of the strict transportation regulations which forbid assembling the men into one large crew.

BEE INSPECTION SERVICE

This year, in cooperation with the united war effort to save gasoline and rubber, the inspection trips throughout the state were cut to a minimum. Requests for inspections were grouped together in such a way that one trip would serve many beekeepers in a given area. The majority of the beekeepers made every effort to cooperate, even though in some instances they were compelled to wait several weeks for inspection.

At the various county meetings the need for becoming familiar with the symptoms of the various bee diseases was stressed. The year's work revealed a large number of beginners in apiculture. Considerable information on various phases of beekeeping was taken care of by correspondence, instead of by personal contacts.

The producers of package bees and queens reported that the demand exceeded the supply.

The queen-rearing apiaries received their seasonal inspections. Also all apiaries in the immediate vicinity were inspected, in order to control bee diseases.

The increased interest in bees for pollination work has resulted in more colonies being rented for that purpose.

Apiary Inspections

During the fiscal year, 533 apiaries were visited for inspections; 5,931 colonies and 774 nuclei of bees were examined. American foulbrood was found in 102 apiaries, and 248 colonies were infected. In most cases the diseased colonies were destroyed and burned by the owners. However, it was necessary for the inspector to destroy and burn sixty-six colonies to check infection.

European foulbrood was found in 5 apiaries and 32 colonies were infected. The continued practice of the introduction of vigorous young queens of resistant stock apparently corrected this condition.

The number of colonies found in plain boxes was 51, and the number of colonies with immovable combs was 39.

Microscopic Diagnosis

The microscopic diagnosis of smears of dead bee brood continued to play an important part in the control of bee diseases. The smears were received by mail and the findings were reported to the respective owners. This also provided a way for the owner to study the symptoms of various diseases in his own apiary. Seventy-one smears were received and diagnosed microscopically. The organism, *B. larvae*, causing American foulbrood was found in 46 smears, and the organism, *B. Pluton*, causing European foulbrood, was found in 4 smears. Twenty-one smears were found negative.

Certificates Issued

Eight queen-rearing certificates were issued during the fiscal year.

County	Number of Certificates	Race of Bees
Cape May	1	Italian
Hunterdon	4	Italian, Caucasian, Carniolan
Mercer	2	Italian
Burlington	1	Italian

Ten certificates for the sale of colonies and out-of-state shipments were issued:

County	Number of Certificates
Camden	1
Burlington	1
Cumberland	1
Gloucester	1
Hunterdon	4
Morris	1
Warren	1

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

APIARY INSPECTIONS BY COUNTIES

County	Apiaries	Colonies	Nuclei	Box Hives	Cross Combed	Apiaries A.fb.	Colonies A.fb.	Apiaries E.fb.	Colonies E.fb.	Colonies Destroyed & Burned	Smears		
											Neg.	A.fb.	E.fb.
Bergen	97	324	...	2	5	21	55	..	..	5	3	6	..
Burlington	26	380	...	..	..	6	10	3	26	2	2	4	2
Camden	4	54	...	..	..	3	11	..	..	..	1	..	..
Cape May	3	12	149	..	..	..	..	..	..	..	..	..	..
Cumberland	45	783	...	..	..	8	17	..	..	..	4	..	2
Essex	1	1	...	..	..	1	1	..	..	..	..	..	..
Gloucester	32	281	...	17	8	6	10	..	..	..	1	6	..
Hunterdon	75	1,529	530	2	1	6	19	2	6	1	2	2	..
Hudson	1	9	...	..	..	1	1	..	..	..	..	2	..
Mercer	37	876	95	..	..	12	43	..	..	27	2	2	..
Middlesex	30	144	...	..	..	6	20	..	..	14	1	6	..
Monmouth	20	150	...	9	7	4	8	..	..	1	4	1	..
Morris	52	356	...	5	11	7	9	..	..	1	..	2	..
Passaic	41	295	...	..	3	8	16	..	..	..	..	3	..
Salem	1	1	...	..	..	..	..	..	..	..	..	..	..
Somerset	41	454	...	3	3	6	8	..	..	15	..	2	..
Sussex	13	176	...	13	1	3	10	..	..	..	..	..	..
Union	4	26	...	..	..	3	7	..	..	..	1	7	..
Warren	10	80	...	..	..	1	3	..	..	..	..	3	..
Total	533	5,931	774	51	39	102	248	5	32	66	21	46	4

DUTCH ELM DISEASE

Annual reports for this project for the two years previous have made reference to the uncertainty of the continuation of WPA participation in the support of this project in New Jersey. The calendar year of 1943 witnessed the termination of all Federal WPA operations which automatically included support to this project. The actual termination date was January 31, 1943, but this information and a few other early 1943 items are included in this 1942 report for the purpose of unity.

Inasmuch as the WPA support to this project terminated with the close of this report, the table presented in the report of 1941 will again be included with a statement of the number of employees for the calendar year 1942 and up to January 31, 1943, the date of termination.

The work program of this calendar year was begun with almost exclusive emphasis on sanitation work, which included the removal of beetle material adjacent to the previously established control areas, and also clean cutting in areas where the disease was known to have attained conspicuous proportions. These causes are considered separately.

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
1942	January	281
	July	116
1943	January	77*

1. *Norwood Section of Bergen County*—In an area $3\frac{1}{2}$ miles wide and 4 miles long, involving the Borough of Rockleigh and Norwood, and bounded by Blanch Avenue on the south, Northern Railroad of New Jersey on the west, Piermont Road on the east, and the New York State line on the north, a considerable number of swamp elms were removed to minimize the disease hazard in this general area. Seventy-five men worked at this location from January 4 to July 18 when work in this locality was terminated because of the reduction of WPA personnel from the northeastern section of the state. Most of the elm wood which resulted from this clean-cutting operation was

*WPA assistance terminated January 31, 1943.

transported to the Army Base at Paterson, New Jersey, where it was used as fuel in the small outposts used as anti-aircraft units. An additional two weeks' work in this area would have completed the initially prescribed work program.

2. *Alderney Dairy Area*—Approximately twenty men spent three months on the property of the Alderney Dairies at Morris Plains where clean-cutting was again practiced. A considerable number of diseased trees had been found in this area since scouting was begun. Most of the wood resulting from this clean-cutting was taken to the Paterson Army Base; the balance was used by the Federal Entomological Laboratory at Morristown for beetle trap logs.

3. *Chimney Rock Area*—Approximately one-half mile south of Chimney Rock was clean-cut so as to eliminate one of the previously known disease centers adjacent to Bound Brook and Somerville. Most of the wood resulting from this operation was transported to Fort Dix where it was used for fuel and railroad ties.

4. *Raritan Canal Area*—Between South Bound Brook and Davis Lock was clean-cut because of the scouting difficulty perennially encountered. A considerable portion of this wood was likewise transported to Fort Dix for uses mentioned above.

On March 13 this Department was notified that curtailment of the WPA program necessitated the closing of four of the eight county offices, viz.: Sussex, Hunterdon, Warren and Somerset, with the offices at Bloomfield, Morristown, Paterson and Lawrenceville continuing. The Lawrenceville office was closed August 28 and all its administrative work was transferred to White Horse. The Paterson and Morristown offices were closed on December 15, which date marks the beginning of liquidation of WPA and the recall of departmental supplies which were used in the field work.

During the early weeks in May, several conferences were held with the Federal specialists, to prepare a policy of procedure for the scouting work for the summer of 1942. The personnel which had by this time dwindled to 185 men was totally unsuited, because of the lack of climbers, to conduct the scouting work as it had been done in previous years. Previous procedure was that scouts, upon detecting a symptomatic tree, would procure a sample of the involved portion of the tree for laboratory culture. This sample procurement involved the climbing of trees in about 80 per cent of the instances. Realizing the shortage of climbers would not permit the use of the program previously followed, a new scheme was devised whereby symptomatic trees would be tagged by the scouts and ticket prepared as heretofore and submitted to the central office for further attention. The suspect trees were placed in one of ten classes which were established for the various types of material the suspect tree might display. Trees, which according to the scout, carried beetle material from which beetles would soon emerge were catalogued so as to be given early attention, thereby minimizing the dispersion

of beetles from these trees to neighboring trees. The most significant change in this 1942 program was the non-consideration of flagging branches less than 6 feet long.

The first scouting was begun on June 8 with 185 WPA men, which number dwindled to 118 by July 15. The second scouting was begun on August 3 and completed September 30.

In the report for the calendar year 1941 a table presenting the number of Dutch elm diseased trees in controlled areas for 1939, 1940 and 1941 was included. Because of the significant departure of the 1942 scouting program from that of the previous years, it has been concluded that any attempt to present comparative data for 1942 would be very misleading. This is believed true because—

1. Wilting branches less than 6 feet long were not considered, and
2. When the WPA project terminated, 305 trees were still scheduled for removal and 232 for pruning. Furthermore, the almost complete assurance that no detailed scouting work would be continued in the formerly established control areas in the year 1943 contributed further to the conclusion that the previous Dutch elm disease data for the control areas would lose much of its significance.

With the final and complete understanding that this project would be so reduced in personnel that any further attention to the control areas would be quite impossible, this department immediately issued four circular letters which had for their purpose conveying to the concerned people in the State of New Jersey the announcement that Dutch elm disease control work as conducted by this department in previous years could no longer be continued, and that much of the burden with respect to the handling of individually affected trees would fall to the property owner or the Shade Tree Commissions. Public utilities and line clearance organizations were similarly notified of the change of policy, and requested to adhere to recommendations for the removal of elm wood which is now known as definitely contributory to the spread of the disease.

During the summer of 1942 two areas of Dutch elm disease infection were quite conspicuous; the first occurring in Johnson Park bordering on the Raritan River in Highland Park, Middlesex County. During the winter of 1942, the men engaged in the conversion of this area into a park site, cut a considerable number of small elms which were later reduced to fireplace lengths. This fireplace wood was stored on the property for the purpose of providing picnickers with fuel for use in outdoor fireplaces. Before the scouting season closed, thirty-nine Dutch elm diseased trees were detected in this park and promptly removed. Also, wood piles in this park were examined and all elm wood removed and destroyed. This case offers evidence as to the predicted consequence of permitting cut elm wood to remain in close proximity to elm trees which are to serve for shade and ornament.

The second area in which a considerable number of Dutch elm diseased trees were detected was in an area four miles long, one mile wide, along

the Saddle River adjacent to Ramsey. Thirty trees infected with this disease were located and promptly removed. The reason for the appearance of this number of trees in this area is not fully understood.

Because of the inflexible policy of the United States Department of Agriculture no known Graphium trees, prior to 1942, were permitted to remain for experimental study. However, the relaxation of this policy in 1942 permitted the organization of a project to investigate the fatality of a Dutch elm disease infection. In cooperation with Federal Division of Forest Pathology at Morristown, this Department located and described 102 trees (50 of these have been photographed) which displayed symptoms typical of the Dutch elm disease. Samples of the symptomatic portions of each of these trees were collected and laboratory-cultured. Of the 102 trees, 51 yielded the Dutch elm disease fungus and the remaining 51 the other fungi usually associated with this type of symptom. These trees will be again examined and photographed in 1943 to ascertain the progress made by the disease in these trees in the absence of any remedial attention.

The close of the year 1942 will mark, temporarily at least, the largest scale participation of a Federal relief agency in the support of the Dutch elm disease eradication work in New Jersey. During the eight preceding years the contributions of relief moneys to this project enabled extensive scouting and permitted removal of infected trees and much sanitation work, at no expense to the property owner. Obviously, the owners of most of the diseased or condemned trees cheerfully granted permission for the removal of such trees from their property.

Beginning with the year 1943, the major portion of the Dutch elm disease control burden must be borne by shade tree commissions and private property owners. This Department can function only as an agency providing recommendations for certain actions of pruning or tree removal, and also bringing to the attention of the concerned individuals, existence of hazards such as wood piles which are known to contribute to the spread of the organism from tree to tree. The program of this project shall be immediately revised so that it may be adapted to the shift of the burden mentioned above, and also that the property owners may be duly instructed as to the desirability of the following recommendations which shall be made to them for the acceptable disposition of diseased or devitalized trees and elm wood. From the wealth of experience which has accumulated during the past eight years, considerable hopefulness is entertained that the shade tree commissions and property owners will at least be amenable to the enactment of the recommendations made to them, provided, of course, that they can hire the necessary help to do such work. The program for 1943, although tentatively established, will be subject to many revisions so that it may be adapted to the contingencies which arise through our many property owner contacts. The assistance of shade tree organizations, public utilities, etc., will be very helpful in maintaining a reasonable condition of sanitation in this state so that the spread of the disease, during the period of much reduced activity, may be held within reasonable limits.

JAPANESE BEETLE SUPPRESSION

Insect Parasite Investigations

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

During the period 1939-1941 colonies of *Neoaplectana glaseri*, a nematode parasite of the Japanese beetle were established at three and one-half-mile intervals over those sections of New Jersey having an appreciable beetle population. In 1942 additional colonies of the nematode were placed in areas where the beetle infestation was heaviest, reducing the inter-colony distance to one and three-quarters miles in these areas. This brought the total number of nematode introductions in the state to 563. It was decided that further work with the nematode should be limited to field observations of spread and effect on beetle population, since the number of colonies now in the state should be adequate if the nematode is biologically adapted to become an important factor in the natural control of the Japanese beetle.

Emphasis of work on this project was therefore shifted from nematode rearing and distribution to (a) investigation of *Beauveria bassiana* as an adult Japanese beetle pathogen, (b) the rearing and field introduction of *Microplectron fuscipennis* as a parasite of the European pine sawfly, (c) initiation of efforts to produce and make available to peach growers large numbers of *Macrocentrus ancylivorus*, the most important insect parasite of the Oriental fruit moth.

Laboratory Activities

Several small lots of *Neoaplectana glaseri*, *Neoaplectana chresima*, *Neoaplectana* N. S. (No. 41035) were sent to the Gulfport, Mississippi Laboratory of the Bureau of Entomology and Plant Quarantine under the cooperative agreement. Nematodes of the genus *Neoaplectana* continued to give promising control results on larvae of the several species of White Fringed beetles (*Pantomorus spp.*) in the Gulf coast states.

Laboratory studies on the problems relating to parasitism of the adult Japanese beetle by *Beauveria bassiana* received considerable attention. Two outdoor screened cages were constructed in the summer of 1940, and stocked with several hundred beetles which had been dusted with spores of *Beauveria bassiana* obtained from the Dominion of Canada Department of Agriculture. These beetles promptly developed the disease and died. In June of 1941, 1942 and 1943 successive lots of healthy, field-collected beetles were introduced in each cage without any previous exposure to the fungus. Many beetles in each introduction group developed the typical infection of *Beauveria*, thus demonstrating that for three successive years the disease has remained viable and infectious under outdoor conditions. It has been necessary to introduce the three successive beetle broods since there is no surviving larval population in these cages. It therefore seems that if this disease can be

successfully established in a beetle population it will be able to maintain its virulence between the successive yearly broods of beetles.

Continued laboratory and field investigations have shown that probably the most important factor governing the successful introduction of *Beauveria* as a pathogen for adult beetles is the amount of moisture present in the environment. Under relatively dry conditions the fungus appears to kill those individual beetles directly contaminated by the fungus spores, but transmission from one individual to another is not readily accomplished. Further, under dry conditions the fungus is not capable of a luxuriant growth, and few spores are produced. Since the disease is primarily disseminated by spores, it is evident that the chances of the disease becoming epidemic are in direct proportion to the dampness of the soil and atmosphere.

Considerable attention was devoted to the problem of maintaining highly virulent strains of *Beauveria baessiana*. Contrary to statements in literature, the strains of *Beauveria* pathogenic for the adult Japanese beetle show a more less rapid "staling," and frequently lose their virulence in a relatively short period of time, or in the course of possibly four or five transfers on artificial media. A number of culture media were tried, the result being that none has yet been found which will permit the cultures to retain full virulence. Potato infusion-dextrose agar containing a small quantity glycerine seemed to be as satisfactory as any medium for maintaining the *Beauveria* cultures. The most practical approach to the problem appears to be re-isolation of the fungus from previously infected beetles, testing each isolate separately for pathogenicity in healthy beetles, and preparation and use of the mass bran cultures of the more virulent strains with a minimum number of sub-transfers and lapse of time. Thus, beetle cadavers showing a heavy growth of *Beauveria* are taken from the outside cages in May, the isolates prepared and tested against adult beetles during June, and mass cultures of the best isolates prepared for inoculating beetles during July and August. Extensive tests have demonstrated that *Beauveria* spores in the dried mass bran cultures will retain their full virulence for at least one month, and therefore cultures dried in the first week of July are satisfactory for use during the entire period of heavy beetle concentration.

There is some evidence that a strain of *Beauveria* loses pathogenicity more rapidly when successively transferred than when a culture is retained over the same time interval without transfer. Therefore one line of investigation followed through this year was to determine the physical factors which determine the length of time a culture can be kept without transfer to fresh culture medium. Insect cadavers in contact with soil, but protected from direct sun and the beating of rain will retain viable and virulent spores for at least eight months, but cadavers stored under ordinary room conditions did not yield viable spores after six and one-half months. Cultures of the fungus on agar slants held at room conditions died out within five months, and it was found that the longest permissible time between transplants was three months. However, agar cultures of *Beauveria* allowed to sporulate at 70°F., and then

sealed almost hermetically (with provision for a very slight gaseous exchange to the atmosphere) and kept at 35°F. will uniformly persist for at least ten months, with one test culture still viable after 26 months' storage.

The rate at which stored cultures lose their pathogenicity needs further work. One strain of *Beauveria*, isolated in July, 1941, was still highly pathogenic for adult Japanese beetles in June, 1943. Another strain isolated in July, 1942 was also highly pathogenic in June, 1943. A number of other strains isolated in 1941 and 1942 had completely lost pathogenicity for the beetles. All of these cultures had been maintained cold, protected against desiccation, and with the minimum number of transfers between isolation and transfer. In view of these variable results the procedure outlined above of preparing fresh isolates from infected beetles, testing these for pathogenicity, and using the best strains with a minimum of delay and sub-culturing seems to be the best course.

A series of isolates reputed to be *Beauveria bassiana*, obtained from adult bark beetles of the genera *Scolytus* and *Hylurgopinus*, were obtained in February from the Dutch Elm Disease Laboratory at Morristown, New Jersey. Some of these isolates were culturally and morphologically indistinguishable from the *Beauveria* we have been using on adult Japanese beetles. These were tested in June, 1943 and two of the isolates from *Scolytus* were found to be pathogenic for the Japanese beetle.

Since the beginning of the work with *Beauveria* it has become increasingly apparent that the fungus varies greatly in pathogenicity for the Japanese beetle, and that these variances are intrinsic. A major problem has therefore been the preparation and selection of virulent isolates. It is a common occurrence to prepare as many as ten isolates from a single infected beetle, and find that only one of these produces spores which cause a high mortality in inoculated beetles. In May, 1943, out of a series of 30 isolations, one "strain" showed exceptional virulence when tested against adult beetles in June. This "strain" uniformly produced death in practically 100 per cent of the test insects within four days, and appears to be the most pathogenic strain yet encountered. Later in this report a large field test of *Beauveria* is described. Laboratory tests run in conjunction with this experiment indicate that some of the fungus used in dusting the beetles was from strains having a low intrinsic pathogenicity, and this may have in part accounted for the failure to recover more infected beetles in the field. Accordingly, in all future work, each culture of fungus inoculum intended for field use will be tested in the laboratory to assure that the spores are virulent. In order to expedite this work, beetles were trapped at Cape Charles, Virginia and sent to the White Horse Laboratory in June, before there were enough beetles locally to permit these tests.

Nematode Field Work

By June 1942, colonies of the nematode *Neoaplectana glaseri*, a parasite of the Japanese beetle, had been established at points three and one-half miles apart over the sections of the state infested by the beetle. In areas of heavy

infestation, additional colonies had been placed. The treating of such areas was discontinued because the 563 colonies established during the period 1939-1942 should be sufficient to initiate whatever beneficial effects can be expected to be obtained by the introduction of this parasite. Therefore, no new colonies were established this year but studies were conducted to obtain information on the two most important phases of the work, namely the ability of the parasite to maintain itself in the field and its ability to extend the area which it infests by migrating or being carried from points where it is introduced to new areas.

Ability of *Neoaplectana glaseri* to Maintain Itself in the Field

The four small plots established in 1931 by the surface application of agar-reared nemas were stocked twice with healthy grubs and subsequently examined for parasitized material. In the fall survey 10.6 per cent of all the larvae present were found to contain the nematodes, while the spring survey showed 43.3 per cent of the total beetle population to be parasitized by *Neoaplectana glaseri*. The recovery of nematode-infected larvae in June, 1943 extends to twelve 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 Spread of *Neoaplectana glaseri* Infestation in the Field

As described in the 1941-1942 report, 25 routine colonies of nematode parasites were established on a golf course in June 1942, for the purpose of determining how rapidly the parasites could spread from the treated areas and accomplish a general infestation of the untreated areas between the plots. During the past year two series of soil samples were examined, the samples having been taken from locations scattered over the course but not previously treated with nematodes.

In each survey, a few nematode-infected beetle larvae were found in areas not originally treated. Some were several hundred feet from the introduction points, but the infected larvae constituted only a small percentage of the total beetle population. It therefore appears that spread of the parasites occurs, but does so at a rather slow rate and affects a small percentage of the population.

Adult Japanese Beetle Damage Survey

A survey of the damage to host plants caused by the feeding of Japanese beetles was conducted during the period August 3-21.

The method of observation and scoring method were the same as those employed in similar surveys. The observations were made at the same spots each year.

The examination was made from a moving car, except in places where the damage was too slight to be discernible when the car was moving. The

damage observed was usually on sassafras or wild grape, with maple, cherry, and linden also frequently employed.

The scoring system employed is indicated below.

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.

The foliage damage in the state was somewhat more severe this summer than it was in 1940 and 1941. The increase was general, all counties showing an increase in injury over the previous two years. Infestations sufficiently heavy to result in damage to host plants are now present in Passaic County as far north as the New York State line. The beetles have also spread northward in Sussex County, and are present in considerable numbers in Newton and Franklin.

The area of heaviest damage extends from Little Falls to Maplewood to Summit to Far Hills to Peapack to Mendham to Morris Plains to Pine Brook.

Surrounding this area is a larger one in which the damage is quite heavy. It includes southwestern Bergen County, southern Passaic County, all of Essex and Union counties, the southern half of Morris County, and the northern half of Middlesex, Somerset and Hunterdon counties.

In southern New Jersey, damage is also quite heavy in the Cedarville-Salem-Mullica Hill-Elmer area. This section has been damaged quite seriously for many years.

OBSERVATION ON SEVERITY OF BEETLE DAMAGE

County	1942 Average	1941 Average	1940 Average
Essex	5.4	5.0	4.4
Hunterdon	4.7	3.9	4.1
Somerset	4.6	3.7	4.1
Union	4.5	4.0	4.2
Morris	4.5	3.9	4.0
Middlesex	4.5	3.7	3.6
Salem	4.3	4.2	4.8
Monmouth	4.3	3.8	3.6
Mercer	4.3	3.5	4.3
Passaic	4.3	2.4	2.6
Bergen	4.2	3.9	3.6
Cumberland	4.2	3.8	4.1
Gloucester	4.0	3.4	3.7
Warren	4.0	3.3	3.2
Burlington	3.7	3.3	3.4
Cape May	3.7	3.1	3.2
Ocean	3.5	3.2	3.6
Camden	3.3	3.0	2.8
Atlantic	3.3	2.9	2.5
Sussex	2.5	1.3	1.3
Total	4.2	3.6	3.8

Beauveria bassiana Field Experiment

Laboratory work and small field experiments with the fungus *Beauveria bassiana* have been described in previous reports. In many tests high rates of parasitism and mortality were obtained.

During the summer of 1942 an experiment on a larger scale was conducted in Essex County. An area four miles square was selected and large numbers of adult Japanese beetles were trapped within the area. These beetles were dusted with the spores of the fungus and liberated at twenty-five points distributed over the sixteen square mile area, so that the liberation points were one mile apart.

To determine whether or not the fungus-dusted beetles were distributing themselves over the area between liberation points, 25 scouting traps were placed at intervals between the liberation sites. The beetles caught in these traps were collected and held under conditions which previous experience showed should induce the growth of the fungus if the spores were present. Fungus infected beetles were recovered from nine of these scouting traps, several of which were midway between liberation points, indicating a spread of one-half mile within a few days.

Also, on several different days a search for beetles infected with *Beauveria* was conducted. Infected beetles were found on the ground beneath heavily damaged host plants at several different locations. Some of these plants were also approximately one-half mile from the nearest liberation spot.

The results show that, as a result of this summer's work, the fungus *Beauveria bassiana* is now generally distributed over the experimental area. Infected beetles were not found in as large numbers as previous work had led us to expect.

Next summer an attempt should be made to recover from this area beetles infected with *Beauveria bassiana*, to prove whether the fungus, once established, is capable of maintaining itself, or whether it must be introduced each year.

Rearing of *Macrocentrus ancyliivorus*, a parasite of the Oriental
Fruit Moth, on Apple Slices

The Oriental fruit moth, *Grapholitha molesta*, is an economically important pest of peaches in New Jersey. Control of the insect by spraying and by cultural practices is unsatisfactory. However, considerable work with parasites of this pest has been conducted by the United States Department of Agriculture and several state departments, including those of Connecticut and New York.

A method of rearing the parasites by growing the host under controlled conditions on sliced green apples is in use in the two states mentioned above. During the year, the laboratories engaged in this work were visited by employees of our department. Information regarding techniques involved and the apparatus required was generously furnished by those engaged in the rearing at New Haven, Connecticut and Geneva, New York.

Subsequently the essential apparatus for rearing the moths and parasites on a small scale was obtained or constructed and rearing on a small scale was conducted at the White Horse Laboratory.

Additional equipment is now being procured and additional space in suitable incubators is being provided, so that the work can be conducted on a larger scale during the year 1943-1944.

The Cocoon Parasite of the European Pine Sawfly

Recent annual reports of the department have called attention to the serious damage being done to plantations of red and Scotch pine by the European pine sawfly, *Neodiprion sertifer*. The New Jersey Department of Conservation and Development alone has distributed some 9.6 millions of red and Scotch pine in reforestation work, and in addition there are many plantations of these trees obtained from other sources.

In 1941 a survey was made to roughly delimit the area infested by the sawfly, the result appearing in map form in the twenty-sixth annual report. In June, 1943, the state was re-surveyed in order to determine the present status of the infestation. The northern half of the state, with the possible exception of the extreme northwest and northeast corners is now infested. The most serious infestations are in Essex, Morris and Somerset counties. The infested area is bounded on the south by a line from Trenton to Imlaystown to Freehold to South Amboy. The area of the state having the major plantings of these pines is now infested.

In July, 1942 a program for the large scale rearing and field distribution of *Microplitis fuscipennis*, a parasite of the sawfly while in the cocoon stage, was put in operation. This parasite is relatively easy to rear, and seems well adapted as a natural control agent in New Jersey.

Sawfly cocoons for rearing the parasite during the winter and early spring were collected during June and July of 1942 and placed in cold storage. In January and February, 1943, a detailed survey of pine plantations in the sawfly infested area was conducted, the information obtained to assist in a general and systematic distribution of the parasite. Lists of the pine seedling sales made by the Department of Conservation and Development were used as a guide, and each plantation found during the survey was accurately located on the appropriate county map. An index card was prepared for each plantation giving all necessary information as to location, owner, size, species and age of pines and infestation status. A total of 525 contacts were made in Hunterdon, Mercer, Middlesex, Morris, Somerset, Union and Warren counties.

Meanwhile rearing boxes for handling the parasites were built, and an incubator constructed to maintain the proper temperature and humidity. The technique of rearing large numbers of the parasite was repeatedly tried out during the winter, and by June, 1943 was developed to a point permitting the large-scale rearing and release of the parasite in the infested pine plan-

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tations. At the end of the fiscal year approximately 300,000 *Microplecton* had been incubated and were ready for release in the field.

Field releases of the parasite were low for the year, due to the fact that most of the material reared for the field release in the summer of 1942 had been released in June, while the material reared in 1943 was to be released during July and August. The list of releases for the 1942-1943 fiscal year is as follows:

Date	Estimate No. of Parasites Released	General Location
July, 1942	110,000	Gladstone-Peapack Water Shed
July, 1942	24,000	East Orange Water Shed
July, 1942	85,000	Bound Brook Reservoir

JAPANESE BEETLE QUARANTINE

The following activities for the fiscal year 1943 were carried on as usual in cooperation with the Bureau of Entomology and Plant Quarantine of the United States Department of Agriculture.

Farm Products and Cut Flowers

During the fiscal year some very radical changes took place in the variety of farm produce handled. The year previous some 17 different commodities were inspected for certification, while this year only three items required attention.

Records indicate that the use of methyl bromide replaced the manual inspection of such items as white potatoes, peppers, blueberries and apples. Other items were disposed of within the area with large quantities going to army camps, and ports of embarkation for ship stores.

Truck shipments slumped to less than half with only 373 being certified. Rail shipments of potatoes last year built up from a few scattered carloads to 1,675 carloads this season. Practically all the rail shipments of potatoes were handled at Trenton.

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

Articles	No. of Packages	No. Beetles Removed
Apples	4,094	...
Potatoes, white	190,141	4
Cut Flowers	708	...
Total	194,943	4

FUMIGATION OF FARM PRODUCTS

Articles	Methyl Bromide
Apples	1,044 units
Cabbage	505 "
Bulleberries	7,202 "
Egg Plants	125 "
Onions	850 "
Peppers	1,195 "
Potatoes, white	541,921 "
Total	552,842 "

The above fumigations consisted of 1,675 cars. Cyanide was used to fumigate 21 cars.

SHIPMENTS OF QUARANTINED NURSERY STOCK

Total amounts of plants, sand, soil, peat, compost and manure shipped.

Month	Outside		Inside	
	Plants	Sand, Soil, etc.	Plants	Sand, Soil, etc.
July	124,508	...	93,452	32,700 lbs.
August	61,674	...	16,321	...
September	30,213	...	69,780	...
October	405,264	...	84,531	1,250
November	269,766	...	112,150	3,300
December	58,093	...	12,157	...
January	105,770	...	79,204	...
February	194,409	...	69,834	...
March	422,721	...	327,108	...
April	691,538	...	364,420	...
May	457,994	...	306,592	...
June	4,271,143	...	173,881	...
Total	7,093,093	...	1,709,430	37,250 lbs.

SUMMARY OF PLANT TREATMENTS MADE JULY 1, 1942—JUNE 30, 1943

Articles Treated	Agent	Units Treated
Plants	Ethy. dichloride	302,365
Plants	Methyl bromide	246,248
Plants (Initial treatment)	Arsenate of lead	54,946
Plants (Retreatment)	Arsenate of lead	1,299
Plants (No lead required)	Arsenate of lead	39,583
	Total	644,441

POTTING SOIL TREATED

Agent	Cubic Yards
CS ₂	486.58
CH ₃ Br.	29.98
Steam	10.91
Total	527.47

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SURFACE SOIL, SQUARE FEET

Arsenate of Lead	Napthalene	Carbon Disulphide
6,561	16,807	192

HEELING IN AREAS, ETC. ARSENATE OF LEAD (SQ. FT.)

Initial	Retreatments	No Lead Required
	22,741	116,164

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, 1943.

	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
Total	2	124	126

Shipments of Quarantined Nursery Stock

This seemed to be a banner year for the nurserymen, especially for products destined to points outside the regulated area. They enjoyed a 44 per cent increase, while their shipments inside the area to dealers slumped 24 per cent. Many of the establishments reported this the best year of their existence. Large quantities of over sized stock were purchased by the army for camouflage purposes.

With the advent of ethylene dichloride emulsion, a new liquid treatment for balled stock, a noticeable slump in leaded areas is apparent. This new treatment is comparatively inexpensive and requires but 24 hours to complete. This means of certification has an advantage over methyl bromide fumigation and seems to leave no ill effects.

MEN EMPLOYED

	Farm Products		Nursery & Greenhouses		Totals	
	Federal	State	Federal	State	Federal	State
July	8	..	12	14	20	14
August	11	..	12	14	23	14
September	7	..	11	13	18	13
October	..	..	11	15	11	15
November	..	..	10	15	10	15
December	..	..	10	14	10	14
January	..	..	10	14	10	14
February	..	..	9	14	9	14
March	..	..	9	13	9	13
April	..	..	10	17	10	17
May	..	..	10	17	10	17
June	..	5	10	14	10	19
Total	26	5	124	174	150	179

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STATE DEPARTMENT OF AGRICULTURE

NUMBER OF AUTOMOBILES OPERATED EACH MONTH DURING THE YEAR

	Farm Products		Nursery & Greenhouses		Totals	
	Federal	State	Federal	State	Federal	State
July	2	14	..	3	2	17
August	4	14	1	3	5	17
September	2	3	2	14	4	17
October	..	..	4	17	4	17
November	..	..	4	16	4	16
December	..	..	3	16	3	16
January	..	..	4	16	4	16
February	..	..	3	16	3	16
March	..	..	3	16	3	16
April	..	..	4	16	4	16
May	..	..	4	16	4	16
June	..	..	4	16	4	16
Total	8	31	36	165	44	196

Official Proceedings of the Twenty-eighth Annual State Agricultural Convention

The Twenty-eighth Annual New Jersey State Agricultural Convention was called to order in the Assembly Chamber of the State Capitol at Trenton at 10:00 A.M. Tuesday, January 26, 1943, by James C. Weisel, president of the State Board of Agriculture. The invocation was offered by Reverend Paul W. Kapp, former chaplain of the New Jersey State Grange.

Williard H. Allen, State Secretary of Agriculture, called the roll of delegates, as follows:

DELEGATES OF THE STATE AGRICULTURAL CONVENTION

FROM COUNTY BOARDS OF AGRICULTURE

Name	Address	Term	County
Louis J. Sanguinetti.....	Minotola.....	2 years.....	Atlantic
William J. Slack.....	Hammonton.....	1 year.....	Atlantic
Richard D. Scoskie.....	Ridgewood, R. D.....	2 years.....	Bergen
Steffen Olsen.....	Ridgewood, R. D. 1.....	1 year.....	Bergen
Robert Brooks.....	Moorestown.....	2 years.....	Burlington
Clement B. Lewis.....	Riverton.....	1 year.....	Burlington
Fred C. Sickler.....	Sicklersville.....	2 years.....	Camden
Joseph Battaglia.....	Hammonton.....	1 year.....	Camden
C. Newton Schellinger.....	Green Creek.....	2 years.....	Cape May
Michael McPherson.....	Cape May, R. D.....	1 year.....	Cape May
Percy D. Fogg.....	Bridgeton, R. D. 1.....	2 years.....	Cumberland
Vernon A. Keller.....	Newport, R. D. 1.....	1 year.....	Cumberland
William A. Crane.....	West Caldwell.....	2 years.....	Essex
C. Russell Jacobus.....	104 Alexander St., Upper Montclair.....	1 year.....	Essex
Ralph B. Starkey.....	Mullica Hill.....	2 years.....	Gloucester
J. Willard Gardner.....	Mullica Hill.....	1 year.....	Gloucester
Charles Burd.....	Pittstown.....	2 years.....	Hunterdon
Harold B. Everitt.....	Flemington.....	1 year.....	Hunterdon
Robert Simpkins.....	Yardville.....	2 years.....	Mercer
Ralph Hunt.....	Princeton, R. D. 2.....	1 year.....	Mercer
Leroy Scott.....	Cranbury, R. D.....	2 years.....	Middlesex
Joseph J. Smith.....	New Brunswick, R. D. 1.....	1 year.....	Middlesex
Harry Crine.....	Freehold, R. D. 1.....	2 years.....	Monmouth
George C. Probasco.....	Freehold, Star Route.....	1 year.....	Monmouth
John D. Bunn.....	Long Valley.....	2 years.....	Morris
Francis W. Ruzicka.....	Main St., Chatham.....	1 year.....	Morris
William H. Borneman.....	Toms River, R. D. 2.....	2 years.....	Ocean
Martin Schubkegel.....	Lakewood, R. D. 3.....	1 year.....	Ocean

STATE DEPARTMENT OF AGRICULTURE

Name	Address	Term	County
Walter Sikkema	Paterson, R. D. 2	2 years	Passaic
Chester J. Krulan, Paterson alternate for			
Arthur Butt	Clifton, R. D. 1	1 year	Passaic
Edward Fogg	Canton	2 years	Salem
Harvey M. Beal	Elmer, R. D. 2	1 year	Salem
David W. Amerman	Neshanic	2 years	Somerset
Edward M. Haynes	Skillman	1 year	Somerset
Charles L. Lendrim	Newton, R. D. 3	2 years	Sussex
Irving Drew	Sussex, R. D.	1 year	Sussex
Charles H. Brewer	Rahway, R. D. 2	2 years	Union
Walter M. Ritchie	502 St. George Ave., Rahway	1 year	Union
Smith J. Almer	Belvidere, R. D.	2 years	Warren
Earl T. Watters	Port Murray, R. D.	1 year	Warren

FROM POMONA GRANGES

Name	Address	Term	County
Martin Decker	Hammonton, R. D. 1	1 year	Atlantic
John R. VanHouten	Midland Park, R. D.	1 year	Bergen and Passaic
William D. Cowperthwaite	Medford	2 years	Burlington
Abel B. Clement	Laurel Springs, R. D.	1 year	Camden
J. Reid Chambers	Delmont, Star Route	1 year	Cape May
Percy Leach	Madison	1 year	Central District
Howard B. Hancock	Bridgeton, R. D. 2	1 year	Cumberland
Wade Heritage	Richwood	1 year	Gloucester
Theodore H. Dilts	Three Bridges	1 year	Hunterdon
Isaac Lipman	Titusville	1 year	Mercer
T. E. Gibson	Princeton, R. D.	2 years	Middlesex and Somerset
William H. Hunt	Freehold, R. D. 1	2 years	Monmouth
Joseph M. Cooper	Elmer, R. D. 2	1 year	Salem
Ramon Ayers	Sussex, R. D.	1 year	Sussex
Norman VanHorn	Columbia, R. D.	1 year	Warren

FROM OTHER ORGANIZATIONS

- American Cranberry Growers' Association—Theodore H. Budd, Pemberton, 1 year; Isaiah Haines, Whitesbog, alternate for F. Allison Scammell, Toms River, 1 year.
- New Jersey State Horticultural Society—Lawrence J. Smith, South River, 2 years; Lester Collins, Moorestown, 1 year.
- New Jersey State Grange—Harry E. Taylor, Freehold, R. D., 1 year; Henry M. Loveland, Bridgeton, 1 year.
- New Jersey State Poultry Association—Leslie M. Black, New Brunswick, alternate for R. L. Scharring-Hausen, Hopewell, 1 year; Max DeJonge, Ringoes, alternate for A. H. Pouse, Vineland, 1 year.
- Jersey Chick Association—Steffen Olson, Ridgewood, alternate for Herman C. Demme, Sewell, 1 year; Henry Rapp, Jr., Farmingdale, 1 year.
- New Jersey Association of Nurserymen—William M. Wells, Millville, alternate for Arthur Levick, Bridgeton, 2 years; Charles W. M. Hess, Mountain View, 1 year.
- New Jersey Florists' Association—Arthur E. Miles, Woodcliffe Lake, alternate for George H. Smith, East Orange, 2 years; Leon F. Clark, Trenton, alternate for Irving Christensen, Wood Ridge, 1 year.

New Jersey Agricultural Experiment Station—James C. Ewart, Cranbury, alternate for Joseph Barton, Marlton, 1 year.
 New Jersey College of Agriculture—William H. Martin, New Brunswick, 1 year.
 Holstein-Friesian Association of New Jersey—Stanley B. Roberts, Port Jervis, R. D., N. Y., 1 year.
 New Jersey Guernsey Breeders' Association—Lloyd B. Wescott, Clinton, 1 year.
 New Jersey State Potato Association—J. Edward Chamberlin, Cranbury, 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 year.
 Blueberry Cooperative Association—H. B. Scammell, Toms River, 1 year.
 New Jersey Field Crop Improvement Association—M. C. Oman, Jamesburg, 1 year.
 Cooperative Growers' Association—Arthur L. Richie, Riverton, 1 year.

APPOINTMENT OF COMMITTEES

The nominating committee, appointed by the president at the delegates' dinner on the evening preceding the convention, follows:

Theodore H. Budd, Burlington County, Chairman
 C. R. Jacobus, Essex County
 David Amerman, Somerset County
 Smith Almer, Warren County
 L. B. Wescott, Hunterdon County
 J. Edward Chamberlin, Middlesex County
 Ralph B. Starkey, Gloucester County
 Martin Schubkegel, Ocean County
 L. J. Sanguinetti, Atlantic County

Other committees appointed by President Weisel at the convention were as follows:

COMMITTEE ON RESOLUTIONS

Francis Ruzicka, Morris County, Chairman
 Martin Decker, Atlantic County
 Isaac Lipman, Mercer County
 Stanley Roberts, Sussex County

GOVERNOR'S ESCORT

Lester Collins, Burlington County, Chairman
 H. B. Scammell, Ocean County
 Theodore H. Dilts, Hunterdon County
 William J. Slack, Atlantic County
 Elmer H. Wene, Cumberland County

COMMITTEE ON CREDENTIALS

Steffen Olsen, Bergen, Chairman
 Charles Lendrim, Sussex County
 Percy Fogg, Cumberland County
 George C. Probasco, Monmouth County

REPORT OF COMMITTEE ON CREDENTIALS

The credentials committee examined the certificates of delegates and reported them in order.

ELECTION OF BOARD MEMBERS

To fill the two vacancies in membership of the State Board of Agriculture which would occur on July 1, Clement B. Lewis, of Riverton, and Charles W. M. Hess of Mountain View, were nominated. There being no other nominations, the secretary was instructed to cast a ballot for Messrs. Lewis and Hess for four-year terms beginning July 1, 1943, to succeed James C. Weisel, of Frenchtown, and William P. Howe, Jr., of Pennington.

CITATIONS

Fred H. Bateman of Grenloch, Dr. Wilfred F. Harrison of Stockton, Dr. James E. Russell of Trenton, and Harry E. Taylor of Freehold, cited by the State Board of Agriculture for distinguished service to the agriculture of New Jersey, were presented to the convention during the reading of the citations which follow.

CITATION OF FRED H. BATEMAN

New Jersey farmers are indebted to you for many of the more recent improvements in labor-saving, mechanized implements which have been made available as a result of your inventive genius, perseverance, practical skill and loyal devotion. Your ability to adapt promptly equipment to new practices and methods has been recognized by vegetable and potato growers throughout the nation as well as in your home state.

Your zeal to provide more perfect implements and your energy and enthusiasm have won for you many friends in New Jersey. They are proud of your achievements and appreciative of your efforts, fully realizing that your contributions have made it possible for them to operate more efficiently and to produce the quotas of victory foods needed now by our nation and our allies.

Before this assembly, including many of your long-time friends, the State Board of Agriculture desires to publicly commend you and so awards you this **Citation for Distinguished Service to New Jersey Agriculture**.

CITATION OF WILFRED F. HARRISON

New Jersey agriculture has been benefited immeasurably by your loyal service of over a half a century in your chosen profession, the practice of veterinary medicine.

Your training and wide experience have especially fitted you for an active part in protecting the health of the animal population of our state, safe-guarding a leading source of our farm income.

Your loyal cooperation in furthering the disease control programs of the State Department of Agriculture has contributed much to the successful conclusion of these projects. Although a veteran practitioner, you always have been among the first in your profession to adopt the latest findings of science.

You have won the regard of our farmers and you have upheld the dignity of your profession, promoting thereby not only your own sphere of usefulness but that of the science you practice.

This **Citation for Distinguished Service to New Jersey Agriculture** is awarded in commendation of your years of faithful and skillful practice.

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CITATION OF HARRY E. TAYLOR

To your leadership must be credited much of the progress achieved by our farm organizations during the past three decades.

Because of your loyal and devoted service, year after year, the New Jersey Farm Bureau has become truly representative of the agricultural interests in every county and has been alert to the needs of our rural people. Its thousands of members are deeply appreciative of your sincere efforts in their behalf. At this period when our nation is facing a serious crisis, they are particularly grateful to you, realizing more than ever the value of the competent organization which you have built for them.

It is fitting that the delegates assembled here, representing many groups which are affiliated with the New Jersey Farm Bureau, pause in their proceedings to pay tribute to your achievements, as we express appreciation of your years of loyal work and award to you this **Citation for Distinguished Service to New Jersey Agriculture**.

CITATION OF JAMES E. RUSSELL

Many high honors have been conferred upon you, particularly in the field of education. You have won the same esteem and regard among New Jersey farmers.

In the science of dairy husbandry you have advocated and proven new principles in the breeding of cattle. You have demonstrated that they are within the reach of every farmer.

To your sound judgment and foresight must be credited much of the recent growth and present stability of our dairy industry. As the fearless champion of the producer, you have won for him recognition as an equal partner in every dairy enterprise.

Not as well known, but perhaps of even greater significance, have been your efforts to develop better rural leadership among both adults and farm youths, thus passing on to future generations the benefits of your counsel and wisdom.

Your many friends among New Jersey farmers join with us today as we express with this **Citation for Distinguished Service to New Jersey Agriculture** our appreciation of your outstanding contributions.

REPORT OF COMMITTEE ON RESOLUTIONS

The following resolutions, reported favorably by the Committee on Resolutions were adopted by the Convention:

WHEREAS, Consideration is being given to the revision of the century old Constitution of the State of New Jersey in order to provide for more efficient operation of the state government under present-day conditions, and,

WHEREAS, The laws dealing with the establishment and functioning of the State Board of Agriculture were revised in 1916 to authorize the reorganization of the State Board of Agriculture and provide for the State Department of Agriculture, and,

WHEREAS, Since then both of these agencies have served the best interests of New Jersey farmers, have performed their duties efficiently, thus demonstrating that in practice the present law is effective and is in the public interest,

THEREFORE BE IT RESOLVED, That this Convention go on record as recommending that, in case of any future revision of the Constitution, the provisions of the present law be retained, thus providing for continuing the State Department of Agriculture under the direct supervision of the State Board of Agriculture, members of which should be elected at an annual Convention of authorized delegates as is provided under the present agricultural laws of the State of New Jersey, Title 4 of the Revised Statutes.

WHEREAS, Farmers in New Jersey are being urged to produce to utmost capacity in the face of serious handicaps due to shortages of labor, supplies and implements, and

WHEREAS, The costs of production on New Jersey farms are extremely high due principally to the proximity of nearby urban and industrial centers, and

WHEREAS, Producers in certain areas are faced with an additional tax burden in the form of assessments levied on growing crops not borne by producers of neighboring states, therefore

BE IT RESOLVED, That the official delegates attending the 1943 Agricultural Convention protest against the assessment of this unfair tax on growing crops and urge that the New Jersey Farm Bureau and the New Jersey State Grange take immediate steps to oppose this movement and relieve farmers of such an added burden.

WHEREAS, The patchwork attempt to interpose, by remote control, a system of ceiling prices on farm products at the consumer price level, has not been fair or effective to farmer or consumer,

BE IT THEREFORE RESOLVED, That all such formulas and subsidies be abandoned as rapidly as possible and substitution begun of a scale of fair prices at the farm by OPA commodity committees on which not less than one member shall be a qualified farmer, and

BE IT FURTHER RESOLVED, That ceiling prices on packing and other farm materials be re-examined and adjusted as necessary to check the increasing tendency of manufacturers of such items to discontinue production due to inability to sell their products at such ceiling without actual loss to themselves, and

BE IT FINALLY RESOLVED, That copies of this and other resolutions shall be sent to our Congressional and Legislative delegations.

WHEREAS, The formula and percentage method for manufacture and allocation of farm machinery in no way recognizes essential farm needs,

THEREFORE BE IT RESOLVED, That the federal agencies, through the U.S. Department of Agriculture, secure from the farmers of the nation the on-the-farm facts as to what machinery is needed and that figure so collected be made the basis for a practical allocation of materials to make the farm machinery which will help to win the war and peace just as surely as war weapons, and

BE IT FURTHER RESOLVED, That the program be carried through on an expedited basis and allocation of manufacturing facilities as it is a matter of common knowledge that many machinery concerns are no longer in position to fill orders even if allocated essential materials.

WHEREAS, New Jersey farmers face intensive and keen competition from producers in other areas who ship to New Jersey and nearby eastern markets, and,

WHEREAS, Such shipments especially of eggs, fruits and vegetables produced in other states appear on New Jersey markets supported by well organized advertising and promotional campaigns, and,

WHEREAS, The New Jersey Council since 1939 has rendered valuable aid to New Jersey farmers through cooperating with farm commodity groups in bringing New Jersey farm products to the attention of consumers, and,

WHEREAS, The program of the New Jersey Council has been endorsed by most of the important commodity groups,

THEREFORE BE IT RESOLVED, That this Convention express the appreciation of the farm groups represented for the splendid programs which have been made possible

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by the New Jersey Council and also urge that the Legislature provide the necessary funds to continue New Jersey Council activities, and

BE IT FURTHER RESOLED, That our public appreciation be expressed at this time to various utilities, food stores and other commercial firms who have indirectly contributed advertising tie-ups and consumer education in the orderly marketing of New Jersey farm products.

WHEREAS, The democratic principles upon which our nation was founded have been ridiculed and challenged by selfish and cruel oppressors who seek to enforce their rule upon this and other nations, and,

WHEREAS, Our nation is engaged in a titanic struggle to suppress the aggressors and re-establish true democracy as the basis of a future world peace, and,

WHEREAS, The products of the farm, particularly food, are as essential as weapons of war, and farmers already have geared their crop production to the needs of our nation and our allies, establishing new record yields during the 1942 crop season at the request of the national government, and,

WHEREAS, New goals of increased production for farm crops have been set for the 1943 season,

THEREFORE, BE IT RESOLVED, That the delegates assembled in this 28th Agricultural Convention, representing the agricultural commodity groups of New Jersey, pledge that they will do their utmost to produce to the fullest capacity of their farms in order to meet their goals and so bring about an early victory, and that a copy of this resolution be forwarded to Claude R. Wickard, Secretary of Agriculture and United States Food Administrator, and

FURTHER BE IT RESOLVED, That New Jersey's agriculture shall and will purchase to the limit of their ability for victory and capital investment United States War Bonds and Stamps.

WHEREAS, The armies and peoples of the United Nations look to the American Farmer for the food to fight unto victory and beyond, and,

WHEREAS, This is a task of such magnitude that it will call for the combined efforts of every qualified farmer of all ages and sexes, and,

WHEREAS, Farm youths can and should be assigned to farm duty either by a system of furloughs at critical planting and harvesting seasons or by full time assignment as specialists on the Farm Front with full recognition by all authorities involved; that their responsibilities and privileges are identical with those of training and combat troops,

THEREFORE BE IT RESOLVED, That certified copies of this resolution be immediately forwarded to all New Jersey members of Congress, Secretary of Agriculture Wickard and Manpower Commissioner McNutt with the request for immediate consideration and coordinated action.

WHEREAS, The efficient operation of New Jersey farms depends to a considerable degree upon their accessibility to market outlets by means of improved roads, and,

WHEREAS, There remain many secondary roads in need of improvement and better provisions for maintenance,

THEREFORE BE IT RESOLVED, That the delegates assembled in this Agricultural Convention, representing all parts of the state, urge that the program for the improvement of secondary roads be continued without interruption and that this resolution

be brought to the attention of the Governor, the members of the Legislature and the Commissioner of Highways, and,

BE IT FURTHER RESOLVED, That the now existing law providing for allotments of money to the counties and municipalities be continued in its present form and not disturbed in any way whatsoever. And, that these moneys be allowed to accumulate for future use after the War Emergency when county and municipal roads will be in dire need of repair made necessary by the inability to obtain materials for maintenance of roads at the present time.

BE IT RESOLVED, That this Convention concur with the Morris County Board of Agriculture by commending the very efficient manner in which Commissioner Arthur F. Foran has conducted his office for the best interests of all the people of the State of New Jersey and,

BE IT FURTHER RESOLVED, That we endorse and request his continuation in office and respectfully request that no legislation be considered to displace him.

BE IT RESOLVED, That this Convention wishes to give public recognition to the many diligent workers and officials of the New Jersey State Department of Agriculture and all related agencies by whom and through whom this Convention and New Jersey's agriculture has reached and will continue to hold its high place in the life of the Garden State.

BE IT FIRMLY RESOLVED, That we stand for a moment of silence in respect and admiration for those who have departed this life during the past year either from fields of agriculture or on the wide battlefields of the world.

BE IT FURTHER RESOLVED, That our prayers shall go out every hour of the day and night for the safe return of our boys who in strange lands and at home are fighting in many and vital ways that we may continue to enjoy and preserve the priceless heritage which is ours.