

STATE OF NEW JERSEY
DEPARTMENT OF AGRICULTURE

W. H. ALLEN, *Secretary*



Thirtieth Annual Report
OF THE
New Jersey
State Department of Agriculture

July 1, 1944 — June 30, 1945

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CONTENTS

	PAGE
REPORT OF THE SECRETARY OF AGRICULTURE	7
LICENSING AND BONDING	10
Milk Dealers' Law	10
Court Decisions	11
Produce Dealers' Law	12
Claims	13
Cattle De	14
THE BABY BLEND SALE	14
THE NEW JERSEY BREEDERS' FUND	14
Livestock Loans	14
Agricultural Loans	23
REPORT OF THE BUREAU OF INFORMATION	16
DEPARTMENTAL PUBLICATIONS	17
FARMERS' WEEK	18
COOPERATION WITH THE NEW JERSEY COUNCIL	18
MISCELLANEOUS SERVICES	20
REPORT OF THE BUREAU OF ANIMAL INDUSTRY	24
TUBERCULOSIS ERADICATION	24
Indemnity Payments	26
Cattle Tested Under Accredited Herd Plan	31
Six-Year Summary of Testing	35
INSHIPED DAIRY CATTLE	38
FEEDER STEERS	40
LIVESTOCK AUCTION SALES MARKETS	43
BANG'S DISEASE CONTROL	43
GOATS	51
EXAMINATIONS OF COWS FOR OFFICIAL GRADES OF MILK	52
POULTRY INSPECTION	52
MISCELLANEOUS ANIMAL DISEASES	56
Newcastle's Disease	56
Encephalomyelitis	59
Anthrax	60
Cholera	60
STALLION LICENSES	60
BUREAU LABORATORY REPORT	61
REPORT OF THE BUREAU OF MARKETS	80
CROPS AND MARKET INFORMATION SERVICE	83
Weekly Market Summaries	83
White Potato Marketing	84
Fumigation of Potato Shipments	85
Sweet Potato Marketing	85
New Jersey Apple Crop	86
Market Summaries Published	87
Annual Potato Summary	88
Daily Market Reporting	89

DAIRY PRODUCTS MARKETING 90
 Milk Production and Distribution 92
 New Jersey Official Grades of Milk 93
 Herd Inspections 94
 Health of Employees 94
 Bacteriological Tests 95
 Farm Products Publicity Fund 95
 Stock Auction Markets 98
 Services 98

TABLE MARKETING 98
 Produce 98
 Inspections 100
 Markets 101
 Auctions 101
 Inspections 102
 Markets 104
 Auctions 105
 Shipping Point Auction Markets 106
 City Farmers Markets 108
 Miscellaneous 109

POULTRY PRODUCTS MARKETING 109
 Poultry Industry in New Jersey 110
 Cooperative Marketing 114
 State Grades at Cooperative Markets 116
 State Certified Eggs 117
 Cooperative Markets Summary 118
 New Jersey Fresh Egg Law 119
 Poultry Standardization 120
 Miscellaneous Activities 124
 Farmers' Week Poultry Program 125
 Expansion of Pullorum Control Proposed 126

REPORT OF THE BUREAU OF PLANT INDUSTRY 129

STATISTICAL AND RELATED WORK 129
 New Jersey Agriculture in 1944 129
 Vegetables—Acreage, Production, Value 130
 Cranberries for Processing 133
 Grain Crops 134
 Hay 134
 Tree Fruits, Berries and Grapes 135
 Rank of New Jersey in Production 136
 Livestock 140
 Cultivated Blueberry Industry 141
 Economic Condition of Dairy Farmers 144
 Operation of Food Processing Plants Affecting New Jersey Farmers 146
 Food Prices in New Jersey Since 1937 152
 Rise in New Jersey Consumer Prices Since the Outbreak of the Second World War 156
 Consumer Prices in New Jersey 158
 Cost of Production of Milk in New Jersey 161
 Gross Value of Agricultural Products Produced During 1943 and 1944 166
 Average Retail Price of Farm Seeds and Plants 167

THIRTIETH ANNUAL REPORT OF THE NEW JERSEY STATE DEPARTMENT OF AGRICULTURE

Report of the Secretary of Agriculture

W. H. ALLEN

The recent end of the war in the European theatre and the weakening of the Japanese enemy in the Pacific area to the point of imminent surrender are the outstanding highlights of the fiscal year for which this report is written. It is for this that the United States and her allies have sacrificed their best blood and have toiled in war plants, in industry, and in agriculture to a degree heretofore undreamed of in order that victory over the enemies of democracy might be fulfilled.

This nation has just surpassed all previous records of food production. Farmers in New Jersey and the country over have labored unceasingly for longer hours, with less farm help and labor-saving machinery, with greater handicaps, from planting through harvesting, than ever before. Against such odds, the American farmer has acknowledged his duty and share in the job to be done and has accomplished the production goals on which victory was premised.

In New Jersey, farmers set their sights on these goals with determination. The acreage devoted to our wide range of commodities and crops in 1944 was nearly 20,000 acres greater than in the previous year, and was about 6 per cent larger than our ten-year average. In spite of this increased acreage, production in general was not much greater than in the previous crop year because of adverse weather conditions. Thus, without more extensive plantings, New Jersey, and other areas similarly affected by the 1944 droughts, would have fallen far short in the volume of essential foods produced for our armed forces, for our allies, and for this nation's own citizens.

Previous records of farm crop valuations were also broken when estimates for the 1944 production reached the staggering total of \$221,000,000. This exceeded the previous year's all-time high by some \$7,000,000. Even so, it is generally conceded that agriculture has not kept pace with industry in wage-hour returns and in profits. Farm labor costs in this area rose sharply because of opportunities in industry and demands on all sides for labor. All other operating costs in the production of a crop—seed, fertil-

izer, packages, equipment in limited quantities, purchases of livestock and poultry, feed, and marketing charges—absorbed larger portions of the income dollar, so that the net was little greater, if any, than in the pre-war period.

The greatly depleted reservoir of farm labor was partly replenished by several thousand school students, who spent limited periods (not in excess of 15 school days in any one school year) on farms, principally to help with the planting and harvesting of crops. In addition, many of these young folks devoted their entire summer vacation periods to working on farms. All of this work was carried out under the direction of the New Jersey State Commission on Student Service, in cooperation with school officials and the Agricultural Extension Service.

In the fall of 1944, more than 2,200 boys and girls, mostly high school students, aided in the harvesting of apples and fall vegetable crops; nearly half of these students were employed during this period on Gloucester, Camden and Burlington county farms, where help was sorely needed in picking and packing the apple crop. In the spring of 1945, more than 3,000 students volunteered to do farm work; again, about half of these were from schools in the same three counties. It was there that the asparagus crop required a large number of workers. Farmers in all but two counties in New Jersey utilized the services of school students and, although not in as great numbers as the counties mentioned, nevertheless needed the students fully as much. The Department has given token recognition to this army of willing farm workers, whose help to many a farmer meant the difference between harvesting a crop and having it lost as food. Students have received, through their schools, a certificate of merit attesting to their contribution toward the successful prosecution of the war.

Next to a lack of labor, farmers have probably suffered most from a shortage of farm machinery and, in some cases, even replacement parts to keep old equipment functioning after a fashion. Every piece of equipment that would serve in some measure the purpose for which it was originally intended filled a big gap left by a drafted or war-industry-employed farm hand.

Efforts have been multiplied to control and reduce the upward trend of tuberculosis infection in herds of cattle, which has been manifest during the latter part of this war period in several New Jersey counties, but concentrated more heavily in Burlington County. A more intensive program of retesting of infected herds has served to reduce sharply the percentage of infection, but at a cost of increased sums for indemnities and a loss for replacement of animals. The newly created Division of Animal Tuberculosis Control, within the Bureau of Animal Industry, will have its very title as its principal objective. Through the closest possible supervision by this Division over herds within New Jersey and especially on cattle imported from other areas as well as increased attention by herd owners to sanitary measures, the incidence of disease can be reduced to the barest minimum.

The continuation of some sort of control against inflationary prices has been generally conceded as a necessary war measure. It is felt, though, in many quarters, that the application of regulations designed toward this end has not been equitably invoked between volume-controlled, non-perishable manufactured goods on the one hand, and perishable agricultural commodities on the other. In several instances, maximum price regulations established by the Office of Price Administration, have been considered unfair, especially those regulations which failed to take into consideration higher labor costs, or costs of marketing services normally performed. The growing tendency to initiate a subsidy program in lieu of reasonable price adjustments has been watched with some misgiving by leading farmers. They feel that this is not the proper solution of the problem, particularly when it is apparent that further increases in prices for industrial goods will be officially sanctioned, whereby only the consumer-producer, and not the entire taxable population of the nation, will pay the increased price.

Through the year there have been opportunities for the Department to acquaint federal officials with New Jersey conditions, particularly in reference to the production and marketing of fruits and vegetables, and the application of maximum price to such products. This relationship of close contact between state and federal authorities has been mutually beneficial.

Since the first cooperative produce auction markets were established at Cedarville and Rosenhayn in 1928, a staggering volume of New Jersey's fruit and vegetables, poultry, eggs, and livestock has been sold in this manner. For the second consecutive year, volume at the ten produce auctions fell off in the 1944 season, due to several factors, including adverse weather, "off-market" sales resulting from unfavorable price regulations, and some shift in acreage of certain crops.

For the same reason of unfavorable price regulations, the volume of eggs and poultry over the auction block showed a considerable decline over the previous year. The disappearing volume found its way into unregulated channels controlled by those who had little regard for ceiling prices. Egg volume declined nearly 25 per cent from that of the previous year, while the amount of live poultry fell off about one-third.

A project heralded too seldom, yet one which is the very foundation of modern agriculture, is the certification of seed. In New Jersey the major crops for seed certification are tomatoes, potatoes, and field crops such as hybrid corn, oats, and barley. Whereas decreases have been occurring in potato seed certification, great advances are being made in the work on tomatoes. In a quarter century of this work, certification of tomatoes has risen from 132 acres in 1921 to 6,770 acres in 1944, a great majority of which is New Jersey's own variety, Rutgers. New Jersey certified tomato seed has come to be respected wherever tomatoes are commercially grown, both within United States and outside. Certification of field crops has also added materially to agriculture's wealth in the form of increased yields per acre, thereby helping to lessen the high costs of production currently exist-

Commendation is due the staff of the Department for the way in which its members have accepted the added duties placed upon an agricultural agency during this war period. It is with a sense of gratification that the following detailed reports are presented wherein the progress which has been made under these conditions is evident.

LICENSING AND BONDING

The State 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

The licensing year 1944-45 witnessed the end of the war with Germany by that country's surrender to the Allied Nations on May 8, 1945. During the fourth year of World War II the milk industry carried on under the various government regulations and restrictions which affected all three phases of the industry. The federal agencies continued to ask the farmers of the country to produce more milk than ever before, the dealers were limited in the price they could charge the consumers for their products and the consumers were limited in the amount of fluid milk they could purchase. Also, cream of butterfat over 19 per cent could not be had, except by a physician's prescription. Butter and cheese at times could not be had even though a purchaser might have a sufficient number of ration points with which to buy these dairy products.

Although numerous meetings of producer and dealer groups were held for the purpose of petitioning OPA to permit an increase in price that dealers could charge the public for milk, OPA refused all such requests so that the price of milk frozen in March, 1942 by OPA remained throughout this licensing term.

Increases in cost of production were taken care of by government subsidies ranging from 55c to 80c per hundredweight during this year. The Federal Administration allowed this subsidy to be increased to 90c during the summer months of 1944. The additional 10c was granted farmers due to the excessively hot dry weather experienced during July, August, and September of that year, in which pastures were burned, necessitating extra feeding to maintain production.

It is necessary only to glance at production figures to see that the farms of this State exerted every effort to comply with the Federal Government's request for additional production of this vital commodity so that not only the needs of this country might be met, but also that of our allies.

The number of dealers purchasing all or part of their milk supply directly from producers dropped this year due to some of the dealers' selling out their businesses to enter war plants; others became sub-dealers for larger dealers, while others of the producer-dealer type increased their own herds so that it was no longer necessary for them to purchase any milk to supply their customers.

Although the number of licenses declined, the Department did not allow the protection to producers afforded by this act to relax at any time during the entire war period. All dealers' bonds were increased in accordance with the increase in the value of milk purchased per month from producers as shown by the total value of bonds filed at the termination of each licensing year. A few dealers thought that with the greatly improved purchasing power of the public due to the war stimulus bonds should be reduced or even waived, but this was not permitted by the act nor would it have been a good policy to follow as the liability to producers was much greater in case of default on the part of a dealer should he for any of many reasons default in his payments.

Two sections of the act were amended by the 1945 Legislature: one amendment included the definition of "Producers" to include all agricultural cooperative associations organized under Chapter 13 of this Title; and the other amendment clarifies the penalty for operating a milk business in violation of the Statute.

COURT DECISION

On September 14, 1944, the Court of Errors and Appeals handed down its decision, on the appeal to this Court by the Surety Company that wrote the bond on behalf of the Reck Dairy Company, upholding the decision of the New Jersey Supreme Court that an agricultural cooperative association organized under the provisions of Chapter 13 of this Title was a producer and therefore entitled to protection under bonds filed with this Department pursuant to Article 1, Chapter 12, Title 4 of the Revised Statutes. This decision definitely establishes the status of such cooperatives in this State. As thousands of farmers are members of the various cooperative associations already established in the State and more cooperatives will be organized from time to time, this decision is of importance to the farmers of New Jersey.

Several complaints amounting to \$1,067.66, were received against our licenses but as all the complaints were paid in full by the dealers it was unnecessary to require the bonding companies to liquidate any claims this year:

Licenses were issued to 244 dealers who filed bonds totaling \$2,519,400.

NUMBER OF LICENSEES UNDER MILK DEALERS' LAW
July 1, 1944 to June 30, 1945

County	Licenses Issued	Bonds Filed	Amount of Bonds
Atlantic	2	2	\$55,000.00
Bergen	7	7	116,000.00
Burlington	17	17	165,500.00
Camden	11	11	95,000.00
Cape May	1	1	1,000.00
Cumberland	15	15	121,700.00
Essex	14	14	270,100.00
Gloucester	10	10	26,300.00
Hunterdon	10	10	224,000.00
Mercer	24	24	150,700.00
Middlesex	16	16	143,900.00
Monmouth	21	21	120,000.00
Morris	27	24	110,400.00
Ocean	3	3	18,000.00
Passaic	12	12	159,500.00
Salem	12	10	39,000.00
Somerset	13	13	90,000.00
Sussex	1	1	2,000.00
Union	10	10	97,200.00
Warren	11	11	140,000.00
Outside of New Jersey	7	7	375,000.00
Totals: 1944-1945	244	239	\$2,519,400.00
1943-1944	256	250	2,287,700.00
1942-1943	266	256	1,905,800.00
1941-1942	280	268	1,744,500.00
1940-1941	285	271	1,507,400.00

PRODUCE DEALERS' LAW

The fruit and truck crop farms were encouraged to produce more farm commodities by the federal agencies as part of the program for the successful prosecution of the war. The farmers of this State engaged in the production of these commodities exerted great effort, even though more handicapped by lack of help, machinery, increased costs, and exceptionally unfavorable weather than in any of the three previous war years.

Among the truck crop farmers very hard hit by the excessively hot dry weather were the potato growers for not only were their crops reduced in quantity, but also the harvesting of this important crop was hampered by the hot sun which resulted in heavy losses when shipped to distant points. This fact caused disputes to arise between dealer and producer as to who would stand the losses incurred in shipment. Although many such questions were settled by the dealers and farmers concerned, several cases of this kind were brought to our attention. All were settled except in one case wherein the dealer stated that he had several hundred dollars due him from the producer for seed and fertilizer so that in case of a suit he would enter a counter-claim.

A few new canneries opened as the demand for canned goods increased in order to supply the armed forces. The service forces drew heavily on all available supplies, which resulted in a much smaller amount going on the

market for public consumption. What was allowed to be sold to the public was not only rationed, but also required a large number of ration points per unit.

Although the commission merchants, dealers, brokers, and farmers still had to contend with OPA ceiling prices and other regulations, the experience gained during the previous years brought about changes in OPA's restrictions which were for the better in many instances. However, violations of its regulations, especially in regard to ceiling prices and "tie-in" sales were numerous and made it necessary for OPA to prosecute many dealers who tried to evade compliance. Some dealers who were convicted two or more times were dealt with severely by the courts.

Claims and Complaints

Several claims and complaints were filed with us amounting to approximately \$3,357.00, but in every instance except one the dealers paid the producers in full. The one exception in which payment was not paid is somewhat involved due to the indefinite agreement covering the purchase of the potatoes for which the producer was not paid.

Each year similar disputes arise between dealers and producers as to which one will stand the loss on potatoes which have been dug, graded on the farm, loaded and shipped to some distant point—where upon arrival the potatoes have failed to meet the grade specified by the buyer to the shipper. Last year, due to the excessive heat during the harvesting and shipping season, it was common for this to occur and the question frequently arises as to whether the local dealer or farmer is to suffer the loss incurred when potatoes fail to pass inspection at the point of destination.

Licenses were issued to 368 dealers who filed bonds totaling \$1,104,000.

NUMBER OF LICENSEES UNDER PRODUCE DEALERS' LAW May 1, 1944 to April 30, 1945

County	Licenses Issued	Bonds Filed	Amount of Bonds
Atlantic	38	38	\$114,000.00
Burlington	3	3	9,000.00
Camden	6	6	18,000.00
Cumberland	49	49	147,000.00
Essex	43	43	129,000.00
Gloucester	35	35	105,000.00
Hudson	4	4	12,000.00
Mercer	12	12	36,000.00
Middlesex	5	5	15,000.00
Monmouth	22	22	66,000.00
Passaic	12	12	36,000.00
Salem	10	10	30,000.00
Somerset	1	1	3,000.00
Union	1	1	3,000.00
Warren	7	7	21,000.00
Outside of New Jersey	120	120	360,000.00
Totals:			
1944-1945	368	368	\$1,104,000.00
1943-1944	351	351	1,053,000.00
1942-1943	339	339	1,017,000.00
1941-1942	335	335	1,005,000.00
1940-1941	332	332	996,000.00

CATTLE DEALERS' LAW

With the large demand on the part of the public for meat and the small supply available due to the Federal Government's restriction on the number of animals that could be slaughtered plus OPA's high ration-point requirements to purchase the small amount permitted to be sold to the public, more interest was shown in the handling of beef and feeding animals by persons who would not otherwise have entered this type of business.

Persons who handle cattle exclusively for slaughter are not required to obtain licenses under Article 1, Chapter 11, Title 4. However, many did apply as they stated that in purchasing animals for slaughter they wished to have the privilege of selling steers to farmers in this State who wished to raise such stock for slaughter at a later date. Moreover, it was highly possible in the conduct of their business that some dairy cows might also be purchased for sale to farmers. Thus, the number of licenses continued comparatively high during this year.

Although each year more farmers are raising their own replacements, nevertheless the demand for dairy cows from dealers continued strong, and prices for good animals remained high. Fewer complaints against dealers were received this year than in any previous year which is as might be expected for many complaints arise due to the inability of the purchaser to meet his obligations on time as agreed at the time the deal was made. All the complaints that were received were settled satisfactorily.

"Black markets" in meat and poultry flourished and became a serious problem for the government agency entrusted with the enforcement of the regulations on the slaughter and sale of these food items. A few instances were reported where cattle left out at night by their owners were slaughtered in the field without the knowledge of the farmers and the carcasses moved to market by truck.

The numerous telephone and written requests for licenses from within and out-of-state buyers of poultry were referred to the Department of Weights and Measures as that State agency does require licenses for such dealers.

THIRTIETH ANNUAL REPORT

15

Licenses were issued to 212 dealers.

NUMBER OF LICENSEES UNDER CATTLE DEALERS' LAW
July 1, 1944 to June 30, 1945

County	Licenses Issued
Bergen	4
Burlington	15
Camden	4
Cape May	4
Cumberland	13
Essex	10
Gloucester	5
Hudson	1
Hunterdon	19
Mercer	6
Middlesex	5
Monmouth	12
Morris	15
Ocean	5
Passaic	8
Salem	21
Somerset	13
Sussex	21
Union	8
Warren	19
Outside of New Jersey	4
Totals: 1944-1945	212
1943-1944	216
1942-1943	213
1941-1942	207
1940-1941	205

THE BABY BEEF SHOW AND SALE

The 6th Annual 4-H Baby Beef Show and Sale was held on December 13, at New Brunswick. The auction sale which followed the show brought a total of \$13,857, or an average of \$375 per animal, setting a new high record.

The price of \$1,226 paid for the 1022-pound Aberdeen Angus steer which won the grand championship also set a high mark, the \$1.20 per pound bid by Gallagher's Restaurant of New York City being just twice the figure paid for last year's grand champion. Exhibitor of the prize Angus steer was 19-year-old Asher N. Schanck, Jr., 4-H Club member from Eatontown. A total of 37 entries of Aberdeen Angus and Hereford steers were sold for an average price of \$0.39 per pound, another record.

The reserve champion steer of the show, a 964-pound Hereford, exhibited by Richard Inicki, of Jamesburg, was bought by the Savarin Restaurants of New York City for \$0.75 per pound, or \$723. The Gateway Restaurant, Newark, purchased the first-prize heavy Hereford for \$0.85 per pound, or a total of \$945. This prize-winning animal was shown by Roy Etsch, Jamesburg.

At the original show and sale held in 1939, only four animals were entered. The interest in this event on the part of both adults and boys and girls indicates that cattle for meat production are winning a permanent place in New Jersey agriculture.

Report of the Bureau of Information

FRED W. JACKSON, *Chief*

During the past 12 months the activities of the Bureau of Information have been expanded to serve in bringing to the attention of farmers and in interpreting to them the services and regulatory functions of the State Department of Agriculture. The media used have included the press, the radio, agricultural and farm magazines, exhibits, appearances before producer and consumer groups, and direct contacts with officials of farm organizations and concerns engaged in the sale and distribution of New Jersey farm products.

Despite war-time restrictions which have made more difficult the publication of both weekly and daily newspapers, the releases from the New Jersey State Department of Agriculture have been used quite consistently throughout the year. The subject of food and the need for maximum food production have contributed to a sustained interest on the part of the public in the subject matter of the releases.

Acknowledgment should be made of the splendid cooperation extended to the personnel of this office by the editors of the daily and weekly newspapers of the State, and particularly to the representatives of the press serving at the State House.

During the twelve-month period, a total of 126 regular releases and stories were issued to the press. Some of these included supplementary mat service, particularly in the coverage of Farmers' Week. Approximately 200 newspapers in New Jersey, New York City, and Philadelphia were serviced. In addition 72 special articles for press or radio distribution were prepared, besides a considerable amount of editorial assistance extended to members of the Department and others in preparing articles or radio talks on New Jersey agriculture.

Tabulation of the news releases reveals that the subject matter originating in the Bureau of Markets dominated the releases, due, no doubt, to the fact that most of the stories referred to food products. The following tabulation shows the news releases for each bureau and suggests that more time should be devoted to the work of other bureaus, especially to the Bureau of Animal Industry.

THIRTIETH ANNUAL REPORT

17

NEWS RELEASES—SOURCE AND NUMBER

Source	Number
Bureau of Animal Industry	4
Bureau of Markets	49
Bureau of Plant Industry	24
Administration	8
General	10
Farmers' Week	31
Total releases, 1944-1945	126

Special acknowledgment should be made of the continued cooperation of the editor of the *New Jersey Farm and Garden*, particularly in advance and current publicity related to Farmers' Week.

DEPARTMENTAL PUBLICATIONS

During the year the following circulars and publications were edited and serviced in the Bureau of Information :

- *Circular No. 339—New Jersey Agriculture—Historical Facts and Figures.
- *Circular No. 351—Average Prices Received and Prices Paid by New Jersey Farmers, 1910-1943.
- Circular No. 352—Dealers Licensed Under the Milk Dealers' Licensing and Bonding Act, Produce Dealers' Licensing and Bonding Act, Cattle Dealers' Licensing Act (1944).
- Circular No. 353—Facts and Figures—Annual Potato Summary—Crop of 1944.
- †Circular No. 354—County Boards of Agriculture and State Agricultural Organizations for 1945.
- †Circular No. 355—Injurious Insects of New Jersey Nurseries.
- †Circular No. 356—The Cultivated Blueberry Industry in New Jersey, 1944—Including a Report on the Insects of the Cultivated Blueberry.
- †Supplement—An Act Providing for the Licensing and Bonding of Dealers in Milk and Cream (Article 1, Chapter 12, Title 4 of the Revised Statutes of New Jersey).
- Twenty-eighth Annual Report (1942-1943).
- †Twenty-ninth Annual Report (1943-1944).
- Six issues of bi-monthly publication, FARM SERVICE NEWS.
- Program—1945 Farmers' Week.
- Booklet—Citations for Distinguished Service for 1945.
- Booklet—Highlights of Your Convention.
- Four issues of *Farm Week Chaff*.

The outstanding publication issued by the Department of Agriculture during the year was Circular No. 339, *New Jersey Agriculture—Historical Facts and Figures*, on which delivery was completed. This publication includes a comprehensive statistical review of New Jersey agriculture from pre-Colonial days up to 1940.

Six issues of *Farm Service News* were published during the year and distributed to a circulation of about 16,000. The January issue was devoted to Farmers' Week and the March issue to the poultry improvement program, listing the names of the improved hatcheries.

* Edited previous fiscal year but not available for distribution until 1944-1945 fiscal year.

† Edited and prepared for publication but not available for distribution during 1944-1945 fiscal year.

Mention should be made of the increased difficulties involved in relations with printers. Although the situation can be attributed to shortages of help and equipment, it should be pointed out that a number of the publications issued by the Department are of little use when distribution is delayed beyond the dates or periods to which they refer. This is particularly true of lists of bonded and licensed dealers and information on subjects having a seasonal aspect.

FARMERS' WEEK

One of the principal activities of the Bureau of Information is the supervision of many of the details, particularly the programs, publicity, and general arrangements, for Farmers' Week held in Trenton on January 22, 23, 24, 25, 1945. A total of 25 meetings were scheduled in addition to the official convention attended by authorized delegates representing the commodity and livestock organizations.

Acknowledgment should be made of the cooperation and assistance extended by the members of the General Committee representing all farm organizations in the State.

Attendance approached seating capacity at most of the meetings scheduled for the 1945 sessions. Due to the war situation, hotel and auditorium accommodations were inadequate. Outstanding speakers appeared on most of the programs, many of which included forum discussions.

Citations were prepared for presentation at the Agricultural Convention to four persons who were honored for their distinguished service to New Jersey agriculture.

A new booklet, *Highlights of Your Convention*, was prepared to furnish the delegates with more complete information on the background of the organization of the Department of Agriculture.

COOPERATION WITH NEW JERSEY COUNCIL

During the past year the New Jersey Council became a unit of the Department of Economic Development. Fortunately the change in organization disturbed in no way the program of the New Jersey Council devoted to the advertising and promotion of New Jersey farm products. The activities were limited to a degree by war-time restrictions which have furnished no incentive to farmers in their efforts to sell under definite grades and labels. The shortage of help has made it impossible to maintain grading standards and the OPA price regulations have offered no price incentives.

However, during the year the following projects were conducted:

(a) Jersey Chick Association—Continuance of the program which provided for the publication of the list of hatcheries, and a series of advertisements in *New Jersey Farm and Garden*, *The Poultryman*, and *The Moos*.

(b) New Jersey Guernsey Breeders Association, Inc.—In response to a request from this group a series of advertisements were planned to appear

in the *Guernsey Breeders' Journal*, the national magazine of the Association.

(c) Jersey Cattle Association of New Jersey—In cooperation with this organization, the New Jersey Council sponsored the preparation and publication of a 40-page booklet devoted largely to a listing of breeding stock available in New Jersey. The cost of the project was shared equally by the Association and the New Jersey Council.

(d) New Jersey Field Crop Improvement Cooperative Association—The series of certified seed advertisements was continued in 34 New Jersey weeklies and six issues each of *New Jersey Farm and Garden* and *The Moos*. Again the organization was able to sell its entire supply of seed and the season was considered satisfactory.

(e) Blueberry Cooperative Association—Continuance of the promotional work in the New York City and northern New Jersey markets included about 700 poster locations in the New York subways and at the stations of the commuting railroads in the northern New Jersey counties. The Council's contribution was about \$2,100, while the Blueberry Cooperative Association expended about \$11,000 in its advertising budget. The demand for "Tru-Blus" has been especially good on the fresh market, and it has been necessary to curtail the allotments for processing.

(f) New Jersey Peach Industry Committee—One of the outstanding projects conducted each year under the sponsorship of the New Jersey Council is the advertising and promotion of New Jersey peaches conducted in cooperation with the New Jersey Peach Council, Inc., and the New Jersey Department of Agriculture. Mention should be made of the cooperation extended by commercial concerns including the chain stores and particularly the public utilities. These concerns extended to the New Jersey Council the assistance of their personnel, particularly their home demonstration agents, advertising departments, and local store managers. Special booklets were issued by the Public Service Electric and Gas Company and that company also prepared at its own expense additional posters and leaflets which were used in busses, trolley cars, show rooms, and terminals. A series of advertisements was sponsored by the New Jersey Council in 15 New Jersey dailies and photographs were furnished to food editors. All in all this is one of the most satisfactory projects measured in terms of market promotion and sales.

(g) General—The New Jersey Council conducted a series of surveys during the past year, one of which was devoted to ascertaining the opinion of New Jersey home makers in regard to New Jersey food products. The survey was conducted by Fact Finders, Inc., and revealed some very interesting trends as well as some definite suggestions on which future promotional work can be developed.

MISCELLANEOUS SERVICES

During the year State Department of Agriculture exhibits were placed at Flemington Fair and Trenton Fair. These were devoted almost exclusively to certified seeds distributed by the New Jersey Field Crop Improvement Cooperative Association.

An effort has been made to continue the practice of visiting newspaper editors to keep posted on their reaction to the program of the Department and other agricultural matters.

A considerable number of letters has been received during the year from servicemen seeking information on farming and farm properties. This correspondence involves considerable time and effort and is rather difficult to service because many of the correspondents are entirely uninformed about agriculture.

The file of photographs has been greatly depleted during the war years due to the difficulty of securing the services of a photographer and it will be impossible to service requests until the files are replenished.

THE NEW JERSEY JUNIOR BREEDERS' FUND

During the fiscal year which ended June 30, 1945, a further decline in the number of requests for loans was shown, with only 48 loans totaling \$3,689.68 being made for livestock. Thirty-five of these loans were for beef cattle projects and thirteen for dairy projects. In addition, two loans were made from the Agricultural Loan Fund, one for crossbred poultry in the amount of \$48, and the other for poultry feed, \$21.45.

For the first year in the history of the Fund, no losses occurred through death of animals. This made it possible to close the fiscal year with a net profit of \$261.67.

Although two charges were made against the reserve for bad debts during the fiscal year in the amount of \$108.26, two accounts totaling \$180.13 which had been charged against it in June 1943, were paid in full, thereby increasing the reserve by \$71.87.

The Baby Beef Show and Sale was again held in New Brunswick in December. Thirty-seven animals of the Aberdeen-Angus and Hereford breeds were sold for an average price of 39 cents a pound, the grand champion bringing an all-time record price of \$1.20 a pound.

Thirty-two certificates for meritorious dairy production records were awarded at the annual dairy banquet during Farmers' Week in January, at which time fifteen of the winners were dinner guests of the Fund.

The following tables give data on the operation of the Fund since its inception in 1921.

THIRTIETH ANNUAL REPORT

21

AMOUNT LOANED TO DATE, BY COUNTIES

County	Amount
Atlantic	\$92.00
Bergen	75.00
Burlington	12,075.91
Camden	.....
Cape May	1,335.23
Cumberland	7,971.63
Essex	405.40
Gloucester	3,617.30
Hudson	.....
Hunterdon	10,263.81
Mercer	24,142.16
Middlesex	19,722.75
Monmouth	11,422.45
Morris	5,479.00
Ocean	2,456.00
Passaic	166.25
Salem	24,183.28
Somerset	6,766.40
Sussex	14,077.17
Union	.....
Warren	13,285.58
Total	<u>\$157,537.32</u>

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

LIVESTOCK LOANS

Fiscal Year	Dairy Loans		Beef Cattle		Pig Loans		Chicken Loans		Turkey Loans		Total Livestock Loans	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
1920-21	30	\$2,815.00	...	.....	...	.....	...	.....	...	.....	30	\$2,815.00
1921-22	92	7,985.00	...	.....	16	\$1,074.98	16	\$824.25	...	.....	124	9,884.23
1922-23	81	6,365.00	...	.....	21	1,267.25	13	636.25	...	.....	115	8,268.50
1923-24	96	8,670.00	...	.....	10	409.50	14	932.00	...	.....	120	10,011.50
1924-25	81	7,065.00	...	.....	26	1,320.00	17	1,183.50	...	.....	124	9,568.50
1925-26	71	6,639.50	...	.....	25	1,684.30	32	1,563.10	...	.....	128	9,886.90
1926-27	83	7,444.00	...	.....	19	1,240.00	28	1,112.50	...	.....	130	9,796.50
1927-28	54	4,644.00	...	.....	10	620.00	31	890.70	...	.....	95	6,154.70
1928-29	55	4,960.00	...	.....	13	805.00	15	680.65	...	.....	83	6,445.65
1929-30	37	3,317.50	...	.....	15	876.00	17	692.20	...	.....	69	4,885.70
1930-31	38	3,467.50	...	.....	12	769.00	7	308.00	...	.....	57	4,544.50
1931-32	38	2,875.00	...	.....	8	415.00	9	394.00	...	.....	55	3,684.00
1932-33	24	1,820.00	...	.....	10	426.75	8	323.00	...	.....	42	2,569.75
1933-34	30	2,310.00	...	.....	9	295.00	24	940.43	...	.....	63	3,545.43
1934-35	46	4,169.00	...	.....	3	110.00	23	1,174.49	...	.....	72	5,453.49
1935-36	26	2,050.00	...	.....	5	297.00	18	797.85	...	.....	49	3,144.85
1936-37	32	2,905.00	...	.....	14	941.00	21	894.40	...	.....	67	4,740.40
1937-38	43	4,366.00	...	.....	8	492.50	29	1,614.82	2	\$30.00	82	6,503.32
1938-39	45	3,740.00	21	\$1,050.00	28	1,377.00	27	1,243.14	5	156.10	126	7,566.24
1939-40	36	3,680.00	35	2,012.20	9	303.00	44	2,012.92	5	201.00	129	8,209.12
1940-41	34	2,503.50	40	2,309.10	3	110.00	32	1,265.90	2	55.20	111	6,243.70
1941-42	40	3,127.00	43	2,754.48	10	295.50	21	735.38	3	153.50	117	7,065.86
1942-43	24	2,095.00	39	2,654.85	1	50.00	6	280.45	1	96.75	71	5,177.05
1943-44	21	2,055.00	32	2,348.77	2	95.00	1	36.25	...	.....	56	4,535.02
1944-45	13	1,305.00	35	2,384.68	...	.....	...	.....	...	.....	48	3,689.68
Total	1,170	\$102,373.00	245	\$15,514.08	277	\$15,273.78	453	\$20,536.18	18	\$692.55	2,163	\$154,389.59

AGRICULTURAL LOANS*

	Feed Loans		Cross-bred Poultry		Agricultural Production Loans		Miscellaneous		Total Agricultural Loans	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount
4-35	3	\$38.38	..	....	..	.....	..	.....	3	\$38.38
5-36	..	....	..	....	..	.....	..	.....	..	.....
6-37	6	63.70	..	....	..	.....	..	.....	6	63.70
7-38	14	276.24	..	....	..	.....	..	.....	14	276.24
8-39	27	451.04	..	....	9	\$128.43	..	.....	36	579.47
9-40	43	728.45	..	....	7	199.08	1	\$8.02	51	935.55
0-41	29	506.63	..	....	6	240.26	..	.....	35	746.89
1-42	2	160.70	..	....	3	104.85	..	.....	5	265.55
2-43	..	....	2	\$72.50	..	.....	..	.....	2	72.50
3-44	..	....	1	100.00	..	.....	..	.....	1	100.00
4-45	1	21.45	1	48.00	..	.....	..	.....	2	69.45
Total	125	\$2,246.59	4	\$220.50	25	\$672.62	1	\$8.02	155	\$3,147.73

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

Report of the Bureau of Animal Industry

DR. R. A. HENDERSHOTT, *Chief*

TUBERCULOSIS ERADICATION

Tuberculosis continued on an upper trend at the outset of this fiscal year. From the increase in reports of lesions found on inspection of cows in federally inspected abattoirs in the Newark area, it was evident that there was considerable infection undisclosed in herds, particularly in Burlington County.

As indicated in last year's report, Dr. Cosgriff, the bureau's agent in Mercer County, was detailed to conduct tuberculin retests of herds in Burlington County on which federal post-mortem reports indicated infection existed. The result of these retests brought to light the fact that infection was not being disclosed in the routine annual tuberculin tests of some herds in the county. This procedure was followed until late September when it became necessary to relieve Dr. Cosgriff of this responsibility until he would be able to bring Mercer County herd-testing up to date.

Close supervision was exercised over the agent regularly assigned to Burlington County. However, observation failed to disclose any fault in technique or other factor that would account for the increase in infection. Several meetings were held with the federal inspector in charge and the secretary of agriculture and with supervisors of tuberculosis control. In addition, discussions took place with the supervisor of tuberculosis control of Burlington County in an endeavor to determine the cause of the increase in infection in herds under his supervision.

It was finally decided to concentrate the efforts of all tuberculin testing agents on the work of retesting all herds in Burlington County. The result of this effort was the disclosure of 270 infected herds whereas bureau records previously had indicated infection in 69 herds.

Infected herds were immediately quarantined and retests conducted on animals remaining in such herds. By June 30, 1945, infection had been reduced from 9.98 per cent to .675 per cent. Retesting of infected herds will continue according to plans long in operation and which always have proven successful in reducing this infection. The Bureau of Animal Industry is confident that the continued application of the tuberculin test and its proper interpretation, coupled with compliance by farmers with time-worn instructions relative to cleaning, disinfection, sanitation, and exercise of care in the retesting of herd additions, will meet with the success desired.

Throughout the remainder of the State there has continued to be too many tuberculin test reactors. In this connection it should be kept in mind that New Jersey is an importing State and receives about one sixth of her milking animal population each year from areas outside of the State. In spite of the fact that New Jersey has the most stringent health regulations governing importation of any State in the nation, we continue to find infected animals brought into the State. At the same time, there is a decrease this year in the number of herd additions retested at the request of farmers.

FACTORS IN THE SPREAD OF TUBERCULOSIS

In 1944, New Jersey imported 20,312 head of which number 7,525 were retested as herd additions, disclosing 116 reactors. In 1945, 21,768 head were imported and only 3,448 were subjected to herd addition tests, resulting in 34 reactors. At the same time, importations from Canada, notably a poor source from the standpoint of health and one over which we have no jurisdiction, have increased from 4,311 head in 1944 to 6,076 head in 1945.

Another factor which undoubtedly contributed to the spread of tuberculosis within the State has been the uncontrolled sale of cows through livestock auction markets. It is recommended that serious consideration be given to legislation designed (1) to provide that herd additions be retested for tuberculosis not within sixty days of a previous tuberculin test; (2) to provide adequate supervision over livestock auction markets, and to make certain that animals sold to go back on farms are examined for health before being permitted removed from the market; and (3) that the changes needed in the law governing importation of animals for immediate slaughter be changed to eliminate loopholes for those who are engaged in bringing cattle in without health papers or permit under the guise of taking such stock to federal quarantine yards.

On June 30, 1945, there were 15,803 herds consisting of 208,459 head of cattle under supervision. This is a decrease of 409 herds and a decrease of 7,555 cattle over the number recorded at the beginning of this fiscal year.

During the year initial tests were conducted on 1,539 herds of 9,483 cattle resulting in the disclosure of 80 or .84 per cent reactors. The percentage of reactors disclosed on tests of cattle added to herds under supervision was .99; or 3,448 cattle tested, 34 animals were declared reactors.

A total of 232,087 tuberculin tests were conducted, resulting in 3,138 reactors or 1.35 per cent reaction as compared with .42 per cent a year ago. Of the 3,138 reactors disclosed, 2,937 were eligible for indemnity; 121 of these were purebred and 2,816 were grade animals.

Following is a table which gives the trend of tuberculin test results during the past ten years:

Year	Herds Under Supervision	Animals Under Supervision	Tests Conducted	Reactors Resulting	Per Cent Reaction
1935-1936	19,718	196,672	212,996	1,604	.75
1936-1937	18,823	196,774	232,275	1,912	.82
1937-1938	18,185	199,474	253,025	1,428	.56
1938-1939	17,725	202,001	248,094	1,417	.57
1939-1940	17,364	206,187	260,692	1,090	.42
1940-1941	16,695	208,223	270,991	1,028	.38
1941-1942	16,174	209,027	258,877	871	.34
1942-1943	15,965	212,323	235,221	580	.25
1943-1944	16,212	216,014	244,496	1,030	.42
1944-1945	15,803	208,459	232,087	3,138	1.35

The amount of State indemnity paid during this fiscal year for reactors condemned increased from an average of \$62.78 for the fiscal year, 1943-1944, to \$66.12 for 1944-1945. During the year, 21,682 dairy cattle and 4,559 steers, a total of 26,241 cattle, were imported as compared with 26,129 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, 1945.

Class of Cattle	Number of Animals	Amount Paid
Registered animal	121	\$14,078.54
Grade animal	2,816	180,107.08
Registered and Grade	2,937	\$194,185.62*

Average State Indemnity Paid Per Head:

Registered animal	\$116.64
Grade animal	63.96
Registered and Grade	66.12

The following summary indicates the amount of salvage received by owners for reactors resulting from the tuberculin test during the year ending June 30, 1945.

Class of Cattle	Number of Animals	Amount Paid
Registered animal	121	\$10,336.53
Grade animal	2,816	211,315.72
Registered and Grade	2,937	\$221,652.25

Average Salvage Received Per Head:

Registered animal	\$85.43
Grade animal	75.04
Registered and Grade	75.47

* Included in this amount is \$4,879.80 covering increased indemnity paid from the 1945-1946 appropriation.

THIRTIETH ANNUAL REPORT

27

The following summary indicates the amount of federal indemnity paid for reactors resulting from the tuberculin test during the year ending June 30, 1945.

Class of Cattle	Number of Animals	Amount Paid
Registered animal	121	\$5,578.76
Grade animal	2,816	65,813.04
Registered and Grade	2,937	\$71,391.80

Average Federal Indemnity Paid Per Head:

Registered animal	\$46.11
Grade animal	23.37
Registered and Grade	24.31

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)	\$487,229.67
Average amount received per head by owners for reactors	\$165.89

TOTAL STATE INDEMNITY PAID, BY COUNTIES

July 1, 1944 to June 30, 1945

County	Indemnity
Atlantic	.....
Bergen	\$675.23
Burlington	152,313.20*
Camden	293.70
Cape May	.....
Cumberland	493.19
Essex	.....
Gloucester	872.82
Hudson	.....
Hunterdon	5,574.96
Mercer	4,126.23
Middlesex	1,099.22
Monmouth	2,811.32
Morris	4,018.05
Ocean	695.74
Passaic	247.38
Salem	2,472.42
Somerset	2,687.94
Sussex	13,214.56
Union	497.99
Warren	2,091.67
State	\$194,185.62

* Included in this amount is \$4,879.80 for increased indemnity paid in Burlington County following a review of certain appraisements. This amount was paid from the 1945-1946 indemnity appropriation.

STATE DEPARTMENT OF AGRICULTURE

TOTAL STATE INDEMNITY PAID, BY COUNTIES, FROM THE BEGINNING OF
ACCREDITED HERD WORK IN 1916 TO JUNE 30, 1945*

County	Indemnity
Atlantic	\$8,620.13
Bergen	36,029.44
Burlington	490,944.42
Camden	17,601.55
Cape May	10,847.14
Cumberland	77,544.06
Essex	40,686.29
Gloucester	64,895.96
Hudson	4,455.78
Hunterdon	355,913.17
Mercer	185,855.45
Middlesex	79,528.49
Monmouth	133,800.97
Morris	144,270.25
Ocean	33,339.24
Passaic	35,672.19
Salem	360,749.02
Somerset	223,536.97
Sussex	987,679.68
Union	40,696.88
Warren	379,264.13
State	<u>\$3,711,931.21</u>

* Included in this amount is \$4,879.80 increased indemnity paid from the 1945-1946 indemnity appropriation.

HERDS AND CATTLE UNDER STATE AND FEDERAL SUPERVISION
June 30, 1945

County	Herds Under Supervision	Herds Fully Accredited	Reg.	Cattle Under Supervision		Number of T.B. Tests Made July 1, 1944, to June 30, 1945	Number of Reactors Disclosed
				Grade	Total		
Atlantic	229	161	28	610	638	613	...
Bergen	256	189	84	2,560	2,644	1,906	5
Burlington	1,165	821	1,630	18,409	20,039	41,616	2,442
Camden	326	269	278	1,370	1,648	1,490	4
Cape May	169	145	43	697	740	742	...
Cumberland	1,086	934	420	6,993	7,413	5,244	4
Essex	102	94	221	1,299	1,520	2,542	2
Gloucester	1,151	878	977	5,272	6,249	5,035	31
Hudson	24	10	....	102	102	.....	...
Hunterdon	2,024	1,918	2,834	28,341	31,175	28,034	72
Mercer	807	705	1,367	8,575	9,942	8,455	37
Middlesex	1,011	837	721	7,583	8,304	9,465	17
Monmouth	1,349	1,075	1,990	8,394	10,384	9,949	46
Morris	899	701	2,308	9,833	12,141	11,137	77
Ocean	287	250	5	1,545	1,550	1,455	15
Passaic	208	156	69	2,491	2,560	1,486	...
Salem	1,248	1,062	539	17,114	17,653	20,104	63
Somerset	1,104	911	2,873	10,025	12,898	10,939	39
Sussex	1,103	895	2,412	31,097	33,509	43,324	221
Union	172	136	54	2,843	2,897	2,976	1
Warren	1,083	933	1,500	22,953	24,453	25,575	62
State	15,803	13,080	20,353	188,106	208,459	232,087	3,138

THIRTIETH ANNUAL REPORT

30

STATE DEPARTMENT OF AGRICULTURE

County	INFECTED HERD RECORD		
	Number of Infected Herds in New Jersey June 30, 1945	Number of Cattle in Infected Herds June 30, 1945	Number of Reactors Disclosed by Counties July 1, 1944, to June 30, 1945
Atlantic	...	...	...
Bergen	3	60	5
Burlington	270	9,056	2,442
Camden	...	...	4
Cape May	...	...	...
Cumberland	3	73	4
Essex	1	39	2
Gloucester	7	83	31
Hudson	...	...	...
Hunterdon	20	731	72
Mercer	27	756	37
Middlesex	15	1,048	17
Monmouth	30	720	46
Morris	14	818	77
Ocean	3	83	15
Passaic	2	100	...
Salem	33	992	63
Somerset	23	599	39
Sussex	93	3,913	221
Union	4	1,024	1
Warren	52	1,607	62
State	600	21,702	3,138

CATTLE TESTED IN NEW JERSEY UNDER THE ACCREDITED HERD PLAN BY VETERINARIANS ON THE STAFF OF THE
STATE DEPARTMENT OF AGRICULTURE
July 1, 1944 to June 30, 1945

	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.
1944															
July	12	2	25	..	..	2	..	41	..	2	56	96	1,002	..	12
August	22	20	92	..	2	2	1	5	..	..	191	227	1,678	..	37
September	25	4	75	..	..	..	..	27	..	..	69	58	1,820	1	47
October	44	1	272	..	..	1	19	93	..	..	399	408	5,639	1	36
November	23	25	38	..	..	..	..	..	..	..	160	51	3,334	..	22
December	16	1	79	..	..	2	..	3	..	..	88	223	2,527	..	8
1945															
January	18	2	149	..	..	3	..	54	..	..	286	494	5,651	35	28
February	8	1	10	..	..	1	..	2	..	..	164	356	2,926	1	80
March	21	114	76	..	2	1	..	4	..	..	175	473	5,064	20	636
April	56	27	146	..	1	2	2	6	..	..	349	1,080	8,330	6	599
May	39	16	288	1	9	1	12	6	..	6	290	867	5,227	7	319
June	26	..	91	..	33	1	..	8	..	..	165	127	2,228	16	95
Total	310	213	1,341	1	47	16	34	249	...	8	2,392	4,460	45,426	87	1,919
Percentage of Reactors				.47	3.5				..	3.21				1.95	4.22
Average Percentage					3.09				..	2.83					4.02

THIRTIETH ANNUAL REPORT

CATTLE TESTED IN NEW JERSEY UNDER THE ACCREDITED HERD PLAN BY VETERINARIANS ON THE STAFF OF THE
 UNITED STATES DEPARTMENT OF AGRICULTURE
 July 1, 1944 to June 30, 1945

	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.
1944															
July	4	..	7	..	..	1	..	5	..	..	33	..	180	..	..
August	17	..	21	..	..	..	8	32	..	..	107	47	807	..	2
September	14	..	17	..	..	..	3	10	..	..	95	35	741	..	1
October	19	1	54	..	..	..	..	61	..	..	91	28	455	..	1
November	1	..	1	..	..	..	..	2	..	..	73	2	1,238	..	1
December	..	..	..	..	..	..	..	11	..	..	90	62	1,430	..	6
1945															
January	2	..	24	..	..	..	..	8	..	..	26	45	953	..	..
February	6	23	7	..	..	1	..	1	..	..	59	3	1,582	..	7
March	7	..	25	..	..	1	..	1	..	..	55	178	1,111	..	26
April	26	7	55	..	1	..	..	..	..	..	144	273	3,276	8	150
May	6	..	23	..	..	..	..	..	..	..	45	..	881	..	3
June	9	..	13	..	..	..	..	..	..	..	60	120	468	..	3
Total	111	31	247	..	1	3	11	131	..	..	878	793	13,122	8	200
Percentage of Reactors				..	.4				..	..				1.01	1.52
Average Percentage					.36				..					1.49	

CATTLE TESTED IN NEW JERSEY UNDER THE ACCREDITED HERD PLAN BY VETERINARIANS ACCREDITED BY THE
 UNITED STATES DEPARTMENT OF AGRICULTURE
 July 1, 1944 to June 30, 1945

	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.
1944															
July	37	23	151	..	1	4	6	105	..	7	415	288	4,194	..	12
August	97	1	270	..	1	27	..	243	..	..	548	184	4,971	..	6
September	60	47	365	..	2	12	3	207	..	7	670	775	10,295	..	35
October	136	67	1,018	..	5	19	24	436	..	1	1,303	1,330	18,606	4	44
November	109	10	788	..	7	17	1	126	..	..	926	1,081	13,383	..	65
December	79	140	576	..	1	12	..	30	..	..	975	1,392	16,970	..	61
1945															
January	100	275	579	..	1	19	13	401	..	..	858	1,090	13,524	9	89
February	46	18	411	..	3	25	2	281	..	1	797	1,469	11,006	2	91
March	51	2	469	..	..	28	5	79	..	1	500	1,877	9,573	1	54
April	182	57	1,302	..	5	26	9	605	1	4	1,632	1,695	19,972	..	243
May	85	43	430	..	4	14	16	303	1	2	780	1,576	10,161	9	71
June	136	13	596	..	1	18	4	124	..	1	896	1,623	8,320	4	10
Total	1,118	696	6,955	..	31	221	83	2,940	2	24	10,300	14,380	140,975	29	781
Percentage of Reactors				..	.45				2.41	.82				.2	.55
Average Percentage				.4					.86					.52	

THIRTIETH ANNUAL REPORT

34

STATE DEPARTMENT OF AGRICULTURE

SUMMARY OF CATTLE TESTED UNDER ACCREDITED HERD PLAN
July 1, 1944 to June 30, 1945

INITIAL TESTS	Registered Animals	Grade Animals	Total
Tested	940	8,543	9,483
Reacted	1	79	80
Percentage of Reactors .84			
HERD ADDITION TESTS			
Tested	128	3,320	3,448
Reacted	2	32	34
Percentage of Reactors .99			
OTHER TESTS			
Tested	19,633	199,523	219,156
Reacted	124	2,900	3,024
Percentage of Reactors 1.38			
TOTAL			
Tested			232,087
Reacted			3,138
Percentage of Reactors			1.35
Percentage of Reactors Based on Cattle Population			1.5

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SIX YEAR SUMMARY BY COUNTIES SHOWING PERCENTAGE OF INFECTION FOUND ANNUALLY BASED ON TESTS MADE AND ON THE CATTLE POPULATION

County	July, 1944 to June, 1945					July, 1943 to June 1944				
	Number Animals Under Supervision	Number Animals Reacting	Per Cent Reaction on Total Cattle Population	Number Tests Made	Per Cent Reaction on Tests Made	Number Animals Under Supervision	Number Animals Reacting	Per Cent Reaction on Total Cattle Population	Number Tests Made	Per Cent Reaction on Tests Made
Atlantic	638	...	...	613	...	605	...	...	152	...
Bergen	2,644	5	.19	1,906	.26	2,702	56	2.07	4,630	1.21
Burlington	20,039	2,442	12.19	41,616	5.87	22,790	154	.68	25,025	.62
Camden	1,648	4	.24	1,490	.27	1,731	...	...	1,912	...
Cape May	740	...	...	742	...	743	...	...	12	...
Cumberland	7,413	4	.06	5,244	.08	5,903	30	.51	6,727	.45
Essex	1,520	2	.13	2,542	.09	1,951	47	2.41	2,342	2.01
Gloucester	6,249	31	.5	5,036	.62	6,259	10	.16	6,348	.16
Hudson	102	...	...	...	...	102	...	...	...	...
Hunterdon	31,175	72	.23	28,034	.26	31,614	108	.34	30,884	.35
Mercer	9,942	37	.37	8,455	.44	10,286	21	.20	10,763	.20
Middlesex	8,304	17	.2	9,465	.18	8,469	31	.37	11,930	.26
Monmouth	10,384	46	.44	9,949	.46	10,769	51	.47	11,704	.44
Morris	12,141	77	.63	11,137	.69	12,791	80	.63	12,536	.64
Ocean	1,550	15	.97	1,455	1.03	1,533	25	1.63	1,745	1.43
Passaic	2,560	...	...	1,486	...	2,753	39	1.42	2,661	1.47
Salem	17,653	63	.36	20,104	.31	17,733	58	.33	21,202	.27
Somerset	12,894	39	.30	10,939	.36	13,481	15	.11	14,373	.10
Sussex	33,509	221	.66	43,324	.51	35,167	207	.59	46,000	.45
Union	2,897	1	.03	2,976	.03	3,138	31	.99	6,214	.50
Warren	24,453	62	.25	25,575	.22	25,494	67	.26	27,236	.25
State	208,459	3,138	1.5	232,087	1.35	216,014	1,030	.48	244,496	.42

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

County	July, 1942 to June, 1943				July, 1941 to June, 1942					
	Number Animals Under Supervision	Number Animals Reacting	Per Cent Reaction on Total Cattle Population	Number Tests Made	Per Cent Reaction on Tests Made	Number Animals Under Supervision	Number Animals Reacting	Per Cent Reaction on Total Cattle Population	Number 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
Samerset	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

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

County	July, 1940 to June, 1941					July, 1939 to June, 1940				
	Number Animals Under Supervision	Number Animals Reacting	Per Cent Reaction on Total Cattle Population	Number Tests Made	Per Cent Reaction on Tests Made	Number Animals Under Supervision	Number Animals Reacting	Per Cent Reaction on Total Cattle Population	Number 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

INSHIPPED CATTLE

We have continued the practice of re-bleeding all cattle imported into New Jersey with the exception of calves under six months of age. As in previous reports, 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 21,762 animals, 225 or 1.03 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 a decrease in the percentage of reaction found over last fiscal year when 20,222 animals were tested with 238 or 1.18 per cent reactors resulting.

The greatest number of imports were received this year from Wisconsin and of 7,961 retested from this State, 38 or .48 per cent were removed because of a positive reaction to the retest made in New Jersey. Next in line came Canada, from which point 6,076 consigned to New Jersey were retested with 85 or 1.4 per cent giving a positive reaction.

This year, the bureau retested for tuberculosis occasional lots of cattle shipped into New Jersey and the following table will give the results of such retests.

Origin	Number of Lots Tested	Number of Cattle Tested	Number of Reactors Resulting
Canada	92	1,564	8
Connecticut	1	18	..
Delaware	1	3	..
Maryland	2	11	..
Michigan	3	39	..
New York	4	84	..
Ohio	2	32	..
Pennsylvania	2	6	..
Tennessee	1	2	..
Wisconsin	2	73	..
Total	110	1,835	8 or .435 per cent

IMPORT CATTLE RECEIVED FROM VARIOUS STATES AND RELEASED FOR DAIRY AND BREEDING PURPOSES, 1944-1945

Origin	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Totals
Canada	450	585	459	327	542	343	204	349	436	461	823	938	5,917
Connecticut	...	...	...	18	...	...	4	1	...	1	...	2	26
Delaware	7	1	...	...	...	...	...	...	...	4	1	...	13
Florida	...	...	...	...	...	...	...	...	...	3	...	...	3
Georgia	...	...	...	...	...	2	...	...	...	...	...	...	2
Idaho	...	...	3	16	...	34	19	...	...	75	78	35	260
Illinois	...	...	...	...	...	3	...	...	3	...	1	...	7
Indiana	41	46	...	...	...	...	...	...	...	...	...	1	88
Iowa	...	...	...	...	...	2	...	...	...	...	...	...	2
Kansas	...	...	...	...	...	...	1	...	...	...	...	...	1
Kentucky	...	...	...	...	...	4	...	...	...	...	...	...	4
Maine	...	...	...	...	...	...	...	...	1	...	...	...	1
Maryland	54	26	37	30	29	22	5	41	14	83	56	88	485
Massachusetts	...	...	...	3	...	...	1	1	...	...	2	5	12
Michigan	137	179	318	321	128	130	147	202	158	325	214	255	2,514
Minnesota	...	9	...	...	...	...	...	27	...	...	27	29	92
New Hampshire	...	...	...	...	...	...	...	...	...	...	1	...	1
New York	41	184	103	95	125	119	83	48	57	90	84	219	1,248
North Carolina	...	...	3	...	...	...	...	...	...	...	...	1	4
Ohio	215	86	90	88	21	95	42	72	73	112	115	221	1,230
Oklahoma	...	...	...	...	...	...	2	...	...	...	...	...	2
Pennsylvania	64	107	119	158	168	96	93	52	63	83	167	133	1,303
Tennessee	2	...	...	...	...	...	...	4	...	7	...	...	13
Virginia	...	71	29	36	19	37	...	2	14	...	60	25	293
Vermont	...	...	...	6	...	...	3	...	...	...	...	6	15
Wisconsin	496	680	833	908	979	882	602	561	465	460	634	509	8,009
Total	1,507	1,974	1,994	2,006	2,011	1,769	1,206	1,360	1,284	1,704	2,263	2,467	21,545
Calves under Six Months Imported	13	16	12	12	6	4	12	8	11	20	6	15	135
Total Dairy and Breeding Cattle Imported	1,520	1,990	2,006	2,018	2,017	1,773	1,218	1,368	1,295	1,724	2,269	2,482	21,680

FEEDER STEERS

The number of steers shipped into New Jersey for feeding purposes continues to remain relatively high. Undoubtedly the rationing of meat is in a very great measure responsible for the importation of unfinished meat-producing animals.

During the war there has been a sustained interest on the part of many farmers to buy a steer or two and let them grow into a locker full of choice beef. There is some likelihood that having equipped themselves to store quantities of meat in the frozen state, the practice of finishing a steer or two will become a fixed practice with the farm people of New Jersey. It has the advantage of providing the farm family with a better grade of beef than that formerly enjoyed by them and at very little cost. Such animals must meet the same stringent health requirements for tuberculosis as are required for dairy animals.

FEEDER STEERS IMPORTED AND RELEASED, BY STATE OF ORIGIN
July 1944 to June 1945

State of Origin	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
Idaho	...	...	...	...	...	...	...	...	...	...	50	...	50
Illinois	...	32	...	...	...	...	...	...	...	...	...	64	96
Iowa	...	27	121	50	148	49	89	...	...	...	...	...	484
Kansas	...	...	35	...	...	...	...	...	...	43	...	...	78
Lancaster Stockyards	261	363	50	63	67	20	7	212	141	251	228	707	2,370
Maryland	85	40	72	70	38	58	33	22	16	...	...	...	434
Michigan	...	...	...	...	...	...	...	...	...	...	73	60	133
Minnesota	...	...	...	...	...	...	...	...	...	24	37	290	351
Missouri	...	...	...	...	...	...	...	...	...	...	240	106	346
Nebraska	25	100	...	...	...	...	...	...	...	...	...	...	125
Pennsylvania	22	...	...	...	...	...	...	...	1	...	1	...	24
Texas	...	...	...	...	...	...	...	...	...	...	...	...	19
Virginia	...	...	...	...	...	...	...	...	...	...	...	49	49
Total Steers Imported	393	562	278	183	253	127	129	234	158	318	629	1,295	4,559
Dairy and Breeding Cattle Imported	1,520	1,990	2,006	2,018	2,017	1,773	1,218	1,368	1,295	1,724	2,269	2,482	21,680
Total Dairy, Breeding and Feeding Cattle Imported	1,913	2,552	2,284	2,201	2,270	1,900	1,347	1,602	1,453	2,042	2,898	3,777	26,239

THIRTIETH ANNUAL REPORT

STATE DEPARTMENT OF AGRICULTURE

RECORD OF BLOOD TESTS MADE ON INSHIPPED ANIMALS
July 1, 1944 to June 30, 1945

State of Origin	Number of Lots Bled	Number of Cattle Bled	Number of Reactors	Percentage of Reactors Resulting
Canada	392	6,076	85	1.40
Connecticut	4	25	..	...
Delaware	3	12	..	...
Florida	1	1	..	...
Georgia	1	1	..	...
Idaho	17	263	14	5.32
Illinois	2	2	..	...
Indiana	5	88	..	...
Kansas	1	1	..	...
Maine	1	1	..	...
Maryland	66	505	11	2.18
Massachusetts	6	9	..	...
Michigan	103	2,491	22	.88
Minnesota	5	102	..	...
Mississippi	1	29	..	...
New York	176	1,307	18	1.38
North Carolina	2	4	..	...
Ohio	61	1,241	21	1.69
Oklahoma	1	2	..	...
Pennsylvania	174	1,247	14	1.12
South Carolina	1	14	..	...
Tennessee	2	4	..	...
Texas	1	13	..	...
Vermont	5	15	..	...
Virginia	28	354	2	.56
Wisconsin	301	7,961	38	.48
Total	1,360	21,768	225	1.03

COMPARISON OF THE NUMBER OF CATTLE SHIPPED INTO NEW JERSEY
DURING THE PAST FIVE YEARS

1940-1941	1941-1942	1942-1943	1943-1944	1944-1945
29,650	26,905	26,381	20,312	27,497

CATTLE SHIPPED OUT OF THE STATE DURING THE FISCAL YEAR, 1944-1945

Month	Number of Lots From Herds Under Supervision	Number of Animals From Herds Under Supervision
July	18	55
August	25	72
September	45	103
October	59	143
November	39	170
December	17	66
January	19	32
February	18	54
March	45	147
April	50	233
May	61	301
June	42	95
Total	438	1,471

THIRTIETH ANNUAL REPORT

43

SUMMARY OF THE LIVESTOCK SOLD AT THE JERSEY CITY STOCKYARDS FOR SLAUGHTER
AT POINTS THROUGHOUT THE STATE, JULY 1944-JUNE 1945

	Calves	Sheep	Cows	Bulls	Hogs	Steers	Total
1944							
July	7,106	14,669	1,484	407	5,834	1,977	31,477
August	6,568	7,488	1,871	448	1,832	2,263	20,470
September	8,023	11,141	2,682	624	1,105	2,855	26,430
October	12,082	23,942	3,905	660	938	3,769	45,296
November	7,285	19,477	4,087	389	819	2,757	34,814
December	5,147	4,780	4,291	501	1,044	2,888	18,651
1945							
January	9,618	1,232	3,512	509	342	2,669	17,882
February	9,572	1,406	3,416	476	286	2,403	17,559
March	7,468	983	2,347	634	37	1,822	13,291
April	7,385	3,447	2,386	997	39	1,685	15,939
May	12,487	6,434	930	799	155	1,515	22,320
June	11,684	6,724	1,902	645	103	1,213	22,271
Total	104,425	101,723	32,813	7,089	12,534	27,816	286,400

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 TUBERCULIN TESTED

Inshipped	28,601
Local	5,558

NUMBER OF SWINE TREATED

Single	Double	Total
1,431	19,022	20,453

TOTAL SALES REPORTED AT HARRIS SALES COMPANY AUCTION MARKET
July 1, 1944 to June 30, 1945

Cows	Calves	Sheep	Swine	Horses	Poultry
5,496	11,811	1,995	8,977	1,629	54
	Steers	Reactors	Bulls	Eggs	
	4,728	793	915	7,929 doz.	

CONTROL OF BRUCELLOSIS (BANG'S DISEASE)

During the past year, area-testing for control of brucellosis was requested by the dairymen of Montague Township, Sussex County. Preliminary meetings were held in the township and interest finally crystallized and culminated in the testing of all cows in that township. The incidence of reaction was not great—7.4 per cent—when one considers the location of the township and the estimates that were bandied about prior to the testing

of herds in the area. As the result of this initial area township test in the largest dairy county, some desire was expressed for a similar test in an adjacent township; however, lack of personnel has caused the bureau authorities to allow the idea to simmer for the time being.

It would seem from the experience gained in township testing that this form of approach to the control of brucellosis would meet with approval if a little effort was exerted and the bureau received support similar to that given by the county agent of Sussex. It is our opinion that whenever sufficient veterinary help and money are available a few contacts with the county agents will bring similar favorable results in other areas.

There is an ever-mounting interest for calfhood vaccination and agents of the department have been encouraging all who raise calves to place their herds under supervision and fortify their replacements against infection through vaccination of calves with strain 19, Brucella Abortus vaccine.

It is important that livestock owners employing vaccine in their herds continue to use recommended sanitary measures regardless of the vaccination procedure.

When employed as an adjunct to disease control measures, good results can be expected from the calfhood vaccination procedure. The use of vaccination as a substitute for good disease control measures is bound to lead to disappointment and unjustified condemnation of the vaccinal procedure.

For the past fiscal year State indemnity has been paid on 345 reactors, totaling \$20,025.25 as compared with 376 reactors and \$21,392.86 for the previous year.

The number of fully accredited Bang's disease-free herds in the State on June 30, 1945 is 824 as compared with 780 on June 30, 1944.

Blood tests have been conducted on animals vaccinated as calves. For the fiscal year, 7,186 tests have been conducted on such animals. In addition, 1,368 tests have been made on goats, 41 tests on horses, 83 tests on swine, and 484 tests for milk whey titre.

Private practitioners have submitted 760 samples from herds not under supervision for the control of Bang's disease and 70 tests have been conducted on animals residing out of the State.

During the year a total of 114 herds comprising 2,514 animals were informatively tested for Bang's disease. Of this number, 253 or 10.06 per cent gave a positive reaction; 79 or 3.14 per cent gave a highly suspicious reaction; 205 or 8.15 per cent gave a slightly suspicious reaction; and 1,977 or 78.64 per cent gave a negative reaction.

Initial tests have been conducted on 448 herds of 3,381 cattle with 236 reactors resulting, or 6.98 per cent

THIRTIETH ANNUAL REPORT

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

June 30, 1945

County	Under Supervision			Fully Accredited	
	Number of Herds	Number of Animals	Number of Vaccinated Calves	Number of Herds	Number of Cattle
Atlantic	233	608	...	180	336
Bergen	8	215	2	5	195
Burlington	52	1,384	226	22	613
Camden	59	335	3	23	262
Cape May	179	734	6	157	684
Cumberland	143	1,290	5	39	811
Essex	8	172	3	4	21
Gloucester	45	793	82	29	448
Hudson	...	...	...	...	...
Hunterdon	70	2,411	350	23	855
Mercer	113	2,485	442	56	999
Middlesex	42	2,748	387	14	208
Monmouth	66	1,891	819	50	1,394
Morris	103	3,302	212	46	1,074
Ocean	2	6	...	1	2
Passaic	3	294	34	1	58
Salem	48	1,043	92	24	486
Somerset	206	4,106	1,085	116	2,339
Sussex	69	2,252	499	7	287
Union	22	163	31	9	83
Warren	148	3,114	564	18	412
State	1,619	29,346	4,842	824	11,567

See June 1945 monthly report page 2. General figures

The following summary indicates the amount of State indemnity paid for reactors resulting from the Bang's test during the year ending June 30, 1945:

Class of Cattle	Number of Animals	Amount Paid
Registered Animal	81	\$7,671.64
Grade Animal	264	12,353.61
Registered and Grade	345	\$20,025.25

Average State Indemnity Paid Per Head:

Registered Animal	\$94.71
Grade Animal	46.79
Registered and Grade	58.04

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, 1945:

Class of Cattle	Number of Animals	Amount Paid
Registered Animal	81	\$5,312.38
Grade Animal	264	16,478.23
Registered and Grade	345	\$21,790.61

46

STATE DEPARTMENT OF AGRICULTURE

Average Salvage Received Per Head:

Registered Animal	\$65.58
Grade Animal	62.42
Registered and Grade	63.16

The following summary indicates the amount of federal indemnity paid for reactors resulting from the Bang's test during the year ending June 30, 1945:

Class of Cattle	Number of Animals	Amount Paid
Registered Animal	81	\$3,744.96
Grade Animal	264	6,341.97
Registered and Grade	345	<u>\$10,086.93</u>

Average Federal Indemnity Paid Per Head:

Registered Animal	\$46.23
Grade Animal	24.02
Registered and Grade	29.24

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)	\$52,513.68
Average amount received per head by owners for Bang's reactors	152.21

NEW JERSEY STATE LIBRARY

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 1944 to June 1945

Number of Reactors Appraised			Appraised Value			Total Amount Paid to Owners (Salvage, State and Federal Indemnity)			Average Amount Paid Owners Per Head		
Reg.	Gr.	Total	Reg.	Gr.	Total	Reg.	Gr.	Total	Reg.	Gr.	Total
1	9	10	\$185.00	\$1,095.00	\$1,280.00	\$156.97	\$966.73	\$1,123.70	\$156.97	\$107.41	\$112.37
1	..	1	200.00	.....	200.00	176.00	.....	176.00	176.00	.....	176.00
1	7	8	200.00	1,010.00	1,210.00	167.50	865.82	1,033.32	167.50	123.69	129.17
2	8	10	600.00	1,115.00	1,715.00	440.00	1,342.11	1,782.11	220.00	167.77	178.21
..	2	2	.....	195.00	195.00	.....	167.19	167.19	.....	83.59	83.59
..	19	19	.....	2,310.00	2,310.00	.....	2,088.05	2,088.05	.....	109.90	109.90
..
..	6	6	.....	970.00	970.00	.....	883.09	883.09	.....	147.18	147.18
7	27	34	1,950.00	5,235.00	7,185.00	1,625.19	4,352.20	5,977.39	232.17	161.19	175.81
5	21	26	1,135.00	3,235.00	4,370.00	959.90	2,837.66	3,797.56	191.98	135.13	146.06
2	58	60	360.00	8,330.00	8,690.00	309.16	7,374.44	7,683.60	154.58	127.15	128.06
8	2	10	1,850.00	300.00	2,150.00	1,542.50	247.50	1,790.00	192.81	123.75	179.00
17	39	56	5,370.00	7,255.00	12,625.00	3,901.43	5,530.39	9,431.82	229.50	141.80	168.43
..	1	1	.....	100.00	100.00	.....	93.00	93.00	.....	93.00	93.00
1	8	9	200.00	1,350.00	1,550.00	182.65	999.07	1,181.72	182.65	124.88	131.30
8	24	32	1,705.00	3,420.00	5,125.00	1,515.81	3,512.96	5,028.77	189.48	146.37	157.15
17	17	34	4,060.00	2,660.00	6,720.00	3,437.34	2,221.90	5,659.24	202.20	130.70	166.45
8	2	10	2,210.00	375.00	2,585.00	1,731.86	302.94	2,034.80	216.48	151.47	203.48
..
3	14	17	650.00	2,425.00	3,075.00	546.96	2,035.36	2,582.32	182.32	145.38	151.90
81	264	345	\$20,675.00	\$41,380.00	\$62,055.00	\$16,693.27	\$35,820.41	\$52,513.68	\$206.09	\$135.68	\$152.21

THIRTIETH ANNUAL REPORT

RECORD BY COUNTIES OF THE NUMBER OF BANG'S REACTORS APPRAISED, THE AMOUNT OF SALVAGE RECEIVED AND THE STATE AND FEDERAL INDEMNITY PAID
July 1944 to June 1945

<i>Number 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
1	9	10	\$28.95	\$393.24	\$422.19	\$78.02	\$350.87	\$428.89	\$50.00	\$222.62	\$272.62
1	..	1	56.00	.....	56.00	87.50	.....	87.50	50.00	.....	50.00
1	7	8	35.00	405.00	440.00	82.50	302.50	385.00	50.00	158.32	208.32
2	8	10	80.00	487.28	567.28	260.00	308.85	568.85	100.00	198.20	298.20
..	2	2	.....	44.58	44.58	.....	75.21	75.21	.....	47.40	47.40
..	19	19	.....	1,044.08	1,044.08	.....	632.94	632.94	.....	411.08	411.08
..
..	6	6	.....	494.25	494.25	.....	237.87	237.87	.....	150.00	150.00
7	27	34	638.68	2,180.28	2,818.96	655.65	1,509.44	2,165.09	330.86	661.48	992.34
5	21	26	352.15	1,503.70	1,855.85	391.42	865.65	1,257.07	216.33	478.31	694.64
2	58	60	65.00	3,662.34	3,727.34	147.50	2,333.83	2,481.33	96.66	1,378.27	1,474.93
8	2	10	435.00	95.00	530.00	707.50	102.50	810.00	400.00	50.00	450.00
17	39	56	795.78	1,923.85	2,719.63	2,281.36	2,612.73	4,894.09	842.50	972.50	1,815.00
..	1	1	.....	58.00	58.00	.....	21.00	21.00	.....	14.00	14.00
1	8	9	95.94	557.25	653.19	52.03	390.36	442.39	34.68	191.76	226.44
8	24	32	600.52	1,600.37	2,200.89	352.22	909.79	1,462.01	363.07	587.70	950.77
17	17	34	1,418.09	971.86	2,389.95	1,315.26	844.15	2,159.41	703.99	426.10	1,130.09
8	2	10	505.49	130.89	636.38	838.57	122.05	960.62	387.80	50.00	437.80
..
3	14	17	205.78	926.26	1,132.04	222.11	733.87	955.98	119.07	344.23	463.30
81	264	345	\$5,312.38	\$16,478.23	\$21,790.61	\$7,671.64	\$12,353.61	\$20,025.25	\$3,744.96	\$6,341.97	\$10,086.93

STATE DEPARTMENT OF AGRICULTURE

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 1945

Number of Reactors Appraised			Appraised Value			Total Amount Paid to Owners (Salvage, State and Federal Indemnity)			Average Amount Paid Owners Per Head		
Reg.	Gr.	Total	Reg.	Gr.	Total	Reg.	Gr.	Total	Reg.	Gr.	Total
1	62	63	\$185.00	\$7,040.00	\$7,225.00	\$156.97	\$6,346.99	\$6,503.96	\$156.97	\$102.37	\$103.24
4	3	7	880.00	350.00	1,230.00	757.40	328.38	1,085.78	189.35	109.46	155.11
43	69	112	7,020.00	8,810.00	15,830.00	6,245.34	7,760.27	14,005.61	145.24	112.47	125.05
3	12	15	950.00	1,635.00	2,585.00	710.00	1,823.60	2,533.60	236.67	151.97	168.91
..	61	61	.....	6,965.00	6,965.00	.....	6,327.04	6,327.04	.....	103.72	103.72
20	98	118	3,115.00	11,475.00	14,590.00	2,781.44	10,538.29	13,319.73	139.07	107.53	112.88
..	15	15	.....	1,400.00	1,400.00	.....	1,305.92	1,305.92	.....	87.06	87.06
9	41	50	1,590.00	4,730.00	6,320.00	1,453.52	4,352.87	5,806.39	161.50	106.17	116.13
..
56	63	119	11,350.00	10,320.00	21,670.00	9,850.30	8,910.08	18,760.38	175.89	141.43	156.33
51	215	266	9,110.00	27,280.00	36,390.00	8,098.99	24,849.96	32,948.95	158.80	115.58	123.87
84	589	673	13,770.00	76,110.00	89,880.00	12,344.48	69,192.15	81,536.63	146.96	117.47	121.15
48	68	116	9,385.00	8,535.00	17,910.00	8,296.88	7,700.41	15,997.29	172.85	113.24	137.91
107	203	310	23,000.00	29,627.00	52,627.00	1,914.23	25,570.61	44,714.84	178.91	125.96	144.24
..	2	2	.....	275.00	275.00	.....	235.50	235.50	.....	137.50	137.50
2	32	34	400.00	4,695.00	5,095.00	351.04	3,927.19	4,278.23	175.52	122.72	125.83
39	202	241	7,430.00	23,815.00	31,245.00	6,646.52	22,475.84	29,122.36	170.42	111.27	120.84
98	184	282	20,185.00	24,435.00	44,620.00	17,057.38	21,427.73	38,485.11	174.05	116.46	136.47
55	15	70	10,290.00	2,170.00	12,460.00	10,524.05	3,807.06	14,331.11	191.34	253.80	204.73
..	6	6	.....	645.00	645.00	.....	598.15	598.15	.....	99.69	99.69
58	79	137	11,115.00	10,885.00	22,000.00	9,706.95	9,618.34	19,325.29	167.36	121.75	141.06
678	2,019	2,697	\$129,775.00	\$261,187.00	\$390,962.00	\$114,125.49	\$237,096.38	\$351,221.87	\$168.33	\$117.43	\$130.23

THIRTIETH ANNUAL REPORT

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 1945

<i>Number 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
1	62	63	\$28.95	\$3,235.22	\$3,264.17	\$28.02	\$1,903.35	\$1,981.37	\$50.00	\$1,208.42	\$1,258.42
4	3	7	264.95	220.36	485.31	323.02	64.81	387.83	186.93	43.21	230.14
43	69	112	2,413.00	3,805.50	6,218.50	2,303.50	2,502.24	4,805.74	1,528.84	1,452.53	2,981.37
3	12	15	170.00	775.75	945.75	390.00	424.31	814.31	150.00	275.16	425.16
..	61	61	.....	3,374.31	3,374.31	.....	1,795.32	1,795.32	.....	1,157.41	1,157.41
20	98	118	1,114.23	5,957.40	7,071.63	1,000.37	2,765.39	3,765.76	666.84	1,815.55	2,482.39
..	15	15	.....	846.86	846.86	.....	276.55	276.55	.....	182.51	182.51
9	41	50	781.69	2,541.65	3,323.34	404.14	1,094.15	1,498.29	267.69	716.10	983.79
..
56	63	119	3,736.54	4,796.22	8,532.76	3,806.62	2,743.89	6,550.51	2,307.14	1,368.97	3,676.11
51	215	266	3,570.66	14,557.24	18,127.90	2,769.65	6,361.32	9,130.97	1,758.68	3,941.40	5,700.08
84	589	673	5,248.30	38,835.97	44,084.27	4,260.85	18,639.48	22,900.33	2,835.33	11,716.70	14,552.03
48	68	116	3,611.00	4,163.50	7,774.50	2,887.00	2,180.75	5,067.75	1,798.88	1,356.16	3,155.04
107	203	310	6,171.58	11,688.99	17,860.57	8,403.65	9,334.31	17,737.96	4,587.21	4,526.00	9,113.21
..	2	2	.....	118.00	118.00	.....	78.21	78.21	.....	264.00	264.00
2	32	34	132.72	2,137.44	2,270.16	133.64	1,272.73	1,406.37	84.68	657.32	742.00
39	202	241	3,104.96	13,606.12	16,711.08	2,162.73	5,104.32	7,267.05	1,378.83	3,350.30	4,729.13
98	184	282	6,142.04	11,151.01	17,293.05	6,991.13	6,580.90	13,572.03	3,924.21	3,716.03	7,640.24
55	15	70	3,183.54	966.23	4,149.77	3,537.62	600.93	4,138.55	2,097.41	320.94	2,418.35
..	6	6	.....	364.14	364.14	.....	140.41	140.41	.....	93.63	93.63
58	79	137	3,547.65	5,037.26	8,584.91	3,783.60	2,908.26	6,691.86	2,375.70	1,641.82	4,017.52
678	2,019	2,697	\$43,221.81	\$128,179.17	\$171,400.98	\$43,235.54	\$66,771.63	\$110,007.17	\$25,998.37	\$39,804.16	\$65,802.53

STATE DEPARTMENT OF AGRICULTURE

THIRTIETH ANNUAL REPORT

51

GOATS

Following is a 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	2	...	...	2	7	...	...
Bergen	5	36	4	34	22	153	7	53
Burlington	4	11	...	...	10	42	2	17
Camden	1	6	...	...	9	49	5	17
Cape May	...	...	...	...	...	...	...	...
Cumberland	1	1	...	...	2	49	2	49
Essex	...	...	...	...	8	132	2	11
Gloucester	9	44	6	33	9	50	5	33
Hudson	...	...	...	...	...	...	...	...
Hunterdon	4	33	1	3	17	75	2	21
Mercer	2	5	1	1	8	225	1	80
Middlesex	3	11	2	6	6	23	3	9
Monmouth	3	7	2	6	21	142	14	109
Morris	5	47	3	44	29	257	9	135
Ocean	...	...	...	...	...	...	...	...
Passaic	1	1	1	1	6	90	4	82
Salem	5	11	...	...	2	12	...	...
Somerset	7	386	1	10	17	257	3	203
Sussex	1	3	...	...	...	...	...	...
Union	2	5	2	5	5	30	2	5
Warren	1	3	...	...	4	6	...	...
State	55	612	23	143	177	1,599	61	824

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

July 1, 1944 to June 30, 1945

County	Number of Lots Tested	Number of Goats Tested
Atlantic	1	5
Bergen	9	53
Burlington	3	24
Camden	3	29
Cape May	..	..
Cumberland	1	44
Essex	1	32
Gloucester	7	44
Hudson	..	..
Hunterdon	4	18
Mercer	7	278
Middlesex	2	6
Monmouth	20	139
Morris	5	52
Ocean	..	..
Passaic	1	25
Salem	1	3
Somerset	24	608
Sussex	..	..
Union	3	9
Warren	1	1

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

Under supervision of the Bureau of Animal Industry, 15,968 physical examinations for health were completed by private veterinary practitioners during the year ending June 30, 1945. Condemnations continue to decrease each year, 78 animals being condemned and 584 removed from production for treatment.

Following is a summary of the examinations made during the year 1944-1945.

Month Made	Number of Herd Examinations	Number of Animals Examined	Number of Animals Condemned	Number of Animals Isolated	Number of Animals Passed
July	3	34	...	1	33
August	2	44	1	1	42
September	2	31	...	...	31
October	1	33	...	...	33
November	164	4,795	24	129	4,642
December	92	3,543	11	131	3,401
January	2	45	...	...	45
February	2	28	...	...	28
March	120	3,847	30	190	3,627
April	123	4,113	12	130	3,971
May	3	63	...	1	62
June	3	54	...	1	53
Total	517	16,630	78	584	15,968

POULTRY INSPECTION

Inspection of all car and truck lots of poultry arriving at the poultry terminals has been carried out throughout the year and 7,668,900 birds were examined with an estimated weight of 28,134,000 pounds. Of this number, due to health condition, 150,079 were condemned, weighing approximately 594,080 pounds.

Following is a summary of the number of birds inspected which arrived in car and truck lots and their estimated weight, by months.

Month	Number of Birds Inspected Car Lots	Truck Lots	Total	Approximate Weight in Pounds
1944				
July	.....	742,500	742,500	2,670,000
August	3,500	706,000	709,500	2,488,500
September	.....	910,000	910,000	3,420,000
October	.....	705,000	705,000	2,370,000
November	18,000	549,000	567,000	2,156,000
December	3,000	429,500	432,500	1,535,000
1945				
January	.....	410,500	410,500	1,640,000
February	9,000	408,000	417,000	1,681,500
March	5,000	816,500	821,500	3,097,000
April	.....	690,000	690,000	2,330,000
May	.....	659,500	659,500	2,395,000
June	32,900	571,000	603,900	2,351,000

CARLOTS OF POULTRY RELEASED AT RAILROAD TERMINALS
July 1, 1944-June 30, 1945

Origin	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
Illinois	1	..	..	1	..	..	..	3	5
Indiana	5	5
Nebraska	..	1	..	..	4	..	..	2	2	..	..	1	10
South Dakota	1	1	..	..	..	..	..	..	2
Total	..	1	..	..	6	1	..	3	2	..	..	9	22

TRUCKLOAD LOTS OF POULTRY FROM VARIOUS STATES
July 1944-June 1945

Connecticut	41	30	42	32	64	55	39	49	26	21	25	35	459
Delaware	145	151	125	117	68	17	20	34	216	251	186	69	1,399
Georgia	..	..	..	..	..	..	..	..	6	..	..	..	6
Indiana	..	16	11	..	2	..	..	..	..	..	..	3	32
Maryland	131	113	139	50	36	4	11	20	58	55	44	7	668
Massachusetts	18	14	83	29	17	25	25	33	16	..	11	9	280
New Hampshire	15	8	16	22	23	23	19	13	37	2	20	12	210
New Jersey	52	53	53	63	59	43	43	18	25	14	16	33	472
New York	37	23	34	50	42	35	37	23	53	21	46	40	441
North Carolina	2	..	1	1	7	23	33	29	32	18	32	67	245
Pennsylvania	55	41	77	58	50	39	34	45	65	27	31	47	569
Rhode Island	..	..	..	..	2	4	18	15	14	10	11	5	79
Tennessee	2	8	..	1	4	2	7	10	2	1	3	20	60
Vermont	..	..	..	..	..	..	..	2	17	..	..	..	19
Virginia	44	38	107	51	41	37	42	37	48	46	54	96	641
Total	542	495	688	474	415	307	328	328	615	466	479	443	5,580

STATE DEPARTMENT OF AGRICULTURE

POULTRY CONDEMNED AT POULTRY TERMINALS
July 1, 1944 to June 30, 1945

Month	Number of Birds Condemned	Approximate Weight in Pounds
1944		
July	17,282	69,144
August	11,581	46,324
September	13,390	53,560
October	13,541	54,164
November	10,644	41,764
December	5,897	23,588
1945		
January	7,800	29,200
February	12,838	51,352
March	22,200	88,800
April	10,180	37,280
May	15,130	60,520
June	9,596	38,384
Total	150,079	594,080

NUMBER OF FOWLS BLOOD-TESTED BY BUREAU REPRESENTATIVES AND APPROVED TESTING AGENTS FOR PULLORUM DISEASE, NUMBER AND PERCENTAGE REACTING, BY COUNTIES*
July 1, 1944 to June 30, 1945

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	28,311	245	.87	310	46	14.84	451,117	291	1.02
Bergen	6,377	18	.28	1,702	14	.82	8,079	32	.40
Burlington	11,857	109	.92	248	17	6.85	12,105	126	1.04
Camden	1,265	1	.08	...	...	...	1,265	1	.08
Cape May	20,322	131	.64	1,401	6	.43	21,723	137	.63
Cumberland	112,259	614	.55	7,283	190	2.6	119,542	804	...
Essex	.....	...	...	772	22	2.85	772	22	2.85
Gloucester	16,269	184	1.13	494	69	13.97	16,763	253	.67
Hudson	.....	...	...	...	...	...	.....	...	...
Hunterdon	14,618	178	1.22	20,254	180	.89	34,872	358	1.03
Mercer	16,273	301	1.85	1,867	55	2.95	18,140	356	1.96
Middlesex	10,107	72	.71	1,738	14	.81	11,845	86	.73
Monmouth	54,007	456	.84	15,257	579	3.79	69,264	1,035	1.49
Morris	6,667	15	.22	102	4	.39	6,769	19	.28
Ocean	47,161	759	1.6	1,761	345	19.59	48,922	1,104	2.26
Passaic	1,550	...	...	196	...	...	1,746	...	...
Salem	34,957	472	1.35	254	90	35.43	35,211	562	1.60
Somerset	7,542	138	1.83	1,263	68	5.38	8,805	206	2.34
Sussex	4,835	9	.19	133	5	3.76	4,968	14	.28
Union	.....	...	...	...	...	...	.....	...	...
Warren	1,705	3	.18	...	...	...	1,705	3	.18
State	396,082	3,705	.94	55,035	1,704	3.1	451,117	5,409	1.20

* In addition to the above, there were 36,203 tests made on out-of-State birds, 453 or 1.25% of which gave a positive reaction to the test.

MISCELLANEOUS ANIMAL DISEASES

NEWCASTLE'S DISEASE

On February 17, 1945, Dr. F. R. Beaudette, of the New Jersey Agricultural Experiment Station at New Brunswick, reported by telephone that he had tentatively diagnosed Newcastle's disease of poultry, obtained from a poultry flock in Vineland, New Jersey.

Dr. Beaudette and the veterinarians in the Vineland area who had had contact with cases of this new disease were requested to come to Trenton on Monday, February 19, for a conference to discuss a plan of procedure to stamp out the infection. Present at the meeting in the bureau chief's office on Monday, February 19, were Dr. F. R. Beaudette, Dr. Tevis Goldhaft, Dr. Rudolph Wernicoff, Dr. James J. Black, Dr. W. A. Andberg, and Dr. R. A. Hendershott.

It developed that Dr. Beaudette had definitely established the fact that Newcastle virus infection was present on the premise of Messrs. Korn and Deutchman where the disease made its appearance about February 4, 1945. This flock consisted of 1,400 sexlink birds, 4 to 5 weeks old at the time. These chicks were obtained from Melini's hatchery. In addition there were seven other flocks in the area where the disease was suspected.

Dr. J. J. Black of the branch experiment station laboratory in Vineland reported he had experienced a respiratory disease of poultry in the Vineland area during the fall months of 1944 which was somewhat different than respiratory conditions heretofore encountered. In many ways this new disease resembles chick bronchitis and laryngotracheitis. It differs in that following an attack of respiratory difficulty a number of birds exhibit paralytic symptoms.

In the flock of J. Greenberg, Grant Avenue, Vineland, a condition thought to be Newcastle's disease occurred on January 1, 1945, and affected 1,500 pullets. Yearlings and two-year-old birds on the same plant were not affected. Later on January 25, 1,300 4-to-5-week-old chicks were stricken. In a lot of 300 red chicks, the loss amounted to 25 per cent; in 700 crossbred chicks, the loss was 5 per cent. These chicks exhibited difficult breathing, followed by paralysis; several birds showed typical symptoms of wry-neck. These birds were obtained from Stern Brothers and L. Schaible.

The symptoms in the chicks strongly suggest Newcastle's virus infection. The fact that yearling and two-year-old birds were unaffected rather indicates that this disease may have been present and unrecognized for a year or more.

This disease of birds is reported as having occurred at various times throughout the world but had not previously visited New Jersey. The disease has been present in California for a number of years and was called avian pneumoencephalitis by research workers in that State. It was not

until May, 1944 that critical tests indicated that pneumoencephalitis and Newcastle's disease were identical.

Newcastle's disease is a very serious virus disease of poultry that has visited England on two occasions and on each was stamped out by radical methods. The last outbreak in England occurred in 1933 and has not reappeared since. Elsewhere, it is present in India where little effort has been made to control it. The disease is likewise prevalent in the Philippine Islands. It made its appearance in Australia where it was immediately eradicated through strict quarantine and slaughter methods.

In the United States, the disease has been present for the past five years in California and no radical measures are being used to eradicate it. Research workers in California are presently experimenting with a vaccine with the hope of finding a method of control.

In this country this infection has not consistently taken the toll of life that has characterized reported outbreaks in other parts of the world. Generally, the mortality has been reported to be from 80 to 100 per cent of the birds affected. In laying flocks, this infection causes a precipitous drop in egg production generally reaching zero in four to five days.

The threat to the poultry industry of the United States is indeed a very serious one and, uncontrolled, this disease bids fair to spread throughout the whole industry.

As a result of the conference held in the Bureau office on February 19, it was suggested that a meeting be held with poultrymen in the Vineland area to inform them of the seriousness of the situation and obtain their cooperation in conducting a survey to determine the extent of infection. It was thought advisable to immediately quarantine premises where the infection had been definitely diagnosed and to institute measures of eradication. It was determined to present these facts to the executive board of the State Poultry Association, which is scheduled to meet February 20, to inform the poultry leaders in the State.

At a meeting of the executive board of the State Poultry Association, Dr. Beaudette reviewed the situation and offered the following recommendations relative to control as decided at the meeting on February 19.

“RECOMMENDATIONS FOR HANDLING THE CURRENT OUTBREAK OF NEWCASTLE'S DISEASE IN THE VINELAND SECTION OF NEW JERSEY

1. Quarantine to be established on each premise where Newcastle's disease is diagnosed by those in a position to identify the infection, and to incorporate the following:
 - (a) No live birds shall be brought on nor taken off the premise.
 - (b) No feed bags or other poultry equipment shall leave the premises during the period of quarantine.
 - (c) No visitors shall be permitted on the premise during the period of the quarantine, except as provided: visitors or servicemen shall be covered by rubber coat and boots and shall submit to formaldehyde gas fumigation on leaving premises.
 - (d) All eggs shall be dipped in an effective disinfectant before leaving the premises, and shall be packed in cases not contaminated with virus.

ERADICATION PROCEDURE

- (a) All fowls, including pigeons, ducks, geese, turkeys and guinea fowl, shall be slaughtered under supervision of an inspector of the Bureau of Animal Industry.
- (b) Following slaughter of poultry, the premises shall be thoroughly cleaned and disinfected.
- (c) No re-stocking of the premises shall be permitted for a 30-day period.
- (d) Following repopulation the premises shall be re-inspected by a member of the bureau to determine the efficacy of the eradication procedure.

FEDERAL COOPERATION

It is recommended that the United States Bureau of Animal Industry be requested to assume an active part in the eradication of Newcastle's disease in the State, in cooperation with the State Department of Agriculture."

Considerable discussion took place over the recommended quarantine. Secretary of Agriculture W. H. Allen pointed out that the poultry industry had faced serious disease problems, notably laryngotracheitis, fowl pox, and bronchitis and had survived without the necessity of the employment of the stringent measures recommended for the eradication of Newcastle's disease.

It was also the thought that the imposition of a quarantine would adversely affect obtaining information regarding the existence of infection and furthermore the Department did not have the personnel to properly apply and enforce the quarantine.

The opinion was expressed that meetings should be held in the Vineland area to acquaint poultrymen with the situation and enlist their aid in establishing the extent of infection. Two meetings were subsequently held and surveys conducted throughout the area. Infection was found to exist on approximately thirty premises with a strong suspicion that other flocks had experienced difficulty that suggested Newcastle's infection.

It is not known how this infection was introduced into New Jersey. It is thought that the disease is undoubtedly present but unrecognized in other areas between California and New Jersey.

Conferences have been held on two occasions with representatives of the United States Bureau of Animal Industry. They, too, suggested strict quarantine and additional surveys to determine the extent of infection.

Throughout the United States, poultry research workers have been alerted on this virus disease of poultry and it is expected that reports during the next year will result in more accurate information on the extent of the disease throughout the country. During the year, three outbreaks were diagnosed in New York State and the suspicion of its occurrence, as well, in Connecticut and possibly Massachusetts.

The disease is expected to continue to spread and may become one of the most important economic disease problems of the poultry industry.

ENCEPHALOMYELITIS

It is evidential from reports received in this office from private practitioners that encephalomyelitis is again appearing in New Jersey. We were able to obtain the head of a horse owned by James Corsiglia, of Vineland, New Jersey, and delivered it to the Rockefeller Institute for Medical Research at Princeton. Report received from that institution confirms the diagnosis made by Dr. W. P. Doherty of Bridgeton.

Sections of the brain of a stallion owned by Ernest Bell, of Mt. Ephraim, were also taken to the Institute and a positive diagnosis made confirming that made by Dr. William S. Miller, of Haddon Heights.

Three pheasants from a lot owned by E. C. Smith of Salem, New Jersey, were also taken to the Institute and a diagnosis of definite encephalomyelitis was made by Dr. Ten Broeck, of that institution.

Recent research has proven that encephalomyelitis is a disease which primarily affects poultry and is tolerated by them without evidence of illness. They, however, serve as apparent reservoirs of infection for succeeding generations of mosquitoes. The disease in horses is a secondary one and can be held in abeyance only through the annual vaccination of horses against the disease. The epidemiology of encephalomyelitis precludes any possibility of eradication in the foreseeable future.

Following is a record of the positive cases reported to this office by private practitioners, by counties.

County	Number of Horses Affected
Atlantic	1
Camden	3
Cumberland	6
Gloucester	13
Salem	3
	<hr/> 26

Immunization of horses as a protection against this disease has been taken care of by private practitioners who have reported the following vaccinations to this office:

County	Number of Horses Vaccinated
Atlantic	13
Burlington	62
Cape May	63
Cumberland	45
Gloucester	22
	<hr/> 205
State	

CHOLERA

HOGS INOCULATED AS A PROTECTION AGAINST CHOLERA INFECTION, BY COUNTIES
July 1944 to June 1945

Vaccinations Made by Private Veterinarians

County	Number of Hogs Given Single Treatment	Number of Hogs Given Double Treatment
Atlantic	...	412
Bergen
Burlington	48	32
Camden
Cape May	...	1,021
Cumberland	...	5
Essex
Gloucester
Hudson
Hunterdon	...	244
Mercer
Middlesex	...	504
Monmouth	...	410
Morris
Ocean
Passaic
Salem
Somerset	...	24
Sussex	...	95
Union	...	838
Warren	...	14
State	48	3,599

ANTHRAX

In April, as is customary, the bureau immunized livestock in Salem County, cooperating with the office of the county agricultural agent; 1,054 cattle and calves on 45 farms, and 39 horses on 15 farms were given prophylactic inoculations of intradermal anthrax vaccine.

STALLION LICENSES

During the year \$66 has been collected in fees for stallion licenses issued. The following tables indicate the registration by breeds as well as by counties:

STALLIONS LICENSED, BY BREEDS

Breed	Number Registered
Belgian (purebred)	3
Percheron (purebred)	2
Saddle (purebred)	2
Suffolk (purebred)	1
Tennessee Walking Horse (purebred)	1
Thorbred (purebred)	12
Thorbred Pinta	1
Grades	2
Total	24

THIRTIETH ANNUAL REPORT

61

STALLIONS LICENSED, BY COUNTIES

Atlantic	..
Bergen	1
Burlington	..
Camden	2
Cape May	..
Cumberland	..
Essex	..
Gloucester	..
Hudson	..
Hunterdon	3
Mercer	2
Middlesex	1
Monmouth	10
Morris	2
Ocean	..
Passaic	1
Salem	1
Somerset	1
Sussex	..
Union	..
Warren	1
State	<hr/> 24

BUREAU LABORATORY REPORT

The following is a report of all the work completed in the Bureau Laboratory during the fiscal year July 1, 1944 to June 30, 1945.

BANG'S DISEASE

Samples received	72,853
Insufficient sera	26
Broken	20
Tests set	72,807
Tests read	72,954
Positive	2,227
Highly suspicious	810
Slightly suspicious	3,133
Contaminated	4
Hemolyzed	367
Negative	66,413

Informative tests have been conducted for Bang's disease from herds in Montague Township, Sussex County.

Samples received	461
Samples set	461
Samples read	461
Positive	41
Highly suspicious	24
Slightly suspicious	49
Negative	347

STATE DEPARTMENT OF AGRICULTURE

INSHIP ANIMALS

Samples received	21,762
Insufficient sera	2
Broken	47
Tests set	21,713
Tests read	21,713
Positive	225
Hemolyzed	30
Negative	21,458

VACCINATED ANIMALS

Samples received	12,771
Insufficient sera	5
Broken	5
Tests set	12,761
Tests read	12,811
Positive	2,053
Highly suspicious	841
Slightly suspicious	2,133
Hemolyzed	306
Contaminated	6
Negative	7,472

PULLORUM

Samples received	58,277
Insufficient sera	86
Broken	11
Tests set	58,180
Tests read	58,180
Positive	1,581
Slightly suspicious	232
Contaminated	49
Hemolyzed	1,665
Jellied	15
Negative	54,638

MILK WHEY TESTS

Samples received	2,256
Samples set	2,256
Samples read	2,256
Positive	232
Unsatisfactory	1
Negative	2,023

MASTITIS

Number of animals	3,225
Number of samples	12,798
Broken	1
Tests set	12,797
Tests read	12,797
Streptococci	2,118
Staphylococci	1,255
Unsatisfactory	1
Contaminated	2
Negative	9,421

BACTERIOLOGICAL, MICROSCOPIC AND POST-MORTEM EXAMINATION

Animal	No.	Material	Condition Suspected	Findings
	18	Lots of stained pullorum antigen	Purity and routine testing	Satisfactory for routine testing
Avian	1	Chicken	Cause of hemorrhagic diarrhea	Coccidiosis
Avian	5	Chicks	Cause of death	Positive for fowl typhoid, Shigella gallinarium
Avian	1	Pullet	Cause of death	Severe heart hemorrhage
Avian	3	Chicks	Cause of death	Positive for coccidiosis. Negative for Salmonella pullorum
Avian	1	Turkey	Cause of death	Blackhead
Avian	5	Dead Birds	Cause of death	Shigella gallinarium (fowl typhoid) was isolated from 3 birds
	3	Live Birds		
Avian	2	Chicken, also sample of feed	Cause of death	The chicken was in a state of decomposition when received in the laboratory
Avian	17	Birds	Salmonella pullorum	Negative for pullorum disease
Avian	1	Turkey	Cause of death	Aspargilli was isolated from the carcass lesions in the air sacks. Diagnosis: Aspargillosis
Avian	3	Chickens	Cause of death	Bacteriological examinations of the chickens were negative. Intestinal pathology was present. Heterakis gallinae worms and ova were found with a heavy infestation of coccidia
Avian	3	Pullets	Pullorum disease	Negative for pullorum disease
Avian	3	Chickens	Cause of death	Two birds appeared normal except for the intestines which were hemorrhagic. One bird showed enlargement of spleen and liver. Cultures were all negative. Heterakis gallinae worms and ova were found in intestine, also coccidia

BACTERIOLOGICAL, MICROSCOPIC AND POST-MORTEM EXAMINATION—Continued

Animal	No.	Material	Condition Suspected	Findings
Avian	1	Chicken	Cause of death	Bacteriological examination showed <i>Shigella gallinarum</i> (fowl typhoid) to be the cause of death
Avian	1	Chicken	Pullorum	Blood tests showed the chick to be a reactor. All cultures were negative for <i>Salmonella pullorum</i>
Avian	3	Chickens	Cause of death	The birds are apparently dying from vitamin deficiency. Cod liver oil feedings recommended
Avian	1	Chick	Cause of death	The chick was negative for pullorum and negative for coccidia. Apparently the chill which the chicks received has something to do with the cause of death
Avian	2	Pullets	Suspected pullorum typhoid-cholera	One bird was positive for pullorum disease. Both birds were negative for fowl typhoid and cholera
Avian	5	Birds	<i>Salmonella pullorum</i>	Negative for pullorum disease or fowl typhoid
Avian	2	Birds	Cause of death	Fowl leukosis (Leukemia). Both were positive for <i>Salmonella pullorum</i>
Avian	6	Baby chicks	Pullorum disease or coccidiosis	Negative for pullorum disease or coccidiosis
Avian	1	Hen	Cause of death	Visceral lymphomatosis, splenic rupture resulting in a blood clot in the abdominal cavity
Avian	1	Hen	<i>Salmonella pullorum</i>	Negative for pullorum disease
Avian	1	Chicken	Cause of death	<i>Pasteurella avicida</i> , the causative organism of fowl cholera was isolated from the chicken
Avian	4	Chicks	Cause of losses	Bacteriological examinations were negative
Avian	4	Chicks	Cause of sickness	Negative bacteriological findings. The feeding of linseed oil probably was the cause

Avian	1	Liver and spleen from hen	Cause of loss of birds	Cultures negative, diagnosis ascitis
Avian	3	2 dead and 1 live chick	Cause of death	Negative culturally. Possibly chilling or other brooder difficulties
Avian	1	Young pullet	Cause of death	Caecal coccidiosis
Avian	1	Chick	Cause of death	Many coccidia were found in the caeca of the chick. Bacteriological cultures were negative for Salmonella pullorum
Avian	6	Chicks	Salmonella pullorum	Bacteriological examination of the six chicks revealed Salmonella pullorum to be the causative agent
Avian	5	Chicks	Cause of death	Bacteriological findings on the chicks were negative
Avian	2	Chicks	Cause of death	Chicks posted were found to have a severe infestation with coccidia. The caeca was much enlarged, hemorrhagic, and contained whole blood. Bacteriological cultures were negative for Salmonella pullorum
Avian	2	Chicks	Cause of death	Bacteriological examination revealed negative findings
Avian	5	Chicks	Cause of death	Caecal hemorrhage and bloody droppings were found in all the chicks. Caecal scrapings revealed that all the chicks were suffering from a heavy infestation with coccidia. Diagnosis: coccidiosis
Avian	2	Chicks	Cause of paralysis	Bacteriological examinations on the chicks were negative. The birds appeared normal on post-mortem examinations
Avian	3	Chicks	Cause of death	Post-mortem findings showed the chicks to have spotted livers, the lungs were grey, solid congested masses. Cultures from the lungs, livers, and hearts were positive for Salmonella pullorum
Avian	5	Chicks	Cause of death	Post-mortem findings showed some of the chicks to be affected with a mouldy condition of the lungs and kidneys. Cultures were positive for unidentifiable moulds. Cultures were negative for Salmonella pullorum

BACTERIOLOGICAL, MICROSCOPIC AND POST-MORTEM EXAMINATION—Continued

Animal	No.	Material	Condition Suspected	Findings
Avian	2	Live poults	Cause of death	Dietary deficiency showed up in gizzard erosion
Avian	3	Live chicks	Cause of death	Caecal coccidiosis
	3	Dead chicks		
Bovine	491	Milk samples	Brucella abortus, also whey titer	124 cows were tested for milk whey titer and milk cultures made for Brucella abortus. Brucella abortus was isolated from one cow in the LH and RH quarters. All the other cows were negative for brucellosis or whey titer.
Bovine	1	Blood sample	Brucellosis	Blood and milk were positive for brucellosis on the agglutination test. Brucella abortus was isolated from the calf's stomach and from the RF udder quarter
	4	Milk samples		
	1	Calf stomach		
Bovine	48	Milk samples	Brucella abortus, also whey titer	Of 12 cows that were positive on the blood test, 6 were found to be shedding Brucella abortus from one or more udder quarters
Bovine	4	Quarter samples of milk	Brucella abortus	Milk samples were negative for Brucella abortus
Bovine	12	Milk samples from 3 cows	Brucella abortus, also whey titer	Two cows were negative for Brucella abortus and negative on whey titer. One cow was positive in all quarters on whey titer and was found to be shedding Brucella abortus from the LH, LF, and RH quarter of the udder
Bovine	8	Milk samples from 2 cows	Brucella abortus and whey titer	One cow was positive in all quarters on whey titer, and was found to be shedding Brucella abortus from the RF quarter. The other cow was negative
Bovine	4	Milk samples	Brucella abortus and whey titer	Milk samples showed positive whey titers and Brucella abortus was isolated from the LH and RH quarters of the udder
Bovine	2	Urine samples from 2 cows	Corynebacterium renale	The urinus on both cows were negative for Corynebacterium renale; staphylococci and coli were present in both samples

Bovine	4	Milk samples	Brucella abortus, also whey titer	Positive for Brucella abortus and whey titer in all four quarters
Bovine	4	Milk samples	Brucella abortus	Reactor to blood test—unable to isolate Brucella from milk samples
Bovine	1	Blood sample		
Bovine	4	Milk samples	Brucella abortus and whey titer	Whey titer negative; isolated Brucella from RF quarter
Bovine	8	Milk samples	Brucella abortus and whey titer	Four samples of positive whey titer. Brucella recovered from one quarter showing whey titer
Bovine	225	Milk samples	Brucella abortus	Brucella abortus isolated from 2 cows. These cows were positive on whey titer; all other cows were negative on whey titer and Brucella
Bovine	2	Placenta and placental fluid	Brucella abortus	Brucella abortus recovered from both specimens
Bovine	4	Milk samples	Brucella abortus	Brucella abortus isolated from two quarters —all quarters positive whey titer
Bovine	1	Lung, liver, kidney, and intestines	Cause of death	Escherichia coli
Bovine	3	Blood and uterine samples	Cause of abortion	Negative for Brucella abortus and trichomoniasis
Bovine	4	Blood and milk samples	Brucella abortus	Negative for Brucella abortus
Bovine	1	Urine samples	Corynebacterium renale	Corynebacterium renale recovered
Bovine	244	Milk samples	Brucella abortus and whey titer	Negative for Brucella abortus and whey titer
Bovine	1	Uterine discharge	Cause of abortion	The blood of the cow was negative. The uterine discharge was negative for trichomonads and for Brucella abortus
Bovine	1	Blood sample	Brucella abortus and whey titer	Blood and milk were negative on the agglutination test. Cultures from the milk were negative for Brucella abortus
Bovine	4	Milk samples		
Bovine		Contents of pyometra	Bacteriological findings	Escherichia coli was isolated in pure culture from the pyometra contents
Bovine	4	Milk samples	Mastitis and brucellosis	Milk samples were negative for Brucella abortus and whey titer. No bacteriological evidence of mastitis was found
Bovine	1	Specimen of urine	Pyelonephritis (Corynebacterium renale)	Corynebacterium renale. Pyelonephritis was isolated from the urine in pure culture

BACTERIOLOGICAL, MICROSCOPIC AND POST-MORTEM EXAMINATION—Continued

Animal	No.	Material	Condition Suspected	Findings
Bovine	68	Quarter samples of milk from 17 cows	Brucella abortus and whey titer	Seven cows were positive for whey titer in one or more quarters. One cow was positive for Brucella abortus on three quarters. All the other animals were negative culturally
Bovine	20	Quarter samples of milk from 5 cows	Brucella abortus and whey titer	Brucella abortus was isolated from one quarter of 1 cow, the other 4 were negative. One cow was positive in all four quarters for whey titer. The others were negative.
Bovine	24	Milk samples from 6 cows	Brucella abortus in milk findings and discharge	Individual quarter samples from all cows were negative for Brucella abortus and negative on whey titer. The two samples of uterine discharge were negative for trichomonads, vibrio and Brucella. E. Coli was found
	2	Samples of uterine discharge		
Bovine	24	Quarter samples of milk from 6 cows	Brucella abortus and whey titer	Bacteriological examination of 6 cows previously suspect on blood tests, showed 1 cow to be shedding Brucella abortus from three quarters of the udder. One cow was positive in one quarter for whey titer. Cultures and titers on the others were negative
Bovine	72	Quarter samples of milk	Brucella abortus and whey titer	One cow was found to be shedding Brucella abortus from three quarters; all other animals were negative. Whey titers on all the animals were negative
Bovine	1	Blood sample	Brucella abortus	Brucella abortus was isolated from the stomach contents of the fetus. Quarter samples of milk were negative for Brucella but were positive for whey titer except one quarter which was unsatisfactory
	4	Milk samples	Whey titers on milk	
	1	Fetus		
Bovine	4	Bovine tissue, muscle, skin tissue, and ear	Cause of death	Clostridium septicum was isolated in pure culture from the skin tissue. Cause of death was malignant edema

Bovine	23	Quarter samples of milk from 6 cows	Brucella abortus and whey titer	Brucella abortus was isolated from udder quarters of three cows. Whey titers were positive on quarters of 5 cows. One cow was negative on all four quarters for both Brucella abortus and whey titer
Bovine	80	Quarter samples of milk from 20 cows	Brucella abortus and whey titer	Brucella abortus was isolated from one udder quarter of one cow. All whey titers were negative.
Bovine	8	Quarter samples of milk from 1 cow	Brucella abortus and whey titer	Milk samples were negative for Brucella abortus. Whey titers were strongly positive on all quarter samples of milk
Bovine	1	Bovine fetus and placenta	Brucella abortus and vibrio fetus	Cultures from the fetus and placenta were negative for Brucella abortus and for vibrio fetus. Escherichia coli was the only organism present
Bovine	1	Specimen of bovine urine	Pyeloniphritis	Bacteriological cultures from the urine were negative for Pyeloniphritis. Cultures were positive for streptococci and staphylococci
Bovine	1	Abscess from prescapula gland from calf	Actino infection	Pure culture of actinobacilli were isolated from the abscess from the prescapula gland of the cow
Bovine	80	Quarter samples of milk from 20 cows	Brucella abortus and whey titer	Brucella abortus was isolated from one quarter of one cow. All the others were negative for Brucella. All whey titers were negative
Bovine	2	Fetus	Brucella abortus	Bacteriological examinations of the fetus were negative for Brucella abortus
Bovine	125	Quarter samples of milk from 32 cows	Brucella abortus and whey titer	Brucella abortus was isolated from quarter samples of 3 cows. These cows were also positive on whey titer. All the other cows were negative for whey titer and negative for Brucella
Bovine	1	Organs from calf	Bacteriological findings	Escherichia coli was isolated from the spleen and intestine of the calf. Cultures on the lung, kidney, heart, and liver were negative
Bovine	3	Pus from abscess of cow	Actino	Smears and cultures from the abscess of the cow were negative for actinobacilli

BACTERIOLOGICAL, MICROSCOPIC AND POST-MORTEM EXAMINATION—Continued

Animal	No.	Material	Condition Suspected	Findings
Bovine	1	Pus from abscess of bull	Actino infection	Bacteriological examination of the pus from the abscess on the jaw of the bull was negative for actinobacilli
Bovine	2	Samples of milk	Bacteria	Bacteriological examination of two samples of milk revealed only a few nonhemolytic staphylococci; cultures for <i>Brucella abortus</i> were negative. Whey titers were negative
Bovine	1	Lungs and right prescapula and cervical glands from calf	Actino infection	Examination of the lungs and prescapula gland revealed actinobacilli and staphylococci. Only staphylococci were isolated from the prescapula and cervical glands of the calf
Bovine	4	Specimens of aspirated pus from 4 cows	Actino infection	No actinobacilli were isolated from the pus samples. All the samples were bacteriologically negative except for one, which contained streptococci
Bovine	1	Specimen of urine and feces from 1 cow	Cause of death	The only organism isolated from the urine and feces was <i>Escherichia coli</i>
Bovine	1	Specimen of urine	Pyelonephritis	The urine specimens were negative for corynebacterium renale (causative organism for pyelonephritis). Non-hemolytic staphylococci were found in pure culture
Bovine	4	Individual quarter samples from one cow	<i>Brucella abortus</i> and whey titer	<i>Brucella abortus</i> was isolated from the LH and RF quarters. The LH, LF and RH quarters were positive on whey titer. The RF quarter was unsatisfactory for whey titer test
Bovine	1	Specimen of pus from heifer	Actino infection	Specimen of pus was negative for actino organisms
Bovine	2	Specimens of pus from 2 cows	Actino infection	Bacteriological examination showed one cow to be positive for actino organisms. The other showed only staphylococci
Bovine	4	Samples of milk	Identification of the organism	Negative for mastitis infection

Bovine	1	Liver	Contagious disease	No definite diagnosis. Cultures revealed many contaminants although <i>Salmonella choleraesuis</i> was isolated from the liver. The specimen was in a state of decomposition
Bovine	1	Sample of urine	<i>Corynebacterium renale</i>	Bacteriological examination of the urine specimen from the cow revealed <i>Corynebacterium renale</i> and staphylococci
Bovine	2	Feti	<i>Brucella abortus</i>	Bacteriological examination of the feti were negative for <i>Brucella abortus</i>
Bovine	1	Uterine discharge and blood from cow	<i>Brucella</i> infection, etc.	The uterine discharge was negative for <i>Brucella abortus</i> and trichomonads. Blood on this animal was negative. Only <i>E. Coli</i> could be isolated from the uterine discharge
Bovine	5	Samples of milk	<i>Brucella abortus</i> and whey titer	No <i>Brucella abortus</i> was recovered from the milk samples. Four of the five samples of milk received showed positive whey titers
Bovine	3	Samples of vaginal discharge	Bacteriological findings	Bacteriological examinations of specimen of vaginal discharge were negative; one showed <i>Escherichia coli</i>
Bovine	4	Quarter samples of milk from 1 cow	<i>Brucella abortus</i> and whey titer	Bacteriological examination of the milk revealed <i>Brucella abortus</i> in the LF quarter. All quarters were positive for whey titer
Bovine	1	Specimen of urine	<i>Corynebacterium</i>	No <i>Corynebacterium renale</i> was isolated from the specimen. <i>E. Coli</i> was present
Bovine	1	Ear from calf	Infectious disease	Smears and cultures from the calf ear were negative
Bovine	78	Individual quarter samples	<i>Brucella abortus</i> and whey titer	<i>Brucella abortus</i> was isolated from the RH quarter of one cow. All the others were negative. Whey titers were positive on one or more quarters in 7 cows
Bovine		Trachea, lung, and bladder from cow Trachea, lung, and lisious from liver of calf	<i>Actinobacillosis</i>	Bacteriological examination of specimens from the calf revealed <i>actinobacillus lignieresii</i> in the trachea and lungs. No actino organisms could be isolated from the specimens from the cow, only staphylococci and <i>subtilis</i> organisms were found

BACTERIOLOGICAL, MICROSCOPIC AND POST-MORTEM EXAMINATION—Continued

Animal	No.	Material	Condition Suspected	Findings
Bovine		Pus from vagina of cow	Cause of infection	Bacteriological examination of the pus sample from the vagina of the cow revealed only E. Coli in pure culture
Bovine		Prescapula gland, small lesion from rib section, pus sample from abscess near anus	Actinobacillosis	No actinobacilli were found; only staphylococci and coliforms were isolated
Bovine		Organs from calf	Cause of death	Bacteriological examination of the organs of the calf were completely negative. There was marked evidence of pneumonia in lungs. Perhaps the condition is due to a virus infection
Bovine		Blood and milk from 1 cow	Brucella abortus and whey titer	Bacteriological examinations of both blood and milk were negative for Brucella abortus. Whey titers were also negative
Bovine		Feed, stomach contents, stomach, and part of intestine	Cause of death	Specimen unfit for diagnosis
Bovine	1	Blood smear	Tuberculosis	Leukemia, blood smear negative
Bovine	3	Urine	Corynebacterium renale	Corynebacterium renale was isolated from the three samples; all showed a heavy cloud of albumen—positive for pyelonephritis
Bovine		Lungs from calf and gland from a heifer	Actino infection	Bacteriological examination of the lung lesions from the calf and the right submaxillary gland from the heifer showed both animals to be infected with actinobacilli lignieresii
Bovine	1	Pus from left stifle gland of cow	Actino infection	Actino organisms were isolated from the pus
Bovine	1	Placenta	Brucella abortus	Brucella abortus was isolated from five

Bovine	1	Live pig	Cause of slow growth	A streptococci was isolated from the lymph gland which was of no diagnostic significance. A diagnosis of postanemic cachexia was made and the owner advised to give piglets access to soil to prevent this condition from recurring
Bovine	1	Vaginal swab	Brucella abortus	Cultures from the vaginal swabs were negative
Bovine	1	Specimen of lungs from calf	Actino infection	Bacteriological examination of the lungs from the calf revealed only coliform and putrefactive organism. No actino organisms could be found
Bovine	1	Specimen of urine	Pyloniphritis	Pure cultures of the organism causing pyloniphritis (<i>Corynebacterium renale</i>) were isolated from the specimen of bovine urine
Bovine	4	Quarter samples from 1 cow	Brucella abortus and whey titer	Brucella abortus was isolated from the RF quarter of the udder. Whey titers were negative
Bovine	2	Organs from 2 heifers	Cause of death	Bacteriological examination of the organs from the two heifers showed only coliform organisms
Bovine	1	Bovine fetus and placenta	Brucella abortus	Bacteriological examination of the fetus and placenta revealed no Brucella abortus
Bovine	2	Feti	Brucella abortus	Bacteriological examination of the fetu revealed no Brucella abortus
Bovine	4	Vaginal swabs	Trichomoniasis or other causes of sterility	Negative for trichomoniasis. Swabs were negative bacteriologically
Bovine		Genitalia, anus, parts of intestine, bladder, lymph glands	Type of tumor	Lymphocytoma
Bovine	1	Specimen of lungs from calf	Actino infection	Actinobacillus lignieresii was isolated from the lungs of the calf
Bovine	1	One specimen of pus	Actinobacillosis	Bacteriological examination of a specimen of pus from cow revealed no actinobacilli. Many contaminating organisms were present

BACTERIOLOGICAL, MICROSCOPIC AND POST-MORTEM EXAMINATION—Continued

Animal	No.	Material	Condition Suspected	Findings
Bovine	1	Blood	Tuberculosis	Blood sera was negative for tuberculosis as determined by rabbit inoculation
Bovine		Skin scrapings and fecal samples	Mange mites and parasitic ova	Negative for mites and parasitic ova
Bovine	1	Urine	Corynebacterium renale	Bacteriological examination of the specimen of urine was positive for Corynebacterium renale. Pus and albumen were present in abnormal quantities
Bovine	2	Feti	Trichomonads and Brucella abortus	The feti were negative for Brucella abortus and negative for trichomonads
Bovine	1	Blood sample	Tuberculosis	A rabbit inoculated with blood sera was killed and posted six weeks after infection and was found to be in a normal, healthy condition and showed no evidence of tuberculosis
Bovine	4	Individual quarter samples of milk from 1 cow	Brucella abortus and whey titer	Bacteriological cultures on the milk were negative for Brucella abortus. The whey titer on the LF quarter was positive
Bovine		Blood samples, smears from punctured gland	Tuberculosis	Cow showed no acidfast bacilli in film from a punctured gland. A rabbit inoculated with blood sera showed no evidence of T.B. six weeks after inoculation
Bovine		Aspirated fluid from lumps on heifer's face, swelling on leg of calf	Cause of infection	Bacteriological examination of the fluid from swellings on the heifer and calf revealed nothing specific. Streptococci found in the heifer fluid. Staphylococci from calf all non-hemolytic. No acidfast organisms
Bovine	1	One specimen of pus from cow, lung lesions from calf	Actinobacillosis	Bacteriological examination of pus samples from the right and left submaxillary glands of the cow showed only staphylococci. Actinobacilli lignieresii were isolated from the lung lesions from the calf
Bovine	4	Individual quarter samples	Brucella abortus and whey	Bacteriological examination of the milk re-

Bovine	1	Fetus and placenta	Cause of abortion	Examination of the fetus and placenta revealed trichomonads in the placental fluid. Diagnosis: Positive for trichomonas fetus
Bovine	4	Individual quarter samples of milk	Brucella abortus and whey titer	Individual quarter samples of milk negative for Brucella abortus. One quarter showed a positive whey titer
Bovine		Pus from abscess on right side of calf's neck	Actinobacillosis	Actinobacillus lignieresii was isolated from the pus from the abscess
Bovine		Genital tract of cow	Trichomoniasis	Trichomonads were found in the uterus of the cow
Bovine	3 1	Samples of bull semen Sample of vaginal secretion	Trichomoniasis	An intensive examination of the samples of semen from the bulls revealed no trichomonads. The vaginal secretion from the cow was also negative
Bovine		Ear and liver from cow	Cause of death—anthrax	Cultures and animal inoculations from organisms obtained from the ear and liver of the dead cow were negative for anthrax
Bovine		Uterine secretion from cow	Trichomoniasis	Examination of the uterine secretion from the cow revealed no trichomonads. The animal was found to be highly suspicious on blood test for Brucella abortus
Bovine	4	Individual quarter samples of milk	Brucella abortus and whey titer	Cultures from individual quarter samples of milk were negative for Brucella abortus. All quarters were positive on whey titer
Canine	1	Kidney, liver, spleen	Bacteriological findings	Cultures made were all bacteriologically negative
Canine	1	Cocker spaniel, 4 months old	Parasitic ova	The fecal sample was positive for Toxocara canis (ascarid) and Dipylidium caninum (tapeworm)
Canine	3	Specimens canine feces	Parasites and ova	Fecal examinations of 3 dogs showed one positive for whipworm, one positive for roundworm, while the third was negative for parasites and ova
Canine	2	Blood samples from 2 Beagle hounds	Dirofilaria immitis (Heartworm)	One live larva found on blood smear
Canine	1	Dead Great Dane pup	Cause of death	Numerous ascarida present; diagnosed as parasitism (ascariasis)

BACTERIOLOGICAL, MICROSCOPIC AND POST-MORTEM EXAMINATION—Continued

Animal	No.	Material	Condition Suspected	Findings
Canine	1	Urine	Bacteriological findings	Bacteriological examination of a specimen of urine of a dog revealed an unidentifiable gram negative bacillus, most likely of intestinal origin. The urine specimen was purulent and bloody
Equine	6	Cervical swabs from 6 mares	Streptococci	Cervical swab cultures from the six mares were all negative for streptococci
Equine	3	Cervical swabs from 3 mares	Bacteriological findings	Cervical swab cultures from all mares were negative for pathogenic organisms
Equine	2	Urine samples, blood take previously	Pregnancy	The mare was positive for pregnancy. Blood was negative for both <i>Brucella abortus</i> and for <i>S. abortivoequina</i>
Equine	1	Fetus and placenta, also blood samples	Infectious equine abortion	Bacteriological examination of the fetus and placenta from the mare were negative for <i>S. abortivoequina</i> ; <i>E. Coli</i> was found. The blood from the mare was negative for <i>S. abortivoequina</i>
Equine	1	Fetus and placenta	Infection equine abortion	Bacteriological examination of the fetus and placenta from the mare were negative for <i>S. abortivoequina</i> . <i>Strep. equi</i> was isolated from the fetus in pure culture. Blood from the two mares was negative for <i>S. abortivoequina</i>
	2	Blood samples		
Equine	1	Equine fetus and placenta	Cause of abortion	Cultures from the fetus and placenta from the mare were negative for both <i>S. abortivoequina</i> and streptococci genitalia. <i>Strep. equi</i> was isolated from the peritoneal fluid, also <i>E. Coli</i> was isolated from the placenta
Equine	3	Vaginal swabs from mare	Bacteriological infection and blood titers	Swabs and cultures were negative bacteriologically. The blood sample showed end titers at 1:100 dilution with both <i>B. abortus</i> and <i>S. abortivoequina</i> antigens
	2	Agar slant cultures		
	1	Blood sample		

Equine	3	Cervical swabs from mare, also blood samples	Cause of abortion	Cultures were negative. The blood showed complete agglutination in a 1:50 dilution with B. abortus antigen and a slight reaction at 1:100 dilution with S. abortivoequina antigen
Equine	3	Cervical cultures from mare, also blood sample	Cause of abortion	Cultures were negative. The blood was negative for B. abortus antigen; a slight reaction showed on B. abortivoequina antigen at 1:200 dilution
Equine	1	Organ from aborted foal	Cause of abortion	Bacteriological examination of the liver, spleen, heart and kidneys of the aborted foal were negative. Cervical swabs were also negative
	2	Cervical swabs from 2 mares	Routine examination	
Equine	2	Cervical swabs from 1 mare	Bacteriological findings	Bacteriological examination of the cervical swabs revealed only E. Coli
Equine	11	Cervical swabs from 11 mares	Bacteriological findings	Bacteriological examination of the cervical swabs revealed no pathogenic organisms
Equine	5	Blood samples from horses	Equine infectious anemia	Blood tests on horses suspected of having infectious anemia showed one to have a severe anemia, an additional two horses appeared also to be anemic but in lower degree. The blood samples on the other two horses were unsatisfactory
Ovine	1	Sheep	Cause of death	Urethral calculi cause of death—"Urinen"
Ovine	1	Sample of goat feces	Parasites	Coccidia were found; also strongyles
Ovine	3	Samples of feces	Parasites	Positive—Strongyles
Ovine	1	Composite sample of goat milk	Brucella abortus and whey titer	Negative for Brucella abortus and whey titer
Ovine	1	Fecal specimen from a sheep	Parasitic ova	The fecal specimen from the sheep was positive for strongyloides papillosus, Oesophagoseum columbianum and moniezia expansa ova
Ovine	1	Organs from goat	Tuberculosis	The animal showed lung lesions. Lung worms were present. No tubercle bacilli could be found in organs from the goat. Rabbit inoculation with lung tissue extract was negative for tuberculosis

BACTERIOLOGICAL, MICROSCOPIC AND POST-MORTEM EXAMINATION—Continued

Animal	No.	Material	Condition Suspected	Findings
Ovine	1	Head and udder of goat	Cause of infection	Bacteriological examination of the abscesses from the goat revealed pure cultures of <i>Corynebacterium ovis</i> . (Pseudobuberculosis or caseous lymphadenitis) as the causative agent
Porcine	1	Whole carcass of pig	Condition of pathological condition that exists	Clinical skin incrustations suggest mange. Bacteriological dermatitis. Usual coli with staphylococci
Porcine	1	Pig	Bacteriological findings	All cultures from the hog cholera case were negative except those from the caecal valve. <i>E. Coli</i> was isolated from ulcers found in this pig
Porcine	1	Shoat	Cause of death	Tentative diagnosis—hog cholera
Porcine	5	Pigs	Cause of sickness in herd	Bacteriological slides were negative to tuberculosis and positive to <i>B. proteus</i> Pathological— <i>Trichuris trichiura</i> and old pneumonic lesions resembling tuberculosis
Porcine	1	Pig	Swine erysipelas	Bacteriological examination was negative for swine erysipelas
Porcine	2	Pigs	Swine erysipelas	Bacteriological cultures from one pig were negative for swine erysipelas. Cultures from the leg joint showed streptococci and staphylococci
Porcine	1	Organs of 225-lb. pig	Cause of death	Pathological—pneumonia; bacteriological—streptococci
Porcine	1	Pig	Cause of death	Death due to chilling and freezing
Porcine	1	Live pig	Cause of death	Hog cholera
Porcine	1	Piece of salt pork	<i>Trichinella spiralis</i>	Negative for <i>Trichinella spiralis</i>
Porcine	2	Pig livers	Cause of condition of pigs	Bacteriological examination revealed only mixed cultures of staphylococci, streptococci, and coli organisms
Porcine	4	Live pigs	Cause of death	Part of the trouble is due to unsanitary conditions. Recommend worming and getting pigs into pasture and into the sunshine

1	Quart of raw milk	Cause of cream becoming thick and ropy after three days	Bacteriological examination of the milk revealed the presence of <i>Aerobacter aerogenes</i> and staphylococci (<i>staphylococcus</i>) common offenders in causing thick, ropy milk. Plate count 35,000 per cc.; (strep. also present). Organisms multiply after few days
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Report of the Bureau of Markets

WARREN W. OLEY, *Chief*

As the present fiscal year closes, the people of this country have some assurance of an early end to World War II. The European war has been finished and the Asiatic phase of it appears to be in the final stage. Japan is surrounded and our forces have succeeded in occupying a strategic ring of bases from which the final assaults can be developed.

This country has sustained three and a half years of actual warfare. The American farmer's share in carrying out our country's part through expanding food production is striking testimony to managerial and productive ability. Nature, in general, has been favorable. With nature's help our farmers have produced sufficient food for ourselves at home, our armies, and aid to our allies.

In producing all the foods necessary, farmers have been guided by government-developed requirements. Many food products have been greatly increased; others of lesser importance have been reduced. This has been done by war agency orders, which have permitted increased prices for some products and discouraged increased acreage of others through various hindrances to profitable distribution and marketing. Farmers had to be assured that increased production would be marketed at prices that would reflect increased costs. To do this, Congress passed legislation to provide support prices during the war period and, to assure farmers that their investments would be protected, promised support prices at not less than 90 per cent of parity for a period of two years following the January 1 after the peace had been officially declared. Such legislation requires large sums of money. The program applies particularly to so-called basic commodities, but Congress also included all other commodities on which the War Food Administration has asked for increased production. It is those other commodities that are most of interest to New Jersey producers. They include some of the State's most important products, such as eggs, poultry, potatoes, sweet potatoes, and a few other vegetables.

FEDERAL SUBSIDY PROGRAM

Other products in New Jersey, such as milk, have been supported by a subsidy program. Subsidies are used as a means of holding down price raises to the consumer at the expense of the taxpaying public. Subsidies are not a solution to the problem of a prosperous agriculture, but only deceive the taxpayer in the city. He is led to believe that the cost of food has been controlled or lowered when he is only paying the difference in taxes instead of across the counter.

In our opinion, subsidies have been a form of wartime necessity in a fight against some inflation, but as we face the future subsidies will only tend to make agriculture less productive by removing the incentive of the indifferent farmer to do a better job, and thus will diminish production while raising costs. If a farmer is assured of a profit by the Government, no matter how inefficient he is, that farmer has no incentive to develop efficiency.

A postwar subsidy program probably would encourage production of many crops in distant States to the detriment of producers in New Jersey. Such a program should be studied carefully by farm leaders in New Jersey as well as in the entire northeastern area and, if the program appears to be detrimental, steps should be taken to oppose it. This is written with full consideration of the effect on the millions of consumers in the Northeast. It is to their interests also to encourage a practical agriculture in our area. From all sides, there is growing evidence that agriculture in New Jersey, as in the whole United States, is becoming recognized for what it is—the fundamental industry and foundation of the economy of the state and nation. If and when agriculture is sick, the illness affects all the rest of the nation's economy.

It is true that in New Jersey farmers are only a small part of our population, but when consideration is given to the people living in towns and villages and their dependence on the surrounding farm population for their industries, trade and welfare, one realizes that the importance of the farm population is increased many fold. Add to this the thousands in cities who are dependent on a prosperous agriculture for their trade in machinery, gas and oil, seeds and fertilizer, all household and farm needs, and pleasures, one can readily realize that in New Jersey, agriculture is most important.

NEW JERSEY REPRESENTED AT WASHINGTON

Much time and effort has been spent during the year by bureau personnel in representing agriculture's needs in Washington and at regional conferences. The war has developed several agencies that can and have exerted a profound effect on marketing programs. Among these, in particular, are the War Food Administration and the Office of Price Administration. The Bureau of Markets has been in close contact with these agencies during the year. We have outlined New Jersey's needs and opportunities to assist in the war effort. At the same time, we have ascertained ideas in advance on how the planners in these agencies are thinking and have taken steps to prepare New Jersey people for programs that will face them later. We feel we have been helpful to these agencies with advice as to the practicability of some plans proposed, and have been helpful with first-hand information to them in developing food orders or price orders.

New Jersey cooperative associations have carried on under difficulties during the war years. Much of the fine work developed through these associations has been curtailed because of the emergency. The cooperatives

have constantly fostered a move to improve the quality and the way in which food has been offered to the public. War agencies, however, have stressed production volume in their directives. As a result, much of our fine work in developing sales for well-graded products has been very limited. When price ceilings have been in effect and demand greater than supply, the producer has been able to obtain the top price for goods which were below quality standards formerly used. Therefore, poor quality or lower-graded commodities have been mixed with better quality without reduction in price.

The cooperatives also have in the past fostered uniformity in packages. New packages usually were a requirement for auction sale. Such packages returned better prices for producers and met the requirements of the middlemen in marketing. Shortage of wood has made it necessary to use packages over and over. As a result, more and more broken packages have appeared on our markets; goods have arrived in poorer condition; and the appearance of the Jersey shipments has been much poorer. The use of second-hand containers has not been a money-saver to our growers to any great extent because of the high cost of salvaging and hauling back the used containers. New Jersey shippers are anxiously waiting for the time when there will be sufficient supplies of new containers.

The auction cooperatives have consistently lived up to the requirements of the OPA in price control work. Because of our proximity to the city markets, this has caused a great loss of volume of these commodities that were in great demand. Unscrupulous buyers from the cities, knowing they could not get their needed supplies in competition with fixed prices at the cooperative markets, went direct to the farms and purchased crops either at higher-than-ceiling prices or at ceiling but with other inducements. This has especially been true in the sale of eggs, poultry, strawberries, onions, potatoes and some other vegetables, as well as the better class of livestock.

In spite of this situation, the greater part of the membership of the cooperatives have sold through their own markets and carried the cooperatives through a successful season. With the end of the war in the not too distant future these associations are now planning for postwar conditions. The directors recognize that the associations have a definite responsibility to their members and to their community. The leaders have given much thought during the past year to the problem of meeting competition from other States and in developing an active market demand for the products of New Jersey farms.

The Bureau of Markets has worked closely with these associations and with the New Jersey College of Agriculture and the New Jersey Agricultural Extension Service. We have cooperated with the Farm Bureau and with commodity organizations as far as we have been able, feeling that the coordinated effort of all agencies is most effective in developing a successful agricultural program in the State.

CROPS AND MARKETS INFORMATION SERVICE

Practically no changes were made in the functions of the crops and markets information service during the past year. The various activities that have been inaugurated in past years were continued. Among these were the weekly publications such as the Market Conditions reports and the Weekly Market Review, which were in force during the year, and the Auction News and the New Jersey Truck Crops News, which were carried on seasonally during the active harvesting and marketing period. The annual potato summary of the New Jersey crop was compiled during the winter months and published in the spring. Several conferences have been attended during the year on various matters important to the fruit and vegetable industry of New Jersey, as well as the regular monthly meetings of the Cooperative Marketing Associations in New Jersey, Inc. In addition to this, assistance was given to the fruit and vegetable project by the supervisor in inspections of various fruits and vegetables during the year.

WEEKLY MARKET SUMMARIES

Weekly market summaries are released weekly on various commodities grown in New Jersey. Some of these are devoted to crop conditions while others are almost exclusively market trends and prices. The Market Conditions reports are made on important crops grown in New Jersey. In covering the conditions in a particular week during the season, information on the crop in competing States is given. Supply as it may affect the marketing of that crop is reported. Overall production figures as released by the United States Department of Agriculture are included in many instances in order to round out the picture. Further information includes spot prices on the nearby markets and, where any variation is noted, auction market prices are given. The Bureau of Markets reports on a particular crop as soon as any information from early producing States is available. In many cases, the intended acreage to be planted in nearby competitive sections will influence the planting in our own State. The reports on a particular commodity are carried through the active part of the harvest.

The objective of these condition reports is to supply the growers with information on crop and market conditions that will be of value to them in marketing the crop. The more important crops covered include both white and sweet potatoes, apples, strawberries, onions, peaches, asparagus, and tomatoes. Some reports are carried throughout most of the year and cover the storage part of the movement on such crops as white potatoes, apples, and sweet potatoes. Others are purely seasonal and cover such crops as strawberries, asparagus, onions, and lettuce.

It must be remembered that in most instances this report covers a fiscal year and not necessarily a crop year. For this reason, there will be some overlapping of seasons on a few commodities concerned.

FACTORS AFFECTING POTATO MARKETING

Fifty reports were issued on white potatoes. The white potato crop marketing has been largely influenced by OPA ceiling prices and by government purchases. Information on the ceiling prices and the inclusion of such material in the reports has been of primary interest to growers and shippers. In the first 15 days of July, 1944, there were no OPA ceilings on white potatoes. The ceiling prices were released on July 11 to become effective July 15. Due to the dry weather and extremely hot spells, yields of the 1944 crop were not expected to return cost of production at those established prices. As this crop condition prevailed in most of the producing sections harvesting at that time, growers' organizations petitioned the OPA to increase the ceiling price so that adequate returns could be obtained. The Bureau assisted in developing facts and figures to support the contentions of the growers and offered such advice as could be given.

After a special crop survey that verified extremely light yields, the OPA granted an increase bringing the price of U. S. No. 1 quality during August to \$3.65. The original request at conferences attended by the State Potato Association Executive Committee, representatives of the War Food Administration, Bureau of Agricultural Economics, Farm Bureau, State Agricultural Adjustment Administration and the New Jersey Department of Agriculture was for a U. S. No. 1 price of \$4.00 a hundredweight. The ceiling price for September was set at \$3.50 for the first half of the month and \$3.05 during the last half of the month. This downward revision and the active demand caused a very heavy harvest during the month of August. This, together with other condition factors of the crop, depressed the market and the price, and ceiling prices did not continue for more than a week. Price ceilings as they affected crop movement during later months were considerably reduced below the active marketing season. For this reason, growers generally did not hold potatoes on the farm for later shipping. The amount held in storage was probably the smallest on record.

Support was given the New Jersey crop on U. S. No. 1, Size B, only. Conferences were held to determine the support price program requirements earlier in the season. As it turned out, the need for the program was not too great. All these government orders should be reviewed before each marketing period so that any unsuitable requirements could be further interpreted and changed if necessary rather than waiting for the height of the harvest season. Some Size B's were held under the support loan program. Prices on these during the late summer months and early fall were very low. There was a good early winter market on the Size B's for export and, in some cases, they brought about \$1.00 a sack more than in the low period earlier.

The Maine crop was light as well as that of the other late States. Prices were maintained at a high level all winter. Ceiling price differentials to allow for storage and shrinkage were not sufficiently spread to influence growers to hold their stock, and most of it was moved out early. The

new crop in the South was late, and in many cases light. Light shipments from all sections in the late spring months of 1945 caused a shortage in many terminal sections. This scarcity seems to be carrying over into the harvest of our 1945 crop. Conditions now indicate a good market for the 1945 crop this year, with at or near ceilings prevailing at least through part of the deal on the good quality large stock.

FUMIGATION FOR POTATO SHIPMENTS

One conference was held with the Japanese Beetle Quarantine authorities and shippers at Hightstown. This was primarily to see if restrictions in fumigation on potatoes moving outside the quarantine area could be lessened to permit more rapid movement in transit. Only one possibility was suggested by the quarantine authorities and that was to have field, warehouse and car inspection so that the shipments could move without fumigation. This was brought to the attention of the growers, but there have been only a few requests for this type of service. One point was brought up at the meeting that was quite important. It was to request the railroads to pick up loaded cars twice a day rather than once a day. In some cases, this would save from 12 to 24 hours in transit time.

In other reports, more careful harvesting was stressed, pointing out that bruises, either on the grader or in the car, sometimes resulted in soft decay with a subsequent loss in revenue. Growers were also advised to look over their incoming seed for ring rot and other diseases that would cause poor yields.

SWEET POTATO MARKETING

Twelve reports were issued on sweet potatoes. The sweet potato acreage planted in the United States was about 3 per cent above the 10-year average and about 7 per cent below the acreage planted in 1943. The July 1, 1944, estimates placed the forecast slightly over 66,000,000 bushels, as compared with 72,500,000 bushels in 1943. The general trend of heavy production had moved from the southcentral States to the southeastern States of Georgia and North Carolina. New Jersey had an estimated crop of around 2,400,000 bushels as compared with 1,500,000 bushels the year before. This presented a marketing problem for our New Jersey growers. Georgia and North Carolina, with a tremendous surplus over their own needs, would look to Philadelphia and New York as outlets for this surplus crop, thereby adding to the competition of New Jersey-grown stock.

The nearby markets were plentifully supplied all year with prices below the allowable ceiling price. As the white potato crop disappeared, there was increased demand for sweet potatoes. Those farmers who held very late in the spring and early summer months realized the full ceiling price on their crop. As the sweet potato market became firmer, and prices advanced, one flaw in the OPA pricing system developed. This was the com-

munity ceiling price in various sections of the country. The f.o.b ceiling price was such that it added freight costs and handling charges, and made the delivered price in such places as Chicago as high as the retail community ceiling price. The receivers were reluctant to purchase New Jersey potatoes when the possibilities of making any profit on them were slim. At one time in the early fall, support programs were advanced by the War Food Administration and several lots were offered in the Vineland section, but due to the conditions of the potatoes, it was hard to make the grade that was being purchased and practically no sales under this program were completed. Generally, all prices that were reported either at the auction markets within the State or in the terminal markets reflected prices higher than the support prices.

THE NEW JERSEY APPLE CROP

The July 1, 1944, forecast on apples indicated the production about one-third higher than in 1943. In subsequent issues of the report, better packing was stressed in order to meet competition and the demand of the public for better quality. There were some indications as the harvest progressed that there would be some export business that could be counted on as a market for part of the crop. As it had been several years since any exporting had been done, we drew attention to the requirements of the existing export laws.

OPA ceiling prices were put into effect about the middle of August and these were reviewed with special emphasis on parts of the order that apply to New Jersey growers. In view of the large crop, storage facilities were explored and it seemed as if the storage space, even with heavy volumes of government-owned foodstuffs, would be ample. A tropical hurricane about the middle of September blew what was estimated at that time to be about 700,000 bushels to the ground. The War Food Administration inaugurated a salvage program for the purchase of those dropped apples on a modified utility grade to be used at processing plants. The purchases in the Northeast were set up to include about 500 cars, of which 50 to 60 cars would be purchased in New Jersey. The program specifications were outlined in these weekly reports. The apple growers, in some cases, did not care to use this salvage program and packed their blown fruit in field boxes or other containers and stored them. As it turned out, this was a poor year to store any fruit in poor condition, due to the large crop and heavy competition. As a result of this additional storage and poor quality, apples did not move too rapidly during the winter months at the high prices, and a heavy cold storage inventory appeared the first of April. At this time, the War Food Administration was again called upon to support the apple market. They did this by purchasing lower-grade and small-size apples, and using them either for processing or for school lunches.

Many processors, after viewing the unfavorable conditions for a large 1945 crop made latent efforts to increase their pack. Home canners were urged to process as much of the apples as possible for home use.

The 1945 crop shows prospects far below average with prospects in western States appearing to be the best in the country. At this time, it looks as if the market will show a good demand all year in the eastern producing section, and the large crop on the west coast will be partially absorbed by the Government for service personnel in the Pacific Theatre.

One report was issued on strawberries. Due to relatively light yields in all competitive areas and in our own State, there was no difficulty in marketing the 1945 crop. Demand was so great that black market activities were the rule rather than the exception. Strawberry ceilings ordered by OPA did not reflect the cost of production in New Jersey. In an effort to keep our growers within a legitimate trading channel, maximum ceiling prices were given at the various levels of distribution so that growers could get a higher legal price. Most sales were around \$12.00 a crate, which was within the price allowed for sales through to ultimate consumers, either at the farm or roadside stands.

MARKET SUMMARIES PUBLISHED

The Weekly Market Review is another of our weekly summaries. The four-page publication, issued every Thursday, is primarily a digest of prices of New Jersey commodities in the eastern markets. For comparison, the prices of the same commodities on the same day of the week previous and the same date a year previous are given.

The Review is in demand by poultry and egg producers. We have carried a pricing section covering all levels of sale from producer through the wholesale and retail markets to the consumer. This has been used as a guide by many poultrymen in all types of sales. OPA price ceilings have greatly influenced poultry and egg sales. They have influenced the marketing and volume also of livestock, and fruit and vegetable offerings. War Food Administration orders have had a great effect on distribution. War Food orders are usually issued when it appears that food supplies are very badly distributed. If it appears that the Army, for example, is not able to obtain needed supplies, an order is forthcoming. These orders cover a multitude of food products.

During the spring of 1944, there was a scarcity of potatoes in the country. Prices were at ceiling, but truck buyers were going direct to growers or to warehouses and buying their supplies. The WFA promptly issued an order which virtually gave the Federal Government first refusal on all potatoes. After the Government, which was buying chiefly for our armed forces, obtained their needs, the commercial shipper could take what was left. This type of order has been applied chiefly at points other than New Jersey, but its use has greatly affected the marketing of our crops. We have carried such information in the Review.

The Review also serves as a summary of the week's marketing activities. It includes reports on weather conditions, principally those that might affect marketing of New Jersey crops. It covered the feed and grain situation, which remained almost steady during the year with practically all prices at ceiling. Butter and eggs were scarce and reflected such a heavy demand that prices were at ceiling most all of the year. In the case of eggs, this was in direct contrast to the year before when the Government had to purchase very heavy stocks under a support program.

Our mailing list was revised a year ago and dropped from 1,800 to around 800. Since then it has increased by individual request to almost 1,200. The chart form of commodity prices on the New York and Philadelphia markets was continued. Livestock prices were published in a manner about the same as in former years.

The Auction News, which is one of our seasonal publications devoted to the interests of the fruit and vegetable auction markets in the State, was continued as in former years. The Auction News printed the time of opening of each market as it started, and the hours and days of sale. Also, the manager's name and telephone number were given for the benefit of any buyer who wished to get in touch with the auction market by telephone. A general paragraph was added, pointing out the fruits and vegetables that were available throughout the State which would tend to attract buyers to New Jersey produce. The various items that were available at each market were given so that the buyers could choose the markets that offered a particular commodity in which they were interested. The general report on weather conditions in New Jersey was also given. On the back, we continued the statistical summary of the previous week's business. This gave the number of packages and the total value, with a breakdown on the volume of each principal commodity, and the high and low average daily prices of that commodity. OPA ceilings, as they affected the sales at the auction, were included. The Auction News mailing list is made up almost entirely of produce buyers.

The New Jersey Truck Crop News was issued during the growing season of 1944 and continued again in April of 1945. The weather report that was inaugurated in 1944 from the Weather Bureau of the United States Department of Commerce in Trenton was included again this year. This Truck Crop News is primarily information on crop conditions in New Jersey beginning with the first planting of the crop and carried through to the end of the active harvesting season. The report is issued by the Bureau of Agricultural Economics of the USDA and the Weather Bureau of the Department of Commerce with the Bureau of Markets of this Department cooperating.

ANNUAL POTATO SUMMARY

The Annual Potato Summary has been prepared yearly for those interested in the potato industry. This list includes county agents, railroad officials, trucking concerns, dealers and growers of New Jersey, and

marketing specialists in other sections of the country whose crop is marketed at the same time as ours. The summary was printed instead of being mimeographed as in former years. Information used in the publication was obtained from market news reports, reports by the railroads, and certain information that was received from the dealers themselves, as well as that obtained directly by the supervisor of this project.

The summary includes a general review of the season from the planting time to the end of the harvesting, and also statistical material covering shipments by railroad and trucks, by weeks. Primarily destinations of New Jersey-grown potatoes, both as to cities and as to States, charts showing trends of distribution by States over a ten-year period, shipping point information by days showing demand, movement and prevailing prices, a study in chart form of the grades as compiled by the inspection service, and other pertinent material were included. The greater part of the work involved in issuing this summary was carried out after the active shipping season closed. The printed report was mailed in March, 1945. There are significant facts in that summary that should be mentioned in this report. In 1943 the State had a heavy potato crop. From the reports made to the Bureau of Markets by the principal handlers of the potato crop, we show that in that year these shippers handled 9,196 cars by rail and 5,207 carlot equivalents by truck, or a total of 14,403 cars. In 1944, New Jersey had a poor crop, with the same handlers reporting 6,613 cars by rail and 4,110 by truck, or a total of 10,726 cars. The crop yield was considerably reduced by drought conditions. We also noted that in a comparison of inspection records of the 1943 and 1944 crop that we have a great improvement in grading. In 1943, we had approximately 60 per cent U. S. No. 1 quality with 30 per cent Commercial. In 1944, we had 81 per cent grading U. S. No. 1 with only 14 per cent grading Commercial. Light wire worm infestation and the early completion of the harvest were probably contributing factors to the increase in the Number 1 grade.

DAILY MARKET REPORTING

Daily market reporting was continued throughout the summer and fall of 1944 and was resumed again this spring. While this part of the project entails considerable expense, the value to the producers makes it worthwhile apparently. Calls are made to our cooperative employees in New York who give the early morning prices on New Jersey grown commodities and other items of interest on the market that may influence our own buying and selling. These prices are in turn relayed to pre-determined points scattered throughout the State where growers or shippers may call to get the information. We have also been called on to give especial information by telephone and letter on market prices, sources of supplies, and other needed facts which were supplied to the extent of our ability.

One of the qualifications for supervisor of this project is that of making fruit and vegetable inspections in cooperation with the fruit and vegetable

marketing project. In this connection, about 30,000 bushels of apples were inspected by the supervisor under the United States Government support program. Other commodities covered included beets, spinach, sweet potatoes, white potatoes, broccoli, and carrots. Altogether, there were 67 inspections with a total revenue to the Department of \$518.29.

DAIRY PRODUCTS MARKETING

The objective of this project is to aid in the development of a practical milk marketing program for the Garden State. The major activity of our 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 on the part of the Bureau of Markets to recognize and identify milk of definite quality standards produced nearby. Other activities include cooperation with the Milk Control Board, the New Jersey Dairymen's Council and other agencies, and the assistance given to livestock auction associations in the supervision and operation of livestock sales by auction.

MILK PRODUCTION AND DISTRIBUTION

The milk producers of New Jersey have had an unusual year in which to produce the quota of milk requested by the War Food Administration. At the beginning of the fiscal year, milk production declined rapidly and continued unabated until the end of August. This was due to a prolonged and almost continuous heat wave starting July 1. Heavy rains later in the season halted the downward trend in production. Supplemental feeding, especially of concentrates, was necessary because of poor pastures, and in addition, some hay and plenty of corn ensilage had to be fed, thus depleting supplies intended for winter use. This, coupled with the increased wages demanded by labor, has increased the cost of production to the farmer, which is estimated, conservatively, at \$5.25 per hundredweight of milk produced. Although the War Food Administration added 10 cents to the 80-cent milk subsidy, this was still inadequate to cover the cost of producing milk in New Jersey. In addition, forage was very scarce as the corn supply was only 60 per cent of normal and there was only a small second cutting of alfalfa due to the drought. Inroads on farm labor by Selective Service created an additional hardship on dairy farmers. Replacements were not available because it is necessary to have skilled labor to operate a dairy farm.

By October, production had reached normal levels, but due to "above level" demand, milk continued to be short, with practically all milk produced bringing Class 1 prices. Through the cooperation of the director of milk control and the administrator of the New York Milk Marketing Agreement, an arrangement was made to have milk shipped into New Jersey on an allocation basis. This relieved the shortage to some extent.

As the fiscal year drew toward the end, milk production increased considerably. This was due to very favorable weather conditions. Cows were out to grass early in April, a condition unprecedented for more than 25 years. The director of milk control appointed a committee to find ways and means of utilizing the expected surplus; several plans were evolved. The peak of milk production came on May 20, with the highest amount of milk ever produced in New Jersey. However, there has been a falling off since then, and some dealers are looking for additional supplies to tide them over the shortage which seems inevitable during the coming months. Existing conditions throughout most of the year were very detrimental to the production of milk, but did not deter the New Jersey dairy farmer from producing enough milk to meet consumption demand and yet, except for a short period in the spring, there was no surplus to lessen the prices paid for such production.

Several hearings on proposed amendments to the New York Federal Milk Marketing Agreement, which affects the nine northern counties of New Jersey, were held during the year. Proposals were offered relating to the supplying of milk to the marketing area during shortage periods; increasing the butterfat differential to producers; the method of determining classes of milk to be included in the market equalization pool; the clarification of the basis of classification of milk; and proposals which would change the class prices for milk and cream used for particular purposes, including manufacturing purposes in New York City. It is very evident, however, that the marketing agreement covering this area has become so complex and difficult to understand that it is admittedly difficult to administrate. It was also admitted that some of the proposals advanced by the War Food Administration were specific violations of the Agricultural Adjustment Act, but necessary for the "proper administration of the order," so that some revision of the law is necessary to clarify the act.

The New Jersey Dairymen's Council, considering the effect of postwar conditions on the dairy industry, held two meetings to discuss the cooperative marketing of milk. Representatives of the Bureau of Markets, United Milk Producers of New Jersey, Inc., Milk Control Board, Lehigh Valley Cooperative Farmers, Dairymen's League Cooperative Association, Inc., Interstate Milk Producers Association, Philadelphia Dairy Council, and several other organizations met and presented their plans to the Council for consideration. These reports are now being compiled and a committee is attempting to coordinate their different goals to work out a comprehensive postwar program for the New Jersey dairy industry.

During the year, the American Dairy Association, an organization of producers and distributors formed for the purpose of advertising milk, has been putting on an organization campaign in the northeastern dairy States. New Jersey was contacted by a representative of the American Dairy Association late in the year, who asked New Jersey milk producers to join the national program. The program would call for each milk producer

in the State to contribute 2 cents per hundredweight of milk produced during the month of June. Twenty per cent of the money collected would remain in the hands of the New Jersey producers for local advertising; the balance would be sent to the national organization for national advertising. Due to conflicting viewpoints of the two large cooperatives operating in New Jersey—one in North Jersey and one in South Jersey—the Dairy Council, which sponsored the ADA movement in New Jersey, was unable to compromise their respective ideas in order to put the program on this year. It will undoubtedly be worked out so that there will be a State organization of the American Dairy Association formed in order that New Jersey can participate in 1946.

NEW JERSEY OFFICIAL GRADES OF MILK

In 1931 the New Jersey Department of Agriculture promulgated two grades of milk—New Jersey Grade A Pasteurized Milk and New Jersey Grade A Raw Milk. Later, New Jersey Grade B Pasteurized Milk was added. Milk produced and distributed under the requirements for New Jersey Grade A Pasteurized Milk and/or New Jersey Grade A Raw Milk may be labelled New Jersey Premium Milk. Milk produced and distributed under the requirements for New Jersey B Pasteurized Milk may be sold without grade designation. Since their promulgation, these grades have been the principal project of the milk marketing work.

The New Jersey grades for milk and cream represent an effort on the part of the Department of Agriculture to recognize and identify milk of definite quality standards produced nearby. Greater use of official grades for New Jersey milk and cream would eliminate much of the confusion, doubt and misunderstanding surrounding the use of unofficial standards. Some municipalities have provided for definite grades in their local milk ordinances, but the majority have not.

All labels and grade designations for New Jersey official grade milk or cream are restricted to a true comprehensive description of the product. Provisions of these grades, covering methods of operation, are expressed in simple, well-defined terms that will foster confidence in the minds of consumers and also protect responsible dealers. Definite standards are desirable for milk and cream so that these products may be bought and sold according to their actual quality. This means fairness to producer, distributor and consumer. New Jersey milk and cream have outstanding wholesomeness and freshness which are easily lost by milk shipped from a distance. Milk does not improve with age or handling. New Jersey consumers demand and New Jersey dairymen produce within the State milk and cream of highest quality.

Use of the New Jersey official grades for milk and cream is elective and not mandatory. Milk and cream may be marketed under other labels, but the use of the terms New Jersey Grade A, or Premium, and New Jersey Grade B is restricted to producers and dealers who elect to sell

milk and cream under the rigid supervision and regulations of the Department of Agriculture.

The standards of the milk and cream sold under the official grades are recognized by health officials. Discriminating consumers have commented favorably on the high quality required by the grades.

The consumer can readily identify official New Jersey grades for milk and cream by the New Jersey official grade label, which is the map of the State. Bottle caps, tags or labels on containers used in the distribution and sale of this milk are also marked with the grade of milk contained therein, where produced, the location of the pasteurizing plant, the name of the proprietor of the business, the day or period during which the milk was pasteurized, and also the words "N. J. Dept. Agri. Official Grade" and "Tuberculin Tested." The complete information on the cap assures the consumer that the contents of the bottle have been produced and handled under rigid regulations of the Department.

At the close of the fiscal year, there were 31 dealers processing 65,841 quarts of milk daily under the New Jersey official grades. Although this represents a decrease from the past fiscal year, the volume of milk distributed remained practically the same throughout the year, inasmuch as the major part of the decrease occurred during the last month of the year. This decrease was due to the inability of the farmers to meet our rigid requirements under present conditions. The bulk of the milk distributed was pasteurized; only a small percentage being sold as raw.

Of the 31 dealers under our supervision, 13 are purchasing-dealers, 14 producer-dealers and 4 both produce and purchase milk. There are 211 producers involved in the production of this milk.

HERD INSPECTION

Our rigid herd inspection system, which has been in existence since the grades were promulgated, serves as a model for other inspection agencies, both within and outside of New Jersey. All animals from which New Jersey official grade milk is produced have been tuberculin-tested and maintained under State and Federal cooperative supervision. The animals are examined physically by a licensed veterinarian at least twice a year, and certified in writing as free from any physical condition which might render the milk unwholesome for human consumption. Cows having diseases of the udder or cows that from any other cause may be a menace to the herd or to consumers are removed from the herd and kept in isolation as long as such condition exists. During the year, there were 16,630 animals examined in accordance with the grade regulations.

The accompanying table shows the physical examinations of cattle by counties for the fiscal year and the results of those examinations.

PHYSICAL EXAMINATION OF CATTLE, FISCAL YEAR 1944-1945, BY COUNTIES

County	Number of Herds Examined	Number of Animals Examined	Number of Animals Passed	Number of Animals Isolated	Number of Animals Condemned
Bergen	2	41	41	..	..
Burlington	104	3,252	3,003	219	30
Cumberland	41	832	792	36	4
Essex	4	213	201	12	..
Gloucester	2	24	24	..	..
Hunterdon	101	3,486	3,396	71	19
Mercer	20	521	502	18	1
Middlesex	2	14	14	..	..
Monmouth	13	430	420	10	..
Morris	68	2,899	2,855	44	..
Ocean	2	23	23	..	..
Salem	57	1,581	1,474	92	15
Somerset	84	2,605	2,530	70	5
Sussex	11	557	540	17	..
Warren	4	152	152	..	..
Totals	515	16,630	15,967	589	74

SUMMARY

No. of herds examined	515
No. of herds in which all animals passed	296 or 57.5%
No. of herds in which animals were excepted	219 or 42.5%
No. of animals examined	16,630
No. of animals passed	15,967 or 96.0%
No. of animals isolated	589 or 3.5%
No. of animals condemned	74 or 0.5%

HEALTH OF EMPLOYEES

A person who is engaged or employed as a milk handler in any pasteurizing plant where New Jersey official grade milk is to be processed, until such milk is sealed in the final container, or who comes in contact with milk utensils or equipment used in the pasteurization of such milk, is subjected to a physical examination by a licensed physician of this State and re-examined at least once in every six months, and certified as free from all communicable diseases which might be transmitted through milk. Each person examined obtains a certificate signed by a licensed physician of this State certifying that he has been subject to such examinations. All employees on farms connected with the production of milk to be sold as raw are also subject to these examinations. This involved the examination of 457 individuals; medical certificates containing the history of these examinations are now on file in the Department.

BACTERIOLOGICAL TESTS

Microscopic analysis of samples of milk in determining causes of defect are made throughout the year on both farm and package samples. The importance of this analysis cannot be over emphasized. All

expensive than ordinary methods of control, much of the guess work is taken out of the routine work, and the results justify the extra expense involved. There were 1,702 samples collected for analysis during the year. This represents a decrease from the past year, due to shortage of funds. Since the scope of this work is so necessary for the effective supervision of the New Jersey official grades, additional funds should be available to carry on this work.

FEEs

The income to the Bureau of Markets from fees averaged \$30.20 daily, and the total income collected for the year was \$11,024.49, which is almost identical with the amount received during the past fiscal year. Fees are based on a sliding scale according to the amount of milk processed by the distributor. The charge for the inspection of all milk produced daily under the grades is as follows:

0-2,000 quarts produced daily—	50 cents per 1,000
2,000-4,000 quarts produced daily—	40 cents per 1,000
Over 4,000 quarts produced daily—	35 cents per 1,000
Minimum charge per month,	\$2.50.

NEW JERSEY FARM PRODUCTS PUBLICITY FUND

Although no advertising of New Jersey official grade milk has been made during the past two years, we are still continuing to receive contributions from cooperating dealers. The reserve fund, which now amounts to \$4,021.20, will be used at the close of the war to continue the program under the sponsorship of the New Jersey Official Grade Milk Dealers' Association.

LIVESTOCK AUCTION MARKETS

The auction method of disposing of surplus farm animals is very old. The method, however, has not been applied in an organized commercial way until recent years. About 13 years ago, a move was started in the Middle West whereby associations were organized to serve the community. This spread eastward and the first of these was established in 1935. In the few years since the early 1930's the movement has developed to a point where livestock auctions have become important marketing agencies in most communities where there is a concentration of livestock large enough to support such an association.

There are three types of livestock auctions operating in New Jersey—cooperative livestock auctions, private livestock auctions and community sales. The two cooperative auctions are the Flemington Auction Market Cooperative Association, Inc., which has the distinction of being the first cooperative venture of its kind in New Jersey, and the Livestock Cooperative Auction Market Association of New Jersey, Inc., located at Hacketts-town, the larger of the two auctions. There are five private auctions located at Woodstown, Freehold, Sussex, New Egypt, and Columbus. The three Community Sales are conducted at Branchville, in Sussex

County; Englishtown, in Monmouth County, and Woodstown, in Salem County. In addition to these auctions, Trenton has become one of the important centers of the livestock industry where consignment sales of purebred cattle are held by breed associations and sales companies.

The two cooperative auctions and one of the private auctions handle approximately 80 per cent of all the livestock sold by the auction method. The smaller auctions, however, are important in that they handle economically and profitably sales in farm communities not covered by the large auctions.

The livestock auction markets of the State, in general, held up in volume during the year. Prices were very spotty in the beginning, however, due principally to the fact that retail distribution has been held down on account of retailers not having the ration coupons with which to purchase large quantities from the wholesalers. Conditions improved later in the year, with prices generally satisfactory except for cows, which were below other classes of livestock for a number of months. Effective January 29, 1945, the OPA applied a price ceiling on cattle, including calves, of \$18.60 per hundredweight, and announced this price early in the month. This caused an upswing in prices over all the markets with calves and cows bringing unprecedented prices until the ceilings were effective the last three days of the month. After that date, few choice calves were delivered for sale at the markets, but the prices on all cattle and calves were affected, with inferior calves selling at ceiling and the price of good cows closely approximating the ceiling. Hogs had to be sold at ceiling, and this cut the farmer's income quite seriously for this class of stock.

PRICE CONTROL AT LIVESTOCK AUCTIONS

From the viewpoint of administration, the OPA ceiling prices on cattle are vexatious to the livestock auctions, but seem to be advantageous to the farmers from the prices received for smaller-sized calves. Cows and light calves continued to bring unprecedented prices, with the supply not nearly large enough to meet the demand. In order to keep the livestock buyers, particularly calf buyers, in line, it was necessary to evolve certain practices not usually found in the auction method of selling. At the Hackettstown market, for instance, 50 choice calves were selected and at the end of the sale of the lighter calves, they were allotted to the buyers in proportion to the number of light calves purchased. The calves were numbered and the purchaser drew his own number out of a hat, and then had the right to take the calf at ceiling price or reject same. None of the calves, however, were rejected.

In May, 1945, a startling price reversal became evident, due again to a ruling of the OPA. A slaughterers' license plan was put into effect whereby slaughterers were put on a quota basis which was based on the tonnage of animals killed last year. This quota was fixed at 70 per cent of the total kills last year. This eliminated a number of buyers from the

auction whose quotas were exhausted early in May; consequently, prices dropped seriously and animals that sold for ceiling prices in April brought very low prices in May. There is undoubtedly a large volume of slaughter animals moving in black market, as hogs and good calves have disappeared from all the auction market sales.

Towards the end of the year, the volume of animals sold at the live-stock auctions decreased faster than the seasonal slump usually experienced during the summer, due principally to adverse OPA rulings. The slaughterers' quota, designed to stop the black market, to date has had just the opposite effect, driving even legitimate buyers to the farms to purchase animals on which little or no check can be made.

The Livestock Cooperative Auction Market Association of North Jersey, Inc., usually called the Hackettstown Auction Market, did a gross business of \$890,850.10, compared to \$738,135.92 in 1943-1944. There were 28,749 head of cattle sold, a decrease of 1,868 from last year's figure of 30,617. It will be noted, that although there was a decrease in the number of head sold, the gross sales were increased. This was due, of course, to the effects of the OPA price ceilings on cattle, calves, and hogs.

The board of directors of this association authorized at the end of 1944 the payment of dividends accumulated since the establishment of this association in January 1941. Checks totaling \$14,788.02 were sent from the Hackettstown office to the 2,424 farmer-members who have sold animals over the auction block during the four-year period. After payment of the dividend, there was a cash reserve of \$8,857.11 left in the association. In addition to the dividend and reserve, the members have invested \$28,429.98 in the market, composed of land and buildings valued at \$25,897.62, and equipment worth \$2,532.36. The individual dividend checks were calculated at the rate of one-half cent per dollar of gross business transacted with the auction by the members in the years 1941 to 1944, inclusive.

Although arrangements were made with other livestock auctions to report their sales to the Bureau of Markets for comparison purposes, this has not been done in all cases. Therefore, the chart below, listing the volume of business done, covers only those auctions which have sent in their reports complete to date.

Market	Number of Head	Value
Flemington	28,355	\$841,960.10
Hackettstown	28,749	890,850.10
New Egypt	9,403	419,314.95
Sussex	18,924	512,604.45
Woodstown	36,078	1,807,830.62
Totals	121,509	\$4,472,560.22

SPECIAL SERVICES

In addition to his regular duties, the supervisor of dairy products standardization has cooperated with the various dairy organizations throughout the State—in particular, the New Jersey Dairymen's Council and the Northeastern Dairy Council. Hearings on amendments to the Federal Milk Marketing Agreement in New York City were also attended.

FRUIT AND VEGETABLE MARKETING

As in the past years, the Bureau of Markets has worked closely with those of our citizens interested in shipping point markets and in terminal and secondary markets. More and more New Jersey producers and shippers have realized the need of sound marketing practices to meet the greatly increased competition from other areas. The work of this division of the bureau, therefore, has centered around two main objectives: First, the establishment and development of adequate outlet facilities, such as auction markets in New Jersey and terminal markets in large adjacent cities, and in cooperative shipper-buyer relations within the State; and secondly, to develop a better product packed in recognized standard packages, and meeting grade standards so necessary in modern methods of food distribution.

The State's program which has a direct bearing upon assisting those concerned in marketing better quality products is the project within the bureau dealing with inspection and certification of fresh fruits and vegetables.

Wartime restrictions on truck transportation facilities were continued to an extent which necessitated a continuance of the need for depending on rail transportation, especially in handling the movement of the potato crop.

Although total inspections of produce shipments for the fiscal year were considerably less than those of a year ago, they were about 900 above the past ten-year average. An unusually dry year caused a considerable decrease in the production of potatoes, and it was here we lost the greatest volume in inspections; the difference amounted to 2,379 inspections this year less than last on this one product.

INSPECTION WORK

The purpose of the inspection service maintained by the bureau is to inspect and certify, upon application, 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 United States 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. This is in line with the program of assistance through improvement of pack and quality to meet competition and increase demand for New Jersey products.

Many experienced inspectors are in the armed forces, and again this year as in the last, it was very difficult to secure enough trained, experienced personnel to handle the work. It was accomplished by those experienced men we were able to secure working longer hours and aiding in the training of new men.

CERTIFYING FRESH PRODUCE

APPLES

Apple inspections were slightly below normal this year, but considerably more than during the year 1943-1944.

The hurricane of September 14, 1944, caused serious damage to the apple crop. Growers suffered severe losses. An estimated 700,000 bushels were blown from the trees, and much of the fruit remaining on the trees was damaged from bruising. To help growers salvage part of the "windfalls," the Purchase Department of the Office of Distribution, War Food Administration, set up a program for purchasing these apples under certain grade specifications. The delay which usually accompanies the setting up of any new program by the United States Government was longer than was first anticipated, and the program was about 10 days getting under way. By this time, the storm-damaged "drops" were showing high percentages of decay, due to exposure and moisture conditions so conducive to the development of decay and other diseases. It is estimated that less than half of the fruit was salvaged under the purchase program, including the percentage that was delivered to nearby processors.

Apples that were left on the trees and harvested in the usual manner showed considerable damage as a result of bruising and scarring from being whipped about by the wind.

During the packing season, one or two growers requested the bureau to inspect and lot-number their apples being packed for storage purposes. The inspection and certification of these apples are in accordance with the U. S. Standards for apples. Inspections of apples going into storage are made at the packing house of the applicant, and the packages are stamped with a State of New Jersey lot number. Certificates are issued on the lot number and may be used in selling the lot at any time afterward. The purpose of using State lot numbers is that a definite means of identification is established on a particular lot and the accompanying certificate shows the quality, condition, and grade of the particular lot bearing such number.

Apples in storages throughout the East moved in a rather slow fashion during the winter months, and consequently storages still contained the greater portion of the crop when the spring of 1945 made its appearance. In March, an appeal was made to the War Food Administration in Washington by apple growers and shippers throughout the East for assistance in moving the vast quantities of stored apples. The program was set up and during March, April, and May, apples were bought by the Federal

Government and distributed mostly within the producing States to public institutions, school lunches, and hospitals. Some of the apples, however, were shipped to destinations outside of the producing States, some cars originating in New Jersey having been shipped to destinations as far away as Texas.

All of these shipments were inspected and certified by New Jersey inspectors for size, quality and condition, grade, and number of containers.

During the fiscal year of 1944-1945 our men made a total of 408 inspections on apples, including cars, trucks, and storage lots, under the above program and for commercial purposes. During the last fiscal year, a total of only 151 inspections was made on apples.

WHITE POTATOES

White potato producers felt the effects of the unusually dry season probably more than any other producers of agricultural products in the State this year. Volume of production was greatly affected in that badly needed rain failed to come, and this shortage of moisture together with days and days of hot sun forced vines to let down before the potatoes reached normal size. Potatoes were forced to early maturity when they were only about half-grown or less. The consequence was a crop of small potatoes, or at best only medium size. Very few potatoes were dug in July, and when harvesting really got under way in August, extremely hot sun took further toll of the already short crop by scald.

During the digging season, the larger size potatoes were in good demand, but growers and shippers were disappointed in the ceiling price first set by OPA. Following an appeal, an additional allowance was granted by OPA. There was no need for aid from government purchase on these larger-sized potatoes, as commercial prices were well above government support. However, there was such a preponderance of small-sized potatoes and lack of demand that government support prices were better than the commercial market, and government purchase was welcomed by the industry.

Harvesting, which started rather slowly in July, reached its peak in August, and was completed by the end of September.

In addition to the government purchase of small-sized potatoes, another outlet developed in September was exportation to Cuba and Puerto Rico. This market proved to be the most important development of the year, and bureau representatives were busy all winter on inspections and certifications of white potatoes for export.

In December, 1944, WFA offered a program by which loans would be made on white potatoes in storage. The program consisted of a loan based on the percentage of U. S. No. 1 quality at a given rate per hundred-weight, depending on variety. The rate amounted to approximately half of the existing support price for the same grade and variety. Potatoes in bulk, stored in bins or farm storages, and sacked potatoes were acceptable. In the case of bulk lots, the inspector was required to measure the contents

of the bins or storages and determine the approximate number of hundred-weights of potatoes contained therein as well as to determine the percentage of U. S. No. 1 quality. This information was entered on a prepared work sheet, and the amount of the loan computed from these figures. Loans were made on about one and one-quarter million pounds of potatoes in bulk, and 1,200 hundred-pound sacks.

During the fiscal year, applications for inspections by receivers of white potatoes in New Jersey were so numerous that it was necessary for the bureau to petition the Washington office to have two of our regular shipping point inspectors authorized to also make terminal inspections and issue straight Federal certificates.

SWEET POTATOES

Even though the crop of sweet potatoes is one of New Jersey's most important and is produced and sold in volume, requests for inspections are small in comparison to other heavily produced agricultural commodities. That this is true speaks well for the quality offered for sale by growers and shippers of sweet potatoes in New Jersey.

Competitive sweet potato growing States have used such care in the packing and marketing of this crop, that it is only good judgment and self-preservation that directs New Jersey growers and shippers to follow the same policy. This kind of competition makes for better quality and lessens the need for inspection. The purpose of inspection is only to insure the receiver or buyer of quality which is as good or better than the minimum requirements stipulated in the grade he purchases, and at the same time insure the shipper against false claims by receivers or buyers. When such requirements are voluntarily met in packing, shippers do not ordinarily consider it necessary to have inspection.

In the past year, the inspections on sweet potatoes were made principally on deliveries to military training bases; 178 inspections were made by our men this year as compared to 47 last year.

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 less than carlot shipments of snap beans, fresh asparagus for market, beets, cabbage, carrots, celery, corn, cucumbers, eggplant, lettuce, parsnips, onions, peaches, sweet peppers, radishes, spinach, squash, turnips, and shipments of lots of mixed vegetables. Most of these products were inspected for shipment to military training centers. Many products were inspected, in addition to those given above, at auction markets upon which no certificates were issued.

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

TEN-YEAR RECORD OF SHIPPING POINT INSPECTIONS BY PRODUCTS

	'35-'36	'36-'37	'37-'38	'38-'39	'39-'40	'40-'41	'41-'42	'42-'43	'43-'44	'44-'45
Apples	333	160	391	579	*672	611	100	†609	151	408
Asparagus	..	..	..	..	..	..	..	..	..	16
Beans	17	43	3	1	1	..	..	7	2	3
Beets	..	..	..	..	..	..	1	3	6	3
Cabbage	1	..	..	..	..	..	1	1	3	22
Carrots	..	..	..	..	..	..	..	3	16	4
Celery	..	..	..	..	..	..	..	..	..	1
Corn	..	..	..	..	..	..	3	..	..	1
Cucumbers	1	..	..	..	..	..	..	..	6	8
Eggplant	..	..	..	..	..	..	1	..	1	12
Lettuce	..	..	..	..	..	..	..	1	..	20
Lima beans	..	3	..	..	..	..	..	..	..	..
Mixed vegetables	..	..	..	..	..	..	..	4	9	77
Parsnips	..	..	..	..	..	..	..	..	..	11
Onions	55	42	61	9	3	8	1	2	..	3
Peaches	..	1	..	..	49	26	1	1	1	3
Pears	16	..	1	2	..	..	..	..	..	..
Peas	2	..	..	..	..	..	..	..	..	..
Peppers	..	..	..	..	..	..	..	..	17	52
Potatoes	121	323	5,180	1,972	397	2,264	1,328	2,941	5,206	2,827
Radishes	..	..	..	..	..	..	..	..	..	1
Spinach	..	..	..	1	6	3	8	30	1	13
Squash	..	..	..	..	..	..	..	..	..	7
Strawberries	1	1	..	..	..	..	..	..	..	..
Sweet potatoes	..	..	45	..	62	9	29	19	47	178
Turnips	..	..	..	..	..	..	..	..	1	2
Totals	547	573	5,681	2,564	1,190	2,921	1,473	3,621	5,467	3,672

CANNERY CROP INSPECTION

ASPARAGUS

Spring arrived early in 1945 so producers of asparagus found themselves unprepared when their asparagus began coming up in volume the latter part of March. Normally, this crop is not ready to be cut for delivery to processors until the latter part of April, reaching its peak about the first week in May. This year, cutting was begun the last week in March, a month in advance of the normal time. Growers were unprepared in that they had not secured the necessary help to keep pace with cutting. Most growers had not ridged up their beds, and in some cases inability to secure necessary help caused complete loss of the first week or ten days' production. This crop grows very fast under favorable weather conditions and shoots often grow 8 to 12 inches in 24 hours.

Harvesting and deliveries to processors were heavy during the early part of April. Cooler weather during the latter part of the month slowed the operation from producer to processor, and by the end of May a gradual backing up of the season had brought conditions to about normal. Cool

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

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

THIRTIETH ANNUAL REPORT

103

weather following the unseasonably warm weather in March and early April tended to keep the quality good by slowing the growth and keeping the tips compact and preventing spreading, which is the prevalent defect affecting asparagus. The same weather conditions were responsible for practically no damage to the crop by asparagus beetles. These insect pests usually make their appearance the first few days of hot weather and multiply rapidly unless brought under control by dusting the fields with rotonone. The beetles often do considerable damage before growers are able to control them. During the season there were very few growers' lots showing beetle damage, and these to only a minor extent.

Most of the asparagus was delivered to processors under contracts based on the regular New Jersey Standards, and graded by employees of the Bureau of Markets on that basis. A considerable tonnage was also delivered on a canner-grower contract basis under which our men only took samples and cut the butts off at the designated length, allowing the specified tolerance for white, and determining the percentage of spears and butts.

Average grades for the 1945 season under the New Jersey Standards were 35 per cent, N. J. No. 1 Large; 40 per cent, N. J. No. 1 Medium; 2 per cent, N. J. No. 1 Small; 3 per cent, culls, and 20 per cent, butts, as compared to the 1944 averages of 28 per cent, N. J. No. 1 Large; 42 per cent, N. J. No. 1 Medium; 3 per cent, N. J. No. 1 Small; 6 per cent, culls, and 21 per cent, butts. A total of 34,911,085 pounds was graded by our inspectors under the New Jersey Standards. A total of 9,350,740 pounds was delivered to canners under the canner-grower contract under which 91 per cent of this weight was purchased as spears, with 9 per cent being classed as butts. There were 25 regular licensed inspectors and 16 assistants assigned to the 18 receiving stations, representing 12 applicants.

The following tables show results of the cannery asparagus grades for the 1945 season:

ASPARAGUS RESULTS—1945 SEASON
TABLE I

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
April 7	551	27	45	3	5	20
14	3,059	33	41	2	3	21
21	2,822	39	37	2	3	19
28	2,700	37	38	2	3	20
May 5	2,071	39	37	2	3	19
12	2,917	37	39	2	2	20
19	3,961	32	43	3	2	20
26	3,778	35	40	2	4	19
June 2	3,398	35	41	2	2	20
9	3,075	37	39	2	1	21
16	4,057	31	41	2	4	22
23	2,590	32	33	1	11	23
30	554	30	37	2	11	20
Season	35,533	35	40	2	3	20

TABLE II

Week Ending	Loads Inspected	Usable Spears Per Cent	Butts Per Cent
April 7	77	86	14
14	770	88	12
21	792	89	11
28	663	90	10
May 5	545	90	10
12	657	91	9
19	1,198	91	9
26	1,177	91	9
June 2	973	92	8
9	886	92	8
16	1,056	92	8
23	750	93	7
30	74	90	10
Season	9,618	91	9

TOMATOES

The 1944 cannery tomato work started at two canneries in South Jersey on July 24. By the first of August, all canners were processing.

With practically no rainfall of any consequence throughout the tomato growing areas in the State up to September 14, growers were unhampered in harvesting and delivering to canners the highest quality tomatoes yet produced in the history of the industry. Tomato fields remained green and foliage heavy enough to protect tomatoes from the sun during extremely hot weather in August. Cool weather in late August and early September only served to help keep the quality at a high level.

The hurricane on September 14 did severe damage to tomato fields and resulted in a sudden drop in quality and tonnage, and canners closed their season by the end of the first week in October despite the fact that most of them did not have a normal pack.

Between 30 and 35 inspectors were assigned to tomato grading work during the season. This was a smaller number than usually needed, but because of good quality during the greater part of the season, inspectors were able to handle the work.

Total tonnage inspected at the nine canneries and receiving stations was 112,801 tons, which was considerably less than the 149,786 tons graded in 1943, and below normal. However, the average grades for 1944 were the highest since the inception of grading under government standards in New Jersey. The 1944 averages were 68 per cent, U. S. No. 1; 31 per cent, U. S. No. 2, and 1 per cent, culls, as compared to the 1943 averages of 66 per cent, U. S. No. 1; 32 per cent, U. S. No. 2, and 2 per cent culls.

The following table shows the record of receipts and grades by weeks at the canneries using State inspection service. The last half of the table compares the 1944 season with the ten preceding years.

THIRTIETH ANNUAL REPORT

105

SUMMARY 1944 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
July 29	186	76	22	2
August 5	636	70	28	2
12	8,064	70	28	2
19	17,708	65	33	2
26	19,028	72	27	1
Sept. 2	23,562	73	26	1
9	26,520	71	28	1
16	9,138	64	34	2
23	3,498	39	54	7
30	3,464	38	58	4
October 7	997	25	71	4
Season, 1944	112,801	68	31	1

Seasons	Total Tons	U. S. No. 1 Per Cent	U. S. No. 2 Per Cent	Culls Per Cent
1944	112,801	68	31	1
1943	149,786	66	32	2
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

MARKET ACTIVITIES

As in former years, the Bureau of Markets has cooperated closely with all of the public marketing organizations selling fruits and vegetables. The bureau has also been of some assistance to private marketing agencies. Not only has the bureau handled shipping point grading inspections for such public and private agencies, but has upon request given advice relative to war agency orders, and aided in correcting conditions caused by some such orders.

Under regulations of the Office of Defense Transportation (ODT), travel was greatly restricted for country buyers or dealers who often acted as agents for farmers. Such buyers under OPA were allowed gasoline enough for only about 325 miles travel per car per month. This created a hardship, not only to those agencies, but also to the farmer who depended on the dealer to examine his crop and to buy or arrange for its sale. The bureau was helpful in some instances. Inasmuch as travel by buyers to the farms was restricted because of lack of all travel equipment, the bureau was all the more anxious to have buyers permitted to come to the various auction markets where supplies were concentrated. Some aid was given to these auction buyers.

The greatest activity of the bureau in fruit and vegetable marketing centered in the organized market groups. These consist of farmers' markets controlled by municipalities, farmers' markets owned and operated by farmers' associations, and the group of cooperative auction markets. Some aid was also given in conferences to groups planning postwar improvements in large terminal markets situated outside of this State, but which are important outlets for New Jersey producers.

Records of sales and services rendered to those markets or associations in New Jersey are reported separately as follows.

SHIPPING POINT AUCTION MARKETS

Inasmuch as a report of the activities of these markets on the basis of the fiscal year of the State would not show a true picture of the situation existing, we have, as in former years, given in the table that follows the results of the entire 1944 marketing season. Growing conditions in the fruit and vegetable areas were nearly normal, with the exception of a wet spring in 1944 and two hot spells in mid-summer. These two hot spells did cause some damage to several vegetable crops. The volume of sales at the auctions during 1944 was about 10 per cent below the sales of 1943. Prices received by farmers were also lower than in the preceding year by 10.8 per cent. The lesser volume was partly caused by black market activities, and partly by a greater acreage planted to certain essential crops not usually sold over the auction. The lower prices obtained were caused by greatly increased production of vegetables from competing States and sold in Northeastern markets. The increase in all vegetable acreage in the United States in 1944 was approximately 17 per cent.

SUMMARY OF SALES AT FRUIT AND VEGETABLE AUCTION MARKETS

Market	Season of 1944		Season of 1943	
	Number of Packages Sold	Value of Sales	Number of Packages Sold	Value of Sales
Beverly	167,055	\$184,658.64	194,795	\$254,582.66
Cedarville	239,520	386,435.72	261,396	565,963.03
Glassboro	398,276	682,876.07	418,772	926,932.60
Hammonton	75,263	220,784.83	131,880	507,211.95
*Hightstown	304,329	327,262.66	407,376	528,285.90
Landisville	420,707	758,536.48	442,604	850,051.44
Pedricktown	149,683	366,552.05	129,395	311,809.46
Rosenhayn	.....	.....	5,660	40,522.15
Swedesboro	886,834	1,745,149.71	941,112	1,754,015.17
Vineland	483,316	668,728.13	437,915	733,717.64
Washington	27,487	26,769.45	46,815	54,752.81
Totals	3,152,470	\$5,367,753.74	3,417,720	\$6,527,844.81
	Average price per package, 1944			\$1.703
	Average price per package, 1943			\$1.910
	Per cent of decrease in price per package, all commodities 1944 under 1943			10.8%

* Figures for Hightstown are those for auction sales only and do not include sales made by the manager, which amounted to 19,161 packages selling for \$50,936.85 in 1944, and 30,526 packages selling for \$71,325.80 in 1943.

The principal activity of the supervisor of fruit and vegetable standardization during the active marketing season has been work with the ten auction market groups. He has met with directors, conferred with managers, and aided in many ways in developing a consciousness of quality packing and grading as a means of promoting demand for products of New Jersey farms. He has also supervised the work of certain shipping point inspectors assigned to some of these markets.

A partial report of the activities of produce auction markets for the 1945 season through the month of June shows that the volume of sales is almost identical with that of the first six months of 1944. This year 795,416 packages have been sold as compared with 795,533 last year. The prices received, however, are much higher so far this year. Total sales for the first six months of this calendar year were \$2,567,096.11. Total sales for the corresponding period of last year were \$1,963,526.34. Much of this increase is due to the high prices obtained for asparagus, lettuce, carrots, beets, and spring cabbage.

As in the last three years' reports, a table is submitted to show the principal commodities sold at the fruit and vegetable auction markets during the year, and the comparison with the preceding season.

PRINCIPAL COMMODITIES SOLD AT FRUIT AND VEGETABLE AUCTION MARKETS,
VOLUME IN 1944 WITH 1943 COMPARISONS

Commodity	Unit	1944	1943
Apples	Bushels	47,756	45,166
Asparagus	Crates, dozen bunches	349,706	321,775
Beans, snap	Bushels	134,084	185,737
Beans, lima	Bushels	50,715	36,577
Beets	Dozen bunches	39,349	25,910
Blackberries	Crates, 24 quarts	6,882	4,502
Broccoli-rabe	Bushels	41,371	37,653
Cabbage	Bushels	46,850	37,116
Cantaloupes	Bushels	81,903	57,965
Carrots	Dozen bunches	16,152	8,908
Carrots	Bushels	2,987	4,428
Cauliflower	Crates	5,083	5,690
Corn, sweet	Bushels or sacks	65,666	85,821
Cucumbers and pickles	Bushels	69,004	172,377
Dandelion	Bushels	27,555	35,405
Eggplants	Bushels	66,865	109,030
Lettuce	Crates, 2 dozen	70,172	59,340
Okra	Climax baskets, 12 quarts	12,122	3,435
Onions	Sacks, 50 lbs.	16,731	1,107
Parsley	Bushels	11,951	6,558
Peaches	Bushels	222,240	268,251
Peas	Bushels	2,829	5,508
Peppers	Bushels	357,771	504,658
Potatoes, white	Sacks, 100 lbs.	87,917	131,414
Potatoes, sweet	Bushels	66,719	222,322
Raspberries	Crates, 12 pints	36,729	45,753
Scallions	Bushels	2,107	3,898
Spinach	Bushels	5,319	8,095
Squash	Bushels	10,224	18,001
Strawberries	Crates, 24 quarts	4,641	45,254
Tomatoes	Climax baskets	587,977	654,708
Watermelons		46,998	39,390
Miscellaneous	Packages	90,630	128,656

AUCTIONS MAKE POSTWAR PLANS

The auction associations have been conscious of the need for plans for the postwar era. They recognize the fact that many areas have greatly increased production of vegetables. They have discussed the probability of increased competition which our growers are likely to face. The need for return to better grading and packaging in order to meet competition has been considered. Air transportation, which, if undertaken, can bring perishable fruits and vegetables to our markets in much better condition than was possible in prewar years, is a factor which auction associations realize must be met.

Two activities of the produce auction associations deserve special mention. The association established in Washington, Warren County, has cooperated by acting as an agent for a processing company whereby that company could concentrate the tomatoes purchased in Warren County at the market grounds and load the purchasers' trucks at that point for delivery to the canner located approximately 75 miles distant.

This same association has also inaugurated a farm sales program. The association has arranged for the sale, prepared and distributed the advertising, employed the auctioneer and clerk, and arranged for financing through a local bank. At these sales, many farms, herds of cattle, and farm implements were sold. In 1944, there were 46 such sales, totaling \$243,172. In the spring of 1945, 23 sales were held. Total value this spring was \$144,058.86.

The associations recognize that they have a definite obligation not only to their members but to the entire community in which they are established. Therefore, they have discussed plans which include pre-cooling facilities, cold storage plants, processing plants, and cooperative purchase or manufacturing of supplies. It is believed in this bureau that these groups, because they are organized, can be of greatest help in carrying New Jersey agriculture through postwar and reconversion difficulties.

CITY FARMERS' MARKETS

The Bureau of Markets has assisted one city during the year in developing plans for a city farmers' market. This market is to be a postwar project. We have cooperated with existing city markets as in past years. Of the present city farmers' markets, the largest and most active are those owned and operated by farmers. Three of these own the produce dealers' stores surrounding the markets. The associations rent the stores to reliable dealers, thereby rounding out the supplies offered to the public from one market point. Such dealers handle shipped-in produce, such as citrus, bananas, winter supplies of fruits and vegetables, and foreign offerings when available.

The Atlantic City Municipal Market has continued making weekly reports to this office. A summary of these reports show that this market sold 8,288 farmers' loads during the past fiscal year. These consisted of

339,142 bushels of produce, 74,670 dozens of eggs, and 50,765 pounds of poultry. Gross sales were \$535,919.26. The volume of fruits and vegetables was much greater than during the 1943-1944 season; poultry and egg sales were much smaller. Value of all sales was about \$15,000 above the preceding year.

Sales on the Newark Farmers' Market were smaller than in 1943-1944. During this past year 7,882,770 bunches of vegetables and 1,833,398 packages of fruits and vegetables were sold. Packages cover all containers, ranging in size from 12-quart climax baskets to barrels. By far, the largest volume of all packaged goods was packed in baskets or crates of a bushel or larger capacity.

Sales on the Paterson Farmers' Market were also smaller than in 1943-1944. During the past year, this market handled 626,813 packages of fruits and vegetables and 1,979,131 bunches of vegetables sold loose, or without packages. Important commodities on these two large North Jersey markets continue to be tomatoes, potatoes, onions, lettuce, carrots, beets, cabbage, spinach, peppers, the spring greens list, and apples and peaches.

MISCELLANEOUS

Six meetings of The Cooperative Marketing Associations in New Jersey, Inc., were held during the year. In addition, the association sponsored a dinner meeting during Farmers' Week. This dinner meeting was devoted to the needs of cooperative associations. More than 160 persons, representing 30 cooperatives, were present. The association functioned during the year as a clearing house for problems confronting the member cooperatives. Many questions relating to marketing practices during war-times were discussed and procedure recommended to the membership. The Bureau of Markets has always been closely connected with this group. Represented in its membership are 14 individual cooperative associations, with a combined farmer membership of about 12,000. The Department has found that this is an organization through which much of our work can be accomplished. The bureau chief is secretary of the association.

POULTRY PRODUCTS MARKETING

The past fiscal year was the greatest year in history for farm value of the products of the poultry industry in New Jersey. According to preliminary estimates of the Department's statistician for the calendar year of 1944, New Jersey eggs had a farm value of \$34,900,000; poultry meat and hatchery products were valued at \$17,600,000. The total value of poultry products, estimated at \$52,500,000, an average of more than one million dollars a week on the calendar year basis, was greater than that of any other commodity group in New Jersey. The increase in farm value of New Jersey poultry products was 6 per cent over 1943, the previous all-time record. Projected to the end of this Department's fiscal year, and

mindful of the extremely heavy marketings of poultry products at high prices as well as of the enormous hatch in the first six months of 1945, it is safe to assume that the records of all previous years were exceeded by the year of this report.

THE POULTRY INDUSTRY IN NEW JERSEY

The fiscal year began on a note of deep discouragement for New Jersey poultrymen; it ended with boundless optimism, which has been translated into expanded numbers of young poultry apparently limited only by the housing capacity of the State. The nation-wide upheaval in supply and market conditions is responsible for this great contrast in the industry's attitudes from June, 1944, to June, 1945.

A year earlier, supplies of eggs were so great that there was even a problem of finding storage space for distress marketings of surpluses. Some supplies, purchased from competitive areas by the Federal Government in fulfilling its obligation to support the market, and temporarily stored in New Jersey and other Eastern States, had to be destroyed because of spoilage in inadequate provisional storages.

At the year's end, conditions of lower supply and greater demand, greatly favoring the producer, and completely reversed from the previous year, resulted in improved returns for poultry farmers and gave them an incentive to expand their 1945 growing operations to or beyond the record year of 1943. A general breakdown in orderly marketing also occurred. Established marketing agencies, both commercial and farmer-cooperative, were victims of the strange circumstances which caused supplies of eggs and poultry to be diverted from regular distribution channels into the hands of marketing opportunists who, allegedly, offered inducements of prices higher than those fixed as legal by the Federal Government.

Against such a background of poultry marketing contrasts, the work of this Department required complete and sudden changes to adjust it to the needs of the industry and of the public. In this work, the State fiscal year was roughly divided into two periods: from July to December, 1944, which were months of surpluses and consequent problems of marketing advantageously; and that period from December, 1944, forward, which were months of increasing demand for poultry products because of wartime shortages of other animal proteins, but with no compensating increase in poultry production largely because of the discouraging market conditions which had originated during the first period.

The supervisor of poultry products marketing carried on some very successful negotiations with the War Food Administration and the Office of Price Administration when war agency regulations struck at the very heart of the cooperative marketing system and the State grading program. These methods of selling have been built up over a period of years in New Jersey and have greatly aided in the development of our fine poultry industry. A detailed report of this activity will be found under the heading of cooperative marketing.

POULTRY DRESSING PROPOSALS

A revival of interest in cooperatively owned poultry dressing plants, which have often been proposed in the past, required a considerable amount of time on the part of the supervisor. Four public meetings were devoted to this subject, several conferences were held with local committees investigating such proposals, one committee was accompanied on trips to four out-of-State dressing plants, and time was invested in observing operations, studying building plans and cost figures, and exploring market possibilities. A report and two magazine articles were prepared to disseminate some of the information obtained.

Three poultry areas—Flemington, Toms River, and Farmingdale—have been especially interested in whether poultry dressing is feasible under New Jersey conditions. To a lesser degree, the Vineland, Mount Holly, and Paterson poultry sections have considered the establishment of dressing plants. Interest this year has been excited by the phenomenal successes of dressing operations in several States, and by the ensuing wave of plant construction in still other nearby States.

Reasonable doubt is entertained as to whether such dressing plants in New Jersey would have been able to attract supplies of poultry during the recent shortage period because of the illegal price competition. Supplies have been maintained at a number of plants in several areas quite distant from consuming markets, but their success in this problem can be attributed to the fact that producers there have been practically forced to put their birds through these local plants because other markets are not generally open to them. Furthermore, government orders have forced all production within these areas to go through the local plants, thus maintaining steady supplies in large volume which, in turn, makes operations efficient and profitable. On the other hand, New Jersey offers a variety of outlets, and continues to be a "live poultry market," catering to the large number of consumers who insist upon fresh-killed poultry.

Through correspondence and interviews, we have determined that at least one New Jersey canner, who normally uses in excess of 20,000,000 pounds of poultry meat a year, will favorably consider dressed fowl from New Jersey sources, purchasing on the basis of company specifications which are not difficult to attain. Commercial dressers whom we interviewed stated that they purchased New Jersey fowl alive at 15 cents per pound, live weight, during the 1944 months of distress marketing; that they had dressed these birds at a cost of from six to seven cents per pound; and had sold to this soup canner dressed fowl at 32 cents per pound, the OPA ceiling.

In view of the long pre-war experience of New Jersey with seasonal distress in the fowl market, and the fact that even in one wartime year—1944—a great seasonal surplus did develop, it can reasonably be assumed that returning peace will see an almost yearly repetition of the problem of advantageously disposing of our expended layers. To make for a more

orderly market and price stability, even if dressing operations cannot be highly profitable of themselves, the supervisor has recommended that our poultrymen cooperate in the establishment of dressing plants in the centers of egg production. The marketing of fowl through the proposed plants would serve as a nucleus because of the fairly well assured market to canneries, around which it is believed the production, dressing and marketing of higher quality poultry items, such as fryers, roasters, capons, and turkeys could be developed.

HATCHERY-REJECT EGGS

Among the vicious practices growing out of food shortages is that of converting items which are not fit for human consumption into the regular food trade. Because this had been done with some other commodities, it was anticipated that a logical poultry product for such conversion would be the hatchery-reject egg. The custom among many New Jersey hatcherymen has been to sell their infertile eggs to agents for industrial and chemical users. Credence was added to our suspicions of improper use for hatchery-reject eggs by reports from several States that traffic to the food trade of such eggs had been discovered. After discussing the problem with members of the New Jersey hatchery industry, those who had formerly been selling undenatured reject eggs volunteered to discontinue such sales.

The possibility of marketing the hatchery-reject eggs to advantage, yet safely, through animal food manufacturers is being explored. There is, however, some reticence upon the part of New Jersey hatcherymen to sell their reject eggs in the future for any purpose whatsoever, even in a denatured condition. Many have indicated that they will destroy these eggs rather than take chances on aiding those who might misuse the eggs.

RELATIONSHIPS DURING SHORTAGE

Special efforts have been put forth to maintain the good will and fine business relationships of the trade with the New Jersey poultry and egg marketing groups. Shortages of supplies of both eggs and poultry have made it necessary for these items to be rationed to the buyers. We have urged the marketing organizations to perform their rationing as fairly and impartially as possible, and we are confident that they are doing so. In our various contacts with members of the trade, we have made a special point of emphasizing this fairness and impartiality toward them. When misunderstandings have occurred, we have attempted to represent the side of the marketing organizations in the hope of preserving good relationships for the future.

Efforts to persuade producers to return to their established market outlets, instead of selling in a disorderly and disorganized way, have been of little avail. Except for those who have grievances against their regular markets, these producers agree that they have benefited, individually and as an industry, from orderly marketing in the past. They admit that they

hope the established agencies can survive and be on hand to help them in the future. They generally minimize the so-called "black market" prices, stating that farm pick-up services offered by the new buyers, free egg cases, and the fact that they do not need to clean or grade eggs are greater inducements. Of these factors, the cleaning and grading chore seems to loom largest in most producers' minds, a fact which has been noted by the established marketing organizations, and which may guide them in planning future services.

SURPLUS CHICK DEALERS

The appearance upon the New Jersey poultry scene of chick dealers of questionable business ethics has been more pronounced during the past year when chicks have been in great demand than during recent normal times. Very likely, also, the questionable methods have been encouraged by the growing practice of sexing day-old chicks. Able to buy cockerel chicks at extremely low prices, the surplus dealers sell by mail to customers who reply to advertisements, usually inserted in the garden pages of metropolitan newspapers. Their buyers are usually backyard flock owners who do not understand the implications of terms which would be transparent to most farmers. These terms include "assorted chicks" and "our selection," which in actuality boil down to cockerel chicks, or chicks that do not meet the standards of many reliable hatcherymen.

The true viciousness of this deal was demonstrated in the spring of 1945 when, because of the chick shortage and high demand, the surplus dealers were unable to buy cockerel chicks at the customary low prices. If called to account, after pocketing the money received from mail order buyers, they would obviously claim good faith, and promise delivery as soon as chicks are available. Some screen their identities behind post office boxes and farm names in New Jersey communities.

Although the State Department of Agriculture is without authority in such matters, it cannot be without interest. The unscrupulous methods of a few are damaging the good reputation of New Jersey hatcherymen. We have discussed the problem with a number of reputable hatcherymen who have assured us that they are doing all in their power to keep cockerel chicks out of unethical hands, thus nipping the deal at its source if all will cooperate. The matter has also been taken up with advertising representatives of several metropolitan newspapers, and will be discussed with others as time permits, with the thought that questionable advertising of this nature may be refused publication.

THE EMBRYO EGG DEVELOPMENT

Approximately 9,000,000 hatching eggs produced in New Jersey were utilized by biological laboratories for the production of vaccines, both for veterinary and human medicine, during the past year. This estimate is based upon reports to this Department from six laboratories, and from information supplied by hatcheries producing 8-day-old and 11-day-old embryos for vaccine production and experimental work of this nature.

The biological laboratories have been small buyers of hatching eggs and embryonated eggs from selected New Jersey producers for more than 10 years. However, their total uses never before reached the million-egg mark. Last year, a vaccine for influenza prevention was perfected, and for the protection of the armed forces, millions of doses were ordered. At the same time, the Army increased its requirements of other egg-propagated vaccines, particularly for typhus prevention. Because several of the major biological laboratories are located in New Jersey and because the hatching industry is so highly developed here, with a large number of hatching egg flocks already engaged in pullorum disease eradication, it was logical for a large part of the requirements to be sought here.

The sudden increase in requirements of embryonated eggs broke upon the industry with little advance notice. In view of the great urgency, the assistance of this Department was volunteered, principally in lining up competent flock owners who could meet the rigid specifications of hatching eggs for this special purpose.

COOPERATIVE MARKETING

Conditions at the cooperative markets have not changed to any marked degree since the previous year. Perhaps it can be said that those who are operating the cooperatives are becoming adjusted to meeting unexpected difficulties in the field of poultry and egg marketing.

Twice during the year the cooperatives were threatened with legal action by the Office of Price Administration. Both times the cooperatives took a firm stand and welcomed court action as the issues were of vital importance to the future of the markets. Fortunately, practical judgment eventually prevailed which eliminated the need for further action.

All of the episodes that have occurred during this and recent years, which affect the operation of cooperatives in all its phases, are gradually bringing to the front the greatest of all problems. Never before have public relations been so important. When cooperative markets were growing, it was because they were needed. They provided the answers to the problems at that time. There apparently was no other way to eliminate marketing difficulties. In the beginning, membership relations were not too difficult, buyer relations were troublesome at times, but consumer relations were left untouched.

The year, 1944-1945, can very well be the crest of cooperative development. Although the war causes things to become unbalanced, the fact remains that too many producer-members of cooperatives are losing sight of the fact that *they* are the cooperative. Buyers are unable to get even a small amount of eggs and poultry that they need. It is possible they might consider a cooperative as an unstable source of supply. Consumers hardly know that our cooperatives exist, and those who are aware of them know very little as to why they should exist.

The picture is not as pessimistic as it sounds here. It might be that the cooperatives grow too fast for the good they were supposed to create.

THIRTIETH ANNUAL REPORT

115

If they experience a setback, it can do no more than settle them on a firmer foundation. From such a point they can rebuild and develop more fully as the organizations they should be through better public relations.

AUCTION MARKET MEMBERSHIP, BY COUNTIES

County	Flemington Auction	Hightstown Auction	Mount Holly Auction	Paterson Auction	Vineland Auction	Totals
Atlantic	...	...	3	...	171	174
Bergen	3	...	...	83	...	86
Burlington	5	32	485	...	...	522
Camden	...	...	9	...	8	17
Cape May	...	...	...	...	32	32
Cumberland	...	...	...	...	422	422
Essex	5	...	...	15	1	21
Gloucester	...	...	...	...	85	85
Hudson	2	...	...	...	...	2
Hunterdon	2,059	...	...	...	...	2,059
Mercer	211	157	1	...	...	369
Middlesex	61	104	...	...	...	165
Monmouth	8	173	2	...	1	184
Morris	61	...	...	88	...	149
Ocean	2	13	8	1	...	24
Passaic	3	...	...	95	...	98
Salem	...	...	...	...	82	82
Somerset	405	2	...	...	...	407
Sussex	9	...	...	110	...	119
Union	26	...	...	1	...	27
Warren	294	...	...	40	...	334
Totals	3,154	481	508	433	802	5,378
1943-1944	3,407	939	655	621	859	6,481
Difference	-253	-458	-147	-188	-57	-1,103

There was a 17 per cent decrease in membership in the cooperative associations during the year. Some of this decrease is attributed to poultrymen selling their flocks and finding other sources of income, but a large part of it represents individuals who choose to deal with buyers who have little regard for ceiling prices. This lack of loyalty to the cooperatives threatens their existence; but, on the other hand, the non-supporting member is showing his true value as a dependable source of eggs and poultry.

The Flemington Auction Market Cooperative Association, Inc., made marketing agreements with their producers at the beginning of the year, and this weeded out a number of uncooperative poultrymen at once. The agreement may account for their drop in membership. However, there were some members who sold off their flocks at the farm for meat purposes which reflects on the volume handled by the market. Hatcheries, of course, were also needing eggs for the production of chicks and embryo eggs for laboratory use.

The Vineland and South Jersey Cooperative Egg Auction and Poultry Association, Inc., has marketing rules which require the members to give their support; but this market, too, is located in a chick-producing area

and some poultrymen have also disposed of their flocks for meat purposes. However, this market has the smallest drop in membership.

PROGRESS IN POULTRY AND EGG AUCTION SALES

Year	Number Cases of Eggs	Number Crates of Poultry	Pounds of Poultry	Total Combined Value
1944-45	512,667	42,644	2,132,829	\$7,399,916.56
1943-44	668,597	62,667	3,136,619	8,824,088.21
1942-43	707,019	106,846	5,182,047	10,532,636.03
1941-42	632,570	135,620	6,533,789	8,008,928.58
1940-41	532,249	122,679	5,854,246	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
Totals	4,747,867	919,030	44,262,891	\$58,079,710.56

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

SUMMARY OF EGG AND POULTRY AUCTION MARKETS
July, 1944 to June, 1945

Market	Cases of Eggs	Value of Eggs	Crates of Poultry	Pounds of Poultry	Value of Poultry	Total Value
Flemington	186,730	\$2,512,253.72	25,553	1,247,929	\$299,080.10	\$2,811,333.82
Hightstown	65,533	880,916.90	7,939	397,957	91,041.58	971,958.48
Mount Holly	23,518	311,040.09	5,905	309,499	79,907.30	390,947.39
Paterson	31,265	425,896.17	3,247	177,444	40,293.12	466,189.29
Vineland	205,621	2,759,487.58	....	.....	.....	2,759,487.58
Totals	512,667	\$6,889,594.46	42,644	2,132,829	\$510,322.10	\$7,399,916.56
Average price per case, 1944-45		\$13.44		Average price per pound, 1944-45		\$0.239
Average price per case, 1943-44		11.95		Average price per pound, 1943-44		0.266

STATE GRADES AT COOPERATIVE MARKETS

Shortly after the beginning of this fiscal year, the Office of Price Administration issued a revised egg price regulation. It was stated in the last annual report that when this revised egg price regulation was issued, it would require all eggs to be described in terms of U. S. Grades for Eggs and that those eggs sold as U. S. Specials, which is the top grade, would have to be certified as such by the United States Department of Agriculture. The poultry industry of New Jersey opposed this regulation and made a formal protest to the Office of Price Administration. Some-time later the protest was denied by the OPA.

Soon after the protest was filed, officials of the War Food Administration, Office of Price Administration, State Department of Agriculture, and representatives of the New Jersey poultry industry met in conference to discuss that part of the OPA regulation which concerned the grading of

eggs. If this part of the regulation had been accepted without opposition, our cooperative markets would have been subjected to considerable detail work and expense, in addition to being forced to change completely their customary simplified practices. They would have been required to pay a fee equal to 15 per cent of the inspector's salary. In addition, they would have been required to stamp each case with a USDA lot number, a grading certificate number, and issue a grading certificate to each purchaser. The result of the conference was that the usual procedure followed by the cooperatives in identifying each case of eggs with the producer's lot number, weight, and date of inspection would be acceptable. The cooperatives would continue to use the State grade label but, with the use of a rubber stamp, simply indicate the grade of eggs in terms of United States grades. As it is customary for cooperatives to receive and dispose of eggs twice weekly, they are, therefore, required to issue but one blanket grading certificate for each sale, and not to each purchaser. The matter of fees was settled by the Department's underwriting the cost of the Federal grading service. We, in turn, collect from the cooperatives. If this had not been done, the cost of the Federal grading service to the cooperatives would have been approximately 100 per cent greater in fees alone.

The U. S. Grades for Eggs, on which OPA prices are based, are more liberal than the New Jersey State grades. If a producer has been qualifying for New Jersey Fancy, he can relax because he needs only 80 per cent Fancy instead of 90 per cent to obtain the highest maximum price. The same is true in producing New Jersey Grade A. If he will care for his eggs properly so that a case will yield 60 per cent Fancy, he will also obtain the highest maximum price. It has become quite evident that national uniform specifications for individual eggs are needed, and possibly uniform egg grades would improve the marketing of eggs considerably. The War Food Administration has been active in stimulating thought in this direction. Representatives of New Jersey, in company with representatives of other States and marketing organizations, were instrumental in steering the Federal agency in initial efforts to this objective. Committees representing the Northeast have been appointed to study and develop uniform grades. They are working in cooperation with the War Food Administration, which is looking to the Northeast for leadership.

STATE CERTIFIED EGGS

The New Jersey Poultry and Egg Cooperative Marketing Association, Inc., completed its fiscal year on May 31. The year has been most successful in that a much greater volume of eggs has been packed under the State Certified label than in any previous year, and the operations of the association have shown a net profit of about \$7,500. Increased volume of sales is handicapped by lack of adequate working quarters. The association has competed with all other buyers in purchasing eggs at the auction markets. Not only has it paid the high dollar on eggs needed in its operations,

but by its presence on the buying end, it has supported all sales by the auctions. It has had to pay ceiling prices for eggs purchased most of the time. In years without price control, and in years to come when eggs may be over-produced, this stabilizing effect on auction sales will be invaluable. More than that, this is an operation by which prices at retail are controlled by producers.

During the year ending May 31, 1945, the association sold 1,569,037 dozen packed eggs. This volume is 252,717 dozen more than in the preceding year. The eggs sold for \$840,543.26, or at a gross margin of \$47,564.02. Costs of operation were \$40,119.38, leaving a net margin of \$7,444.64. Average selling price for the year was \$0.536 per dozen.

The supervisor of poultry products marketing has devoted considerable time to affairs of this association. He has filled the position of secretary of the association. The Bureau of Markets feels that this is a worthwhile contribution to an association which, through its activities, indirectly influences the business transactions of the most important segment of New Jersey poultrymen.

The association, recognizing the opportunities to be of greater service to the poultry industry, purchased land just outside of Flemington during the year and is developing plans for a new building to fill the needs of a business which is growing rapidly.

COOPERATIVE MARKETS SUMMARY

The supplies of live poultry handled by our cooperative markets are for all practical purposes non-existent. Poultry sales are conducted merely to serve those producers who are still loyal to the cooperatives, and they are few so far as poultry is concerned.

Egg supplies have diminished to the point where the cooperatives are obtaining about 50 per cent of the volume handled in 1943-1944. Toward the end of the fiscal year, the Army issued priorities to secure a supply of nearby eggs. It is very difficult for our cooperatives to meet the demands of the Army and at the same time serve the civilian trade, but they feel that our servicemen should be served first.

Last year there was considerable conflict between the OPA and the cooperatives handling live poultry. The cooperatives performed all of the services of a first receiver, but were not permitted legally to take the first receiver's mark-up. The live poultry markets welcomed legal action on the matter. The OPA ultimately recognized the services of the cooperatives and, through an amendment to the poultry regulation, permitted them to take the mark-up permitted a first receiver.

The OPA district office at Camden brought suit against the Vineland and South Jersey Cooperative Egg Auction and Poultry Association, Inc., charging that the auction in handling eggs was not a first receiver in that it did not take title to the eggs. Another regulation, concerning poultry,

did recognize the same cooperative as a first receiver. The affair caused much embarrassment in the Washington office of the OPA, and the charges were dropped. The cooperative was recognized as a first receiver of eggs as well as poultry. In this case, as in another, our representatives were of considerable help to the Vineland association. Trips were made to Washington and the arguments presented which aided in obtaining favorable recognition.

NEW JERSEY FRESH EGG LAW

The past year has been one in which eggs have passed freely through retail stores. Due to the scarcity of red meat, eggs have been in strong demand. Some distributors still upgrade their product. Their excuse is usually one of two reasons, either of which does not concern the New Jersey Fresh Egg Law. The first reason offered is that much of their help is new and, therefore, not acquainted with egg candling. In such a case our inspectors have little sympathy, as there is always someone in the distributor's employ who can supervise the work of the novice. The second reason given is that OPA price margins are not sufficient to allow proper candling. This is true in most cases, but our yardstick for measuring egg quality is not elastic and does not include a price factor.

Considerable thought has been given to possible ways of improving our fresh egg law. Changes in fresh egg laws by neighbor States are placing New Jersey in a position where some action must be taken to prevent our consumers from being at a disadvantage. New York has always had a requirement that the grade and size of the eggs must be indicated at the point of sale. Connecticut now has practically the same requirement, and Pennsylvania is inclined that way. These changes are not to be construed as barriers of interstate trade, but are simply steps that have been taken to create order in the marketing of eggs.

STATE DEPARTMENT OF AGRICULTURE

NUMBER OF SAMPLES INSPECTED AND PER CENT VIOLATIONS, BY COUNTIES

County	Independent Stores		Chain Stores		All Stores	
	Number Inspected	Per Cent Violations	Number Inspected	Per Cent Violations	Number Inspected	Per Cent Violations
Atlantic	1,096	3.28	429	1.77	1,525	7.34
Bergen	1,225	8.08	266	21.80	1,491	10.53
Burlington	381	3.67	303	11.88	684	7.31
Camden	1,602	4.18	802	21.07	2,404	9.82
Cape May	138	12.32	43	53.49	181	22.10
Cumberland	214	3.74	172	7.56	386	5.44
Essex	3,865	2.20	721	6.52	4,586	2.88
Gloucester	221	2.26	247	22.27	468	12.82
Hudson	3,140	4.14	492	9.96	3,632	4.93
Hunterdon	11	...	...	...	11	...
Mercer	526	26.05	144	13.89	670	23.43
Middlesex	1,411	6.80	210	18.57	1,621	8.33
Monmouth	534	4.49	53	16.98	587	5.62
Morris	373	.80	79	1.27	452	.88
Ocean	15	20.00	7	28.57	22	22.73
Passaic	1,333	6.53	186	6.99	1,519	1.32
Salem	87	2.30	19	5.26	106	2.83
Somerset	234	8.12	52	5.17	286	7.69
Sussex	30	...	14	...	44	...
Union	1,617	3.40	191	6.28	1,808	3.71
Warren	54	1.85	7	28.57	61	4.92
Average		4.90	Average	14.15	Average	6.37
			1944-1945	1943-1944	Per Cent Change	
Total inspections made			22,544	21,981	+ 2.56%	
Total violations			1,436	1,007	+42.60%	
Average per cent violations			6.37%	4.38%	+ 1.99%	

POULTRY STANDARDIZATION

Again as in 1943-1944, there has been an increase in the applications for service in developing high class breeding flocks in New Jersey. Many applicants had to be turned away as the bureau was not able to employ temporary help capable of doing the work. Practically no checking of field agents doing selecting and pullorum testing was possible during the fall and early winter season as the supervisor of poultry standardization was busy keeping the State crew in the field and supplying the field agents' needs. New Jersey is now the only one of the 13 Northeastern States to use pullorum-testing agents. The hatcheries are beginning to feel a need for being classified as "Pullorum Passed" and "Pullorum Clean," which requires State employees to do the testing. The hatcheries would have been in a bad spot if they had depended entirely on State men last season.

Again the bureau coordinated its program with that of the Federal Department, and with other States, by uniting in the National Poultry Improvement Plan. This is the tenth year the national plan has been in operation in New Jersey. Contracts between the Department and the Federal agency have been signed for continuance of the work in the 1945-1946 season.

The program continues to improve in its effectiveness. Under the program as revised a few years ago, the use of privately employed flock selecting agents and testing agents was continued. There were 20 agents, who, after qualifying, were licensed as flock selectors; and 29 were licensed as testing agents. The work of the supervisor of poultry standardization was partly confined to supervising the work of these agents. More of his time should be devoted to such supervisory work, but with the volume of State-selected and -tested birds as it is, much actual field work has been handled by him.

As in past years, a conference was held in Trenton at which instruction was given to applicants qualifying as selectors and testers. At this conference, instructors from the poultry division of the College of Agriculture cooperated with representatives of the Bureau of Markets and the Bureau of Animal Industry. At the close of the conference a written examination was given and those passing were given field tests.

This year makes the twenty-third in which a poultry improvement program has been carried by the Bureau of Markets. As previously stated, our program for the last ten years has been coordinated with that of other States in the development of the national plan. The program has included breed improvement together with pullorum disease control. The several classes are 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

New Jersey hatcheries under supervision did approximately the same amount of business as in 1944. The shortage of hatching eggs limited the number of chicks hatched. The smaller hatcheries closed down about June 1. The larger ones will continue at a reduced rate the balance of this year. There has been considerable more demand for Record of Performance cockerel chicks than were produced in the Garden State.

Twice during the year our work in New Jersey was checked by Federal supervisors. These men not only observed our work, but suggested improvements in further carrying on the service.

Two tables are included to give the classification and distribution of birds under supervision, and the number of birds handled by breeds and by counties in which the work was conducted.

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 and decreases that have taken place in the services rendered.

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

NUMBER OF BIRDS

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	Pul. Clean	
Atlantic	21	1,788	8,454	...	...	452	14,231	...	...	...	...	...	...	24,925
Bergen	8	...	...	...	...	...	2,205	...	...	...	5,640	...	...	7,845
Burlington	15	...	2,971	...	...	...	7,678	...	...	...	55	...	...	10,704
Camden	2	...	776	...	...	...	488	...	...	...	...	...	...	1,264
Cape May	12	...	12,622	...	...	...	4,417	...	...	...	1,232	...	...	18,271
Cumberland	109	3,654	14,127	...	...	2,105	52,681	...	...	...	2,333	2,120	20	77,040
Gloucester	11	...	...	3,048	7,191	1,141	3,469	...	...	...	848	...	...	15,697
Hunterdon	21	...	...	...	...	529	8,927	...	...	499	2,776	2,497	45	15,273
Mercer	34	...	...	...	...	...	10,176	...	1,368	...	2,556	...	375	14,475
Middlesex	8	...	2,541	3,140	...	942	385	...	...	...	790	1,593	229	9,620
Monmouth	52	1,328	...	...	...	1,109	30,441	...	...	720	8,996	...	175	42,769
Morris	10	...	...	...	...	...	961	1,376	...	137	4,315	...	...	6,789
Ocean	58	...	575	...	...	...	9,735	...	...	5,671	32,517	...	...	48,498
Passaic	4	...	...	...	...	...	791	...	...	...	955	...	...	1,746
Salem	64	354	5,228	...	...	1,057	25,121	...	...	...	...	...	...	31,760
Somerset	12	...	...	2,842	...	...	1,594	1,491	...	...	305	...	142	6,374
Sussex	9	...	...	...	...	...	2,659	786	358	...	82	...	1,022	4,907
Warren	5	...	436	...	...	...	87	...	...	...	1,179	...	...	1,702
Out-of-State	79	...	1,717	...	...	1,074	21,814	...	...	...	803	...	...	25,408
Totals	534	7,124	49,447	9,030	7,191	8,409	197,860	3,653	1,726	7,027	65,382	6,210	2,008	365,067

NUMBER OF BREEDERS, BY COUNTIES AND VARIETIES*

WR Cross, BRxReds,
RedsxBR,
BrahmaxBR,
RedsxCornish,
WLxIBM,
BRxJBG, LBxWR

County	Leghorns	New Hampshires	Rhode Island Reds	Barred Rocks	White Rocks	Jersey Black Giants	Black Minorcas	Brahmas	Turkeys	
Atlantic	15,991	865	5,314	1,212	452	...	155	...	...	936
Bergen	4,681	2,476	379	309	...	...	...	...	...	...
Burlington	2,971	3,983	251	...	183	1,800	...	...	55	1,461
Camden	...	...	776	...	488	...	...	...	...	...
Cape May	8,768	...	9,426	...	...	...	77	...	...	...
Cumberland	34,804	14,884	10,007	3,188	2,325	...	272	553	20	10,987
Gloucester	10,497	...	2,978	...	455	...	...	...	848	919
Hunterdon	7,163	5,692	1,908	...	...	...	...	...	45	465
Mercer	3,104	5,308	855	2,386	...	561	...	...	253	2,008
Middlesex	6,471	1,732	...	942	...	...	...	...	229	246
Monmouth	31,384	657	408	4,233	...	...	...	...	1,849	4,238
Morris	3,765	1,894	359	634	...	...	...	...	137	...
Ocean	45,859	2,639	...	...	...	...	...	...	...	...
Passaic	1,435	311	...	...	...	...	...	...	...	...
Salem	13,285	2,484	2,551	1,219	3,120	...	196	...	...	8,905
Somerset	667	1,156	2,842	204	...	76	...	...	142	1,287
Sussex	3,248	193	1,307	...	...	...	...	...	159	...
Warren	1,179	90	198	148	87	...	...	...	...	...
Out-of-State†	3,020	4,558	3,337	7,128	1,141	...	...	...	803	5,421
Totals	198,292	48,922	42,896	21,603	8,251	2,437	700	553	4,540	36,873

Total number of breeders—365,067

* Number of birds rejected, number of reactors, and flocks dropped are not included.
† Banded by flock selecting agents, supervised by New Jersey Department of Agriculture.

N. J.-U. S.	1944-45	1943-44	Per Cent Changes in 1945
Number of flocks cooperating	534	681	-21.6
Total number of breeders	365,067	369,793	- 1.3
Number of hatcheries cooperating	55	47	+17.0
Hatchery capacity cooperating	4,729,420	4,385,230	+ 7.8
Number of birds in pullorum stages only	80,627	51,546	+56.4
Number of birds in Approved stages only	211,648	244,520	-13.4
Number of birds in certified stages only	72,792	73,727	- 1.3
Number of birds in R. O. P. Trapnest Project	2,983	2,710	+10.1
Number of birds qualified as Register of Merit	23	15	+53.3
Number of females in R. O. P. breeding pens	1,042	820	+27.1
Number of R. O. P. chicks produced	21,811	17,475	+24.8
Number of R. O. P. chicks and cockerels sold	3,276	1,663	+97.0
Number of R. O. P. chicks and cockerels entering New Jersey	7,557	.....	.....
Per cent of birds reacting to the pullorum test	.83	1.566	-47.0
Number of flock inspections	163	91	+79.1
Number of hatchery inspections	65	67	- 3.0
Number of R. O. P. inspections	19	13	+46.2
Number of farm visits	107	133	-19.5

MISCELLANEOUS ACTIVITIES

In addition to the reports of organized projects, our poultry division has been called upon for many miscellaneous services about which some mention should be made.

Considerable time has been given to interpretations, price regulations and compilation of price information as a guide to our poultry associations and individual poultrymen and dealers. The OPA regulations were subject to many changes during the year. Our men were requested to keep informed constantly as to these changes, and to prepare advisory material for those affected financially. In this work, we conferred constantly with local and regional OPA officials so that there would be no difference of interpretation of Federal orders. This work was greatly appreciated by our producers and others who benefited, and was approved by enforcement officers of the OPA.

Services were rendered to the New Jersey Turkey Growers' Cooperative Association, Inc., in line with activities of former years. In addition, representatives of the bureau took an active part in our meetings of the Northeastern turkey growers, and made it possible that New Jerseyites could benefit through cooperation with producers from the other States in our area.

Anticipating that another surplus of eggs would flood the markets in the spring of 1945, as in 1944, the Federal Agricultural Adjustment Administration requested this department to hold a conference of poultry industry representatives and discuss a flock reduction program. The supervisor was named secretary of the conference, which was held in Trenton in November, and assigned to disseminate the information brought out. The Federal agency advised that ways should be worked out to reduce the total national laying flock from its estimated level of 500 million to approxi-

mately 400 million. Otherwise, the AAA predicted, adding confirming statements from WFA, another egg glut would develop in 1945 and would be of such great proportions that the Government would be unable to meet its price support obligations under the Steagall amendment.

Resolutions advocating a flock reduction program were prepared and concurring action was taken by a number of other poultry groups. The conference had not reckoned with a greatly increased purchase program for the armed services, however. Shortly after the conference was held, the 1945 plans for military procurement were announced, and from the day of that announcement forward, no further thought had to be given to the hen-reduction proposals. Instead, from December through and beyond the next half year, which normally would be egg surplus months, shortages of eggs became increasingly worse, as noted elsewhere.

The poultry section of the Bureau of Markets cooperated with organizations who are members of The Cooperative Marketing Associations in New Jersey, Inc., by arranging the poultry part of the annual meeting program of the State association. Advance and follow-up publicity of the entire program was prepared by the poultry project supervisor.

Special assistance was given in clearing up allegations submitted by OPA of wilful violation of the live hog ceiling price order by two of the cooperative livestock auctions. Our efforts were successful to the extent that a self-audit of the accounts was permitted and only single damages were collected by OPA, with no stigma of deliberate violation being attached thereby.

A special egg exhibit was set up at the Flemington Agricultural Fair in space provided by the Flemington Auction Market Association. The management reported a total attendance of 70,000, many of whom viewed the egg exhibit and showed interest in the more modern methods of egg marketing as demonstrated. These exhibits and demonstrations have proven very effective in developing consumer interest in New Jersey products.

FARMERS' WEEK POULTRY PROGRAM

A full two-day poultry program was held during 1945 Farmers' Week, and in addition to participating in the activities, the supervisor of poultry products marketing handled press and radio information on the poultry subjects. Arrangements were also made for the State Poultry Dinner and special program features.

As in the past, the supervisor of poultry products marketing gave a large amount of his time during Farmers' Week to helping in the big chore of publicity and information. A variety of news articles was prepared on other than poultry subjects; many photographs of feature events were taken and finished in the improvised dark room set up for the week.

The egg grading and packing contest was held again this year as part of the Farmers' Week activities. The contest was supervised by the supervisor of poultry products marketing. Students participated in a series of elimination contests early in January, and two winners from each of the three regions of the State journey to Trenton for the finals. The vocational agricultural students and the 4-H boys competed separately. In general, the contest was practical and met with the approval of the vocational teachers and 4-H Club leaders. Cash awards in war saving stamps were presented to the winners of each group and apportioned according to their standing in the finals.

The committee on agriculture of the State Chamber of Commerce requested assistance in the preparation of a circular for popular distribution on the agricultural industry of New Jersey and its relationship with commerce and the consumer. The supervisor of poultry products marketing participated in two editorial conferences on this bulletin, and was assigned to prepare chapters on marketing and distribution, with notes for maps and illustrations—all of which were completed. Cooperation with the agricultural committee was given on several other matters related to the work of this Department.

Participating in a feed dealers' conference at Vineland, called by the New Jersey Secretary of Agriculture in an effort to work out a program of sanitation to prevent the further spread of Newcastle disease, the supervisor of poultry products marketing prepared and distributed the official report.

The Northeastern Poultry Producers' Council represents the mutual interests of the poultrymen and allied industries of the 13 Northeastern States. As has been done for the past three years, the supervisor of poultry products marketing was again in charge of press and radio information for the series of meetings held in New York City in August 1944. Similarly, representatives of State government agencies from other States and agricultural extension staff workers cooperated in other work in connection with these meetings. We also participated in the Neppco conferences on egg and poultry grading, on business management, and on marketing problems common to New Jersey and other Northeastern States.

Assistance was given the War Food Administration on a number of matters, principally in the survey of cold storage facilities for the provisional storage of eggs during the period of great oversupply in the early summer of 1944. We also cooperated with this agency and with the New Jersey egg marketing organizations on the problem of supplies of egg cases and cartons to assure the proper packaging of New Jersey eggs.

EXPANSION OF PULLORUM CONTROL PROPOSED

The Jersey Chick Association, representing more than 100 New Jersey hatcherymen, requested the services of the Department's poultry division in its annual program at Atlantic City in October, on a special committee

to consider the possibilities of an expanded pullorum disease control program for the State, in the series of conferences following the discovery of the outbreak of Newcastle disease, and in the preparation of promotional literature and advertising in cooperation with the New Jersey Council, Department of Economic Development.

The supervisor of poultry products marketing was requested to determine what the attitudes of breeders and hatcherymen, as well as chick buyers, might be toward the question of pullorum disease control in New Jersey, while other members of the committee were working on the technical aspects of the problem. We interviewed 284 hatcherymen, breeders and out-flock owners, by mail, and a detailed report of our findings was presented to the special committee, to the association, and to this Department. Briefly, we were able to confirm that a number of responsible members of the hatchery and breeding industry have noted that New Jersey chicks and breeding stock have suffered loss of popularity by comparison with those from the New England States where pullorum eradication has been more aggressively and generally practiced under expanded facilities provided by State governments; and that a similar program should be followed here in the interests of the general agricultural public as well as to assist the hatching and breeding industry in efforts to supply healthy production stock to our farmers. Such a program would also help to maintain New Jersey's reputation as a source of breeding stock, according to those interviewed, and place this State on a sound competitive footing for the future. Although a minority of those interviewed expressed opinions which questioned the need for government sponsorship of an eradication program, the consensus of an overwhelming majority was that the problem could not be solved without State assistance on a larger scale than heretofore provided. Our interviews indicated that approximately three-quarters of a million birds would be the maximum number likely to be offered for test, but the judgment of the committee was that the actual number would be closer to 500,000 tests per year.

Cooperation was given to the Jersey Chick Association in the preparation and editing of the 1945 issue of its annual directory, "A Guide to Better Chicks," and in its distribution.

The supervisor was a member of a special committee which developed a program to commemorate publicly the outstanding poultry breeding achievements of two New Jersey breeders, George Pearce of Whitehouse, and C. T. Darby of Somerville. Both established new national records for contest-pen egg production—Mr. Pearce for the New Hampshire Red breed; Mr. Darby for Leghorns. A dinner was given to honor these poultrymen. Special awards and photographs of the presentations provided excellent publicity material which we distributed to the press.

During such strenuous years as these through which we have passed, there are many requests that come to the Bureau of Markets. Very few of these special requests were ever thought of when the bureau was

organized. Many do not necessarily fall to us in line of prescribed duties. All of the bureau personnel have done their best to aid in trying times. We have not always satisfied the applicant, but feel that as departmental employees we must serve wherever possible in aiding farmers. We are certain that we have accomplished many things which have been of assistance in the war effort.

Report of the Bureau of Plant Industry

HARRY B. WEISS, *Chief*

STATISTICAL AND RELATED WORK

NEW JERSEY AGRICULTURE IN 1944*

Although the weather during the planting, growing and harvesting seasons was not favorable, New Jersey farmers gathered relatively fair crops. March and April were cold and wet, July and August extremely hot and dry, and September brought the most destructive storm in the annals of the State during the last fifty years.

There were 858,993 acres of various commodities, fruit trees excluded, harvested in 1944, or 18,931 acres more than in 1943 and 52,320 acres above the ten-year, 1934-1943, average acreage. The increase is 2.25 per cent and 6.49 per cent, respectively. Grain crops showed an increase of 17,000 acres compared to 1943 and 3,500 acres more than the ten-year 1934-1943, average acreage. White potato acreage remained the same as in 1943, being 71,000 acres, and exceeded the ten-year average acreage, 1934-1943, by 15,300 acres. All hay dropped to 248,000 acres, or 12,000 acres less than in 1943, and yet was 6,000 acres above the ten-year, 1934-1943 average. Berries for market stood at 10,800 acres, or 700 acres below the 1943 average and 2,510 acres under the ten-year, 1934-1943, average. Vegetables for market, white potatoes excluded, registered 113,300 acres, or 1,572 acres more than in 1943 and 302 acres below the ten-year, 1934-1943, average acreage. Vegetables and berries for processing, cranberries excluded, rose to 84,113 acres or 12,979 acres more than in 1943 and 27,272 acres above the ten-year, 1934-1943, average. The acreage of cranberries for processing in 1944 stood at 5,780 acres, or 80 acres more than in 1943, and 1,060 acres above the ten-year, 1934-1943, acreage.

In 1944, the total production of all crops, including fruits, amounted to 51,985,286 bushels or crates, as well as 339,000 tons of all hay, as compared with 51,028,642 bushels or crates and 412,000 tons of all hay in 1943, and 51,236,338 bushels or crates and 374,000 tons of all hay, the ten-year, 1934-1943, average annual production. Production of all grain crops

* Many crops, such as broccoli, radishes, dandelions, parsley, scallions, rhubarb, escarole, parsnips, cultivated and wild blueberries, cherries, buckwheat, etc., are not included in this report because their records are not being taken. In estimating gross cash and net income, the value of these crops should be taken into consideration.

amounted in 1944 to 9,915,000 bushels, or 1,159,000 bushels more than in 1943, and 504,000 bushels below the ten-year, 1934-1943, average annual production. White potatoes yielded in 1944 approximately 8,804,000 bushels, or 2,627,000 bushels less than in 1943 and 829,000 bushels below the ten-year, 1934-1943, average. In 1944, farmers cut approximately 339,000 tons of all hay, or 73,000 tons less than in 1943 and 35,000 tons below the ten-year, 1934-1943, production. The 1944 yield of apples, peaches and pears stood at 3,335,000 bushels, or 341,000 bushels more than in 1943 and 775,000 bushels less than the ten-year, 1934-1943, average. Berries for market yielded in 1944 approximately 496,733 bushels, or 30,185 bushels less than in 1943 and 113,483 bushels below the ten-year, 1934-1943, average. The 1944 production of vegetables for market, white potatoes excluded, reached 16,483,000 bushels or crates, or 692,500 bushels or crates more than in 1943 and 1,251,600 bushels or crates below the ten-year, 1934-1943, average production. Vegetables and berries for processing, cranberries excluded, reached in 1944 a high point of 12,846,462 bushels, or 1,423,329 bushels above the 1943 and 4,242,516 bushels in excess of the ten-year, 1934-1943, average annual production. The 1944 production of cranberries for processing was 105,091 bushels, or 2,000 bushels less than in 1943 and 20,485 bushels below the ten-year, 1934-1943, average annual production.

The 1944 total farm value of all crops listed above reached \$95,401,469, or \$1,011,420 more than in 1943 and \$43,985,479 above the ten-year, 1934-1943, average annual farm value. The grain crops contributed in 1944 approximately \$13,859,000, or 14.5 per cent of the total farm value; the share of white potatoes was \$14,967,000, or 15.7 per cent of the total farm value; hay \$9,774,000, or 10.2 per cent; tree fruits \$8,214,000, or 8.6 per cent; berries for market \$3,518,510, or 3.7 per cent; vegetables, except white potatoes, for market, \$29,495,000, or 30.9 per cent; vegetables and berries for processing, cranberries excluded, \$14,741,639, or 15.5 per cent, and cranberries for processing \$832,320, or 0.9 per cent of the total farm value.

VEGETABLES

ACREAGE

The 1944 acreage devoted to vegetables for market and processing, white potatoes excluded, stood at 197,413 acres against 182,862 acres in 1943 and 170,443 acres, the ten-year average acreage, 1934-1943. The increase is 14,551 acres and 26,970 acres, or 8 and 16 per cent, respectively. The larger acreage in 1944 is due mostly to the increase in acreage of vegetables for processing because, of the 14,551 acres, the total increase in 1944 as compared with 1943, 12,979 acres were devoted to processing and only 1,572 acres to the fresh market. Comparison of the 1944 acreage with the ten-year, 1934-1943, average acreage shows that in 1944 the acreage of vegetables for market declined 302 acres, while the acreage for processing rose 27,272 acres.

The 1944 total acreage of vegetables for market, white potatoes excluded, was 113,300 acres against 111,728 acres in 1943 and 113,602 acres, the ten-year, 1934-1943, average acreage. There was no great change in the acreage of each individual vegetable for market between 1943 and 1944. Sweet corn showed the greatest increase of 1,000 acres in 1944 as compared with 1943, while snap beans registered the greatest decline of 1,000 acres. The acreages of other individual vegetables fluctuated up or down within the range of 700 acres above the 1943 acreage and 500 acres below the 1943 acreage. The acreage of some vegetables remained steady. Comparison of the 1944 acreage of individual vegetables for market with the ten-year, 1934-1943, average acreage, reveals that three commodities have undergone a relatively strong change: namely, the acreage of cabbage went up 1,730 acres in 1944 as compared with the ten-year average; peppers also increased 1,680 acres; the acreage of sweet corn declined 1,600 acres. The acreages of other vegetables changed slightly.

The 1944 acreage of vegetables and berries for processing, cranberries excluded, was 84,113 acres against 71,134 in 1943, and 56,841 acres, the ten-year, 1934-1943, average acreage. Comparison of 1944 acreage with 1943 acreage shows that the increase in tomato acreage amounted to 7,501 acres in 1944 against 1943; pumpkins went up 2,104 acres; beets, 1,585 acres; peppers, 446 acres; snap beans, 406 acres, and other vegetables and berries, 1,861 acres, while the acreage of asparagus declined 925 acres. Considerably greater increase took place when the 1944 acreage is compared with the ten-year, 1934-1943, average acreage. Every commodity registered a strong upward swing in 1944, compared with the ten-year average. Tomatoes went up 6,473 acres; asparagus, 5,162 acres; beets, 2,366 acres; pumpkins, 1,941 acres; snap beans, 1,572 acres; peppers, 469 acres, and other vegetables and berries, 9,289 acres.

PRODUCTION

The 1944 production of vegetables and berries, white potatoes and cranberries excluded, reached 29,329,462 bushels or crates against 27,213,633 in 1943, and 26,338,546, the ten-year, 1934-1943, average. The 1944 increase over that of 1943 is 7.8 per cent, and over the ten-year average, 11.4 per cent. In 1944, vegetables for market constituted 16,483,000 bushels or crates, and vegetables and berries for processing 12,846,462 bushels; i.e., 56.2 per cent for market and 43.8 per cent for processing. In 1943, there were 15,790,000 bushels and crates for market and 11,423,133 for processing; i.e., 58 per cent for market and 42 per cent for processing. The ten-year, 1934-1943, average annual production of vegetables for market was 17,734,600 bushels or crates and 8,603,946 for processing; i.e., 67.3 per cent for market and 32.7 per cent for processing. It is evident that the production of vegetables and berries for processing is increasing from year to year at a greater rate than the production of vegetables for market.

YIELD

The average yield per acre of all vegetables for market, white potatoes excluded, stood at 145 bushels or crates in 1944, against 141 bushels in 1943 and 156 bushels, the ten-year, 1934-1943, average. The 1944 average yield per acre of vegetables and berries for processing was 153 bushels or crates, against 161 in 1943, and 151, the ten-year, 1934-1943, average. All vegetables and berries for market and processing, white potatoes excluded, have yielded in 1944 approximately 149 bushels or crates per acre, against the same figure, 149, in 1943, and 155, the ten-year, 1934-1943, average.

TOTAL FARM VALUE

The total 1944 farm value of vegetables and berries for market and processing, white potatoes and cranberries excluded, stood at \$44,236,639, as compared with \$42,822,067 in 1943 and \$22,021,327, the ten-year, 1934-1943, average. In 1944, the farm value of vegetables for market, white potatoes excluded, was \$29,495,000, and vegetables and berries for processing, cranberries excluded, was \$14,741,639, or 66.7 per cent for market and 33.3 per cent for processing. In 1943, the relation was 71.8 per cent for market and 28.2 per cent for processing. The ten-year, 1934-1943, average relationship stood at 74.3 per cent for market and 25.7 per cent for processing.

The leading vegetables for market as far as farm value is concerned in 1944 were: sweet potatoes, \$5,400,000; tomatoes, \$4,125,000; asparagus, \$3,988,000; sweet corn, \$2,167,000; cabbage, \$2,114,000; peppers, \$1,584,000; snap beans, \$1,522,000; lettuce, \$1,318,000; spinach, \$1,094,000; onions, \$1,049,000, and celery, \$1,041,000.

The 1944 farm value of vegetables for processing was as follows: tomatoes, \$7,297,585; asparagus, \$2,803,703; beets, \$581,863; snap beans, \$425,298; peppers, \$139,993; pumpkins, \$119,915, and other vegetables and berries, cranberries excluded, \$3,373,281.

AVERAGE FARM PRICE

The 1944 average farm price per bushel or crate of all vegetables and berries for market and processing was \$1.51 against \$1.57 in 1943 and \$0.84, the ten-year, 1934-1943, average price. The 1944 average farm price of vegetables for market per bushel or crate, white potatoes excluded, stood at \$1.79, as compared with \$1.95 in 1943, and \$0.92, the ten-year, 1934-1943, average price. The 1944 average farm price of vegetables and berries for processing, per bushel or crate, stood at \$1.15, against \$1.06 in 1943 and \$0.66, the ten-year, 1934-1943, average price.

Generally, the season was quite successful although not outstanding.

CRANBERRIES FOR PROCESSING

The cranberry industry in New Jersey is declining. The average annual production for market and processing during the five-year period, 1940-1944, amounted to only 79,200 barrels, as compared with 149,092 barrels in 1910-1914, 152,777 barrels during 1915-1919, 185,000 barrels in 1920-1924, 125,600 barrels during 1925-1929, 115,600 barrels during 1930-1934, and 97,000 barrels during 1935-1939. The preliminary forecast of 1945 production is placed at the low figure of 45,000 barrels. It is evident that production during recent years has declined more than 50 per cent.

The 36-year, 1910-1945, average annual production stood at 126,843 barrels. From 1910 to 1938, the annual productions in most instances were higher than the 36-year average production. Since 1938, however, each year's production has fallen far below the average, ranging from 21,843 barrels under the average in 1942 to 81,843 barrels below the average in 1945.

One is inclined to compare the present critical situation of the cranberry industry with that of the peach industry between 1890 and 1910, when the number of trees in the State declined from about 5,000,000 in 1890 to about 2,000,000 in 1910.

During 1944, the cranberry crop from approximately 5,780 acres was devoted to processing as compared with 5,700 acres in 1943 and 4,720 acres, the ten-year average, 1934-1943, acreage. The quantities of berries from these acreages were 105,091 bushels in 1944 against 107,091 bushels in 1943 and 125,576 bushels, the ten-year, 1934-1943, average. The farm value in 1944 reached \$832,320 as compared with \$477,090 in 1943 and \$411,152, the ten-year average, 1934-1943.

The 1944 farm price per unit was excellent and those growers who took care of their bogs were well remunerated.

WHITE POTATOES

The weather during the 1944 planting, growing and harvesting seasons was not favorable. The spring was very wet and cold, and the summer unusually hot and dry. Such weather is not conducive to good yields, especially for white potatoes.

The 1944 acreage of white potatoes remained the same as the 1943 acreage, i.e., 71,000 acres, and was 15,300 acres above the ten-year, 1934-1943, average acreage. Production in 1944, on account of the unfavorable weather, was low, standing at 8,804,000 bushels, against 11,431,000 bushels in 1943 and 9,633,000 bushels, the ten-year, 1934-1943, average production. The 1944 average yield per acre of 124 bushels stood 37 bushels less than in 1943, and 49 bushels below the ten-year, 1934-1943, average yield. Due to the shortage of the crop, the average farm price per bushel in 1944 stood at \$1.70, or 30 cents above the 1943 price, and 93 cents higher than the ten-year, 1934-1943, average farm price. The 1944 total farm value amounted

to \$14,967,000 against \$16,003,000 in 1943, and \$7,419,000, the ten-year, 1934-1943, average farm value. Generally, growers enjoyed a good, prosperous year.

GRAIN CROPS

The total acreage of grain crops in 1944 amounted to 326,000 acres as compared with 309,000 acres in 1943 and 322,500 acres, the ten-year, 1934-1943, average acreage. All corn went up from 179,000 acres in 1943 to 193,000 acres in 1944, an increase of 14,000 acres. The 1944 acreage of wheat was 60,000 acres, or 14,000 acres above the 1943 acreage. Rye for grain also showed an increase of 1,000 acres, being 14,000 acres in 1944. Oats for grain declined from 44,000 acres in 1943 to 39,000 acres in 1944. The acreage of barley for grain remained the same, i.e., 7,000 acres.

The 1944 average yield per acre of all these grain crops was 30.4 bushels against 28.3 bushels in 1943 and 32.3 bushels, the ten-year, 1934-1943, average. The all corn average yield per acre in 1944 surpassed the 1943 yield by one bushel, being 35 bushels. Wheat yielded excellently—23 bushels per acre against 20 bushels in 1943. Oats for grain also exceeded the 1943 yield by 6 bushels, being 31 bushels per acre. Rye for grain gave an average yield of 17.5 bushels, or 1.5 bushels above the 1943 yield, and barley for grain followed the trend of other grain crops with the 1944 average of 28 bushels per acre against 26 bushels in 1943.

The total 1944 production of all grain crops amounted to 9,915,000 bushels, against 8,756,000 bushels in 1943 and 10,419,000 bushels, the ten-year, 1934-1943, average production. Of course, corn was the leader in 1944, with 6,755,000 bushels; wheat followed with 1,380,000 bushels; and oats for grain next to wheat with 1,209,000 bushels. The 1944 production of rye and barley was 245,000 and 196,000 bushels, respectively.

The average 1944 farm price of all grain crops was \$1.40 per bushel as compared with \$1.36 in 1943 and \$0.84, the ten-year, 1934-1943, average. The average price per bushel of each individual grain crop in 1944 exceeded that in 1943 and the ten-year, 1934-1943, average. Correspondingly, the average farm value per acre of all grain crops combined was \$42.51 in 1944; \$38.60 in 1943; and \$27.28, the ten-year, 1934-1943, average.

The 1944 total farm value of all grain crops stood at \$13,859,000 against \$11,927,000 in 1943 and \$8,798,000, the ten-year, 1934-1943, average. The farm value of all corn in 1944 was \$9,862,000; wheat, \$2,125,000; oats for grain, \$1,016,000; rye for grain, \$331,000; and barley for grain, \$245,000.

The year was quite successful for the grain growers.

HAY

The dry weather during the summer of 1944 did not facilitate normal growth of hay. On that account, the average yield per acre of all hay was 1.37 tons against 1.58 tons in 1943, and 1.55 tons, the ten-year, 1934-1943,

THIRTIETH ANNUAL REPORT

135

The acreage of all hay cut in 1944 was 248,000 acres as compared with 260,000 acres in 1943, and 242,000 acres, the ten-year, 1934-1943, average acreage. The acreage of alfalfa went up from 63,000 acres in 1943 to 66,000 acres in 1944, while the acreage of clover and timothy went down from 115,000 acres in 1943 to 106,000 acres in 1944. The remaining grasses, such as soybeans for hay, cowpeas for hay, and wild hay showed declines in acreage.

The total 1944 production of all hay amounted to 339,000 tons as compared with 412,000 tons in 1943 and 374,000 tons, the ten-year, 1934-1943, average. The total farm value of all hay stood in 1944 at \$9,774,000 against \$10,496,000 in 1943 and \$6,172,000, the ten-year, 1934-1943, average.

The year was not successful for the farmers growing hay.

TREE FRUITS

The total production of tree fruits was 3,335,000 bushels in 1944 as compared with 2,994,000 bushels in 1943 and 4,110,000 bushels, the ten-year, 1934-1943, production. In 1944, commercial apples yielded 2,090,000 bushels or about the same as in 1943; production of peaches amounted to 1,193,000 bushels against 918,000 bushels in 1943, and pears yielded 52,000 bushels or 4,000 bushels more than in 1943.

The average price received by farmers per bushel of apples in 1944 was \$2.50 against \$2.61 in 1943 and \$1.02, the ten-year, 1934-1943, average. The average 1944 farm price of peaches stood at \$2.70 a bushel as compared with \$4.00 in 1943 and \$1.46, the ten-year, 1934-1943, average.

The 1944 total farm value of all fruit trees amounted to \$8,214,000 compared to \$9,042,000 in 1943 and \$4,592,000, the ten-year, 1934-1943, average. In 1944 commercial apples contributed \$4,912,000; peaches, \$3,221,000; and pears, \$81,000.

The year was unsuccessful, especially for apple growers whose crop was severely damaged by the hurricane on September 14.

BERRIES AND GRAPES FOR MARKET

The combined 1944 acreage of cranberries, strawberries, blackberries and raspberries for market amounted to 10,800 acres against 11,500 acres in 1943 and 13,310 acres, the ten-year, 1934-1943, average. The 1944 production of these berries, grapes added, amounted to 496,733 bushels compared to 526,918 in 1943 and 610,216, the ten-year, 1934-1943, average. The total farm value amounted to \$3,518,510 in 1944 against \$3,622,892 in 1943 and \$2,002,511, the ten-year, 1934-1943, average.

RANK OF NEW JERSEY AMONG OTHER STATES IN THE PRODUCTION OF
CERTAIN VEGETABLES, FRUITS AND BERRIES, AND HAY
AND GRAINS IN 1944*

New Jersey continued to maintain its reputation as the "Garden State" in 1944. Although the Garden State has a land area many times smaller than its principal competing States, being 45th in size among all the States, and occupying only one-fourth of one per cent of the territory of the nation, New Jersey farmers deliver large quantities of perishable and semi-perishable produce to the New York and Philadelphia markets as well as to the consuming centers within the State, and the distant food distributing cities of the United States. In normal times, some of its agricultural products are exported to foreign countries. Food articles processed in New Jersey are shipped to the many foreign countries.

Throughout the year New Jersey supplies its own population and the neighboring metropolitan areas with milk, eggs, poultry meat, pork, beef, and veal.

In 1944, New Jersey ranked in production of commodities as follows:

- 1st—green lima beans for processing
- 2nd—asparagus for market and processing; California first
 - sweet corn for market; New York first
 - green peppers for market; Florida first
 - early Irish potatoes; California first
 - eggplant; Florida first
 - green lima beans for market; Florida first
- 3rd—snap beans for market; Florida first, California second
 - cucumbers for market; New York first, Maryland second
 - beets for market; Texas first, Pennsylvania second
 - cranberries; Massachusetts first, Wisconsin second
- 4th—lettuce; California first, Arizona second, New York third
 - spinach; Texas first, California second, Pennsylvania third
 - beets for processing; New York first, Wisconsin second, Oregon third
 - tomatoes for processing; California first, Indiana second, Maryland third
- 5th—cauliflower; California first, New York second, Arizona third, Oregon fourth
 - tomatoes for market; Texas first, California second, Florida third, New York fourth

* Based upon data published January 1945 by the United States Department of Agriculture in "Crops and Markets"

THIRTIETH ANNUAL REPORT

137

(New Jersey ranked fifth in acreage of 25 vegetable crops for fresh market; California was first, Texas second, Florida third and New York fourth.)

7th—cabbage for market and celery

8th—total acreage of vegetables for market and processing

10th—green peas for market and sweet potatoes

12th—strawberries and carrots

—New Jersey ranked twelfth in acreage of all crops for processing

13th—cantaloupes, all white potatoes, and apples

14th—corn for silage and grapes

15th—onions and peaches

19th—watermelons and cowpeas for hay

20th—soybeans for hay

24th—rye

25th—soybeans for beans

27th—clover and timothy hay

31st—corn for grain, all corn and wild hay

32nd—winter wheat

33rd—alfalfa hay

34th—all wheat

37th—oats, barley and pears

AVERAGE YIELD PER ACRE, AVERAGE FARM VALUE PER ACRE AND AVERAGE FARM VALUE PER UNIT DURING 1944, 1943
AND THE TEN-YEAR AVERAGE, 1934-1943

Crop	Unit	Average Yield per Acre			Average Farm Value per Acre			Average Farm Price per Unit		
		1944	1943	10 yr. Average 1934-1943	1944	1943	10 yr. Average 1934-1943	1944	1943	10 yr. Average 1934-1943
Grain Crops	bu.	30.4	28.3	32.3	\$42.51	\$38.60	\$27.28	\$1.40	\$1.36	\$0.84
Potatoes, white	bu.	124.	161.	173.	210.80	225.39	133.20	1.70	1.40	0.77
Hay, all	ton	1.367	1.585	1.545	39.41	40.37	25.50	28.80	25.50	16.50
Tree Fruits	bu.	.....	.....	.....	.....	.....	.....	2.46	3.02	1.12
Cranberries, Strawberries, Raspberries, Blackberries and Dewberries	bu.	29.9	33.6	33.1	300.79	298.95	141.89	10.04	8.89	4.28
Vegetables for market*	bu. & crt.	145.	141.	156.	260.33	275.28	144.04	1.79	1.95	0.92
Vegetables for processing	bu.	153.	161.	151.	175.26	169.62	99.55	1.15	1.06	0.66
Vegetables for market and processing, except white potatoes	bu.	149.	149.	155.	224.08	234.18	129.20	1.51	1.57	0.84
All Vegetables, including White Potatoes	bu. & crt.	142.	152.	159.	\$220.57	\$231.72	\$130.18	\$1.55	\$1.52	\$0.82

* Excludes white potatoes.

ACREAGE, PRODUCTION AND FARM VALUE OF NEW JERSEY CROPS DURING 1944, 1943 AND THE TEN-YEAR AVERAGE, 1934-1943

	Unit	Acreage*			Total Production			Total Farm Value		
		1944	1943	10-yr. Average 1934-1943	1944	1943	10-yr. Average 1934-1943	1944	1943	10-yr. Average 1934-1943
Crops	bu.	326,000	309,000	322,500	9,915,000	8,756,000	10,419,000	\$13,859,000	\$11,927,000	\$8,798,000
Apples, white	bu.	71,000	71,000	55,700	8,804,000	11,431,000	9,633,000	14,967,000	16,003,000	7,419,000
Apples, red	ton	248,000	260,000	242,000	339,000	412,000	374,000	9,774,000	10,496,000	6,172,000
Fruits	bu.	.....	.....	.....	3,335,000	2,994,000	4,110,000	8,214,000	9,042,000	4,592,000
Strawberries, †										
Blackberries, ‡										
Raspberries, ‡										
Grapes and Grapes										
Market		10,800	11,500	13,310	496,733	526,918	610,216	3,518,510	3,622,892	2,002,511
Apples, except potatoes for										
Apples, for	bu. & crt.	113,300	111,728	113,602	16,483,000	15,790,500	17,734,600	29,495,000	30,756,000	16,363,000
Apples and berries for processing	bu.	84,113	71,134	56,841	12,846,462	11,423,133	8,603,946	14,741,639	12,066,067	5,658,327
Apples for marketing and processing, except white potatoes	bu. & crt.	197,413	182,862	170,443	29,329,462	27,213,633	26,338,546	44,236,639	42,822,067	22,021,327
Vegetables, including white potatoes		268,413	253,862	226,143	38,133,462	38,644,633	35,971,546	59,203,639	58,825,067	29,440,327
Strawberries for processing	bu., 33 lbs.	5,780	5,700	4,720	105,091	107,091	125,576	832,320	477,090	411,152
Grand Total	bu. & crt.	858,993	840,062	806,673	51,985,286 and 339,000 tons of hay	51,028,642 and 412,000 tons of hay	51,236,338 and 374,000 tons of hay	\$95,401,469	\$94,390,049	\$51,415,990

*Except tree fruits and grapes.
 †A bushel, about 33 pounds.
 ‡A bushel, 32 quarts.
 §A bushel, 30 pounds.

LIVESTOCK STATISTICS
(As of January 1, Each Year)

- Horses and Colts: The number is decreasing. On January 1, 1934, there were estimated 39,000 head against 25,000 on January 1, 1944. Tractors and other motor-power machines are replacing horses.
- Mules and Mule Colts: The number has declined from 4,000 head on January 1, 1934 to 3,000 head on January 1, 1944.
- All Cattle: The number is increasing substantially. The estimate for January 1, 1934 is 177,000 head as compared with 215,000, January 1, 1944.
- Milk Cows and Heifers Two Years Old and Over: The number is growing. The estimate for January 1, 1934 is 129,000 head against 155,000 head January 1, 1944.
- Heifers, 1-2 Years Old, Kept for Milk: The increase is noticeable. The estimate for January 1, 1934 is 18,000 head compared to 24,000, January 1, 1944.
- Sheep and Lambs: Slight increase. Total about 9,000 head.
- Hogs Including Pigs: The increase is remarkable. On January 1, 1934 there were 66,000, while on January 1, 1944, there were about 155,000. The upward swing was stimulated by the Second World War.
- Chickens: The increase is outstanding. On January 1, 1934 there were approximately 5,541,000 chickens against 9,713,000 on January 1, 1944.
- Turkeys: The number is increasing. It was estimated that the January 1, 1944 number was 33,000, against 19,000, the January 1, 1934, number.

TOTAL FARM VALUE, ALL LIVESTOCK INCLUDING CHICKENS AND TURKEYS, JANUARY 1

Year	Farm Value
1944	\$58,668,000
1943	54,044,000
1942	41,008,000
1941	32,579,000
1940	32,650,000
1939	32,278,000
1938	32,918,000
1937	30,587,000
1936	30,450,000
1935	24,058,000
1934	21,385,000
10-Yr. Average, 1934-1943	33,196,000

POULTRY AND EGG STATISTICS*

Year	Hens and Pullets on Farms Jan. 1 (000)	Farm Production of Eggs (millions)	Eggs Produced per Layer on Farms During Year (number)
1944	8,015	1,018	169
1943	7,533	941	158
1942	6,455	924	175
1941	5,997	831	177
1940	5,785	805	173
1939	5,281	764	170
1938	4,825	663	155
1937	4,773	663	160
1936	4,497	561	150
1935	4,296	570	151
1934	4,585	555	154
10-Yr. Average, 1934-1943	5,403	728	162

* Source—"Farm Production Disposition and Income, Chickens and Eggs," an annual report by the United States Department of Agriculture.

THIRTIETH ANNUAL REPORT

141

POULTRY AND EGG STATISTICS

Year	Commercial Broilers Produced* (000)	Chicks Hatched by Commercial Hatcheries† (000)	Farm Price of Eggs‡ (cents per doz.)
1944	2,139	27,725	41.8
1943	2,325	34,787	46.4
1942	1,860	25,000	40.1
1941	1,495	22,500	32.2
1940	1,210	18,418	26.9
1939	1,000	19,439	26.2
1938	880	18,306	29.6
1937	760	16,635	30.4
1936	650	18,940	30.5
1935	575	17,457	31.8
1934	500	16,621	26.4
10-Yr. Average, 1934-1943	1,126	20,810	32.1

* Source—"Farm Production, Disposition and Income, Chickens and Eggs," an annual report by the United States Department of Agriculture.

† "Hatchery Production," a monthly report by the United States Department of Agriculture.

‡ "Agricultural Prices," a monthly report by the United States Department of Agriculture.

REVISED ESTIMATES OF CASH RECEIPTS FROM FARM MARKETINGS OF CROPS, LIVESTOCK AND LIVESTOCK PRODUCTS AND OF TOTAL RECEIPTS FROM FARM MARKETINGS INCLUDING GOVERNMENT PAYMENTS*

Year	Livestock and Livestock Products (000)	Crops (000)	Total Cash Receipts from Farm Marketings (000)	Cash Receipts and Government Payments (000)
1944	\$101,270†	\$85,561‡	\$186,831†	\$194,853‡
1943	102,818	86,672‡	189,490	191,134‡
1942	86,701	63,516	150,217	151,368
1941	69,004	51,651	120,655	121,445
1940	59,529	45,136	104,665	105,773
1939	57,019	43,694	100,713	102,206
1938	57,528	41,941	99,469	100,196
1937	57,310	46,604	103,914	104,374
1936	52,848	48,447	101,295	101,607
1935	51,269	39,110	90,379	90,718
1934	44,217	35,574	79,791	79,966
10-Yr. Average, 1934-1943	63,824	50,235	114,059	114,879

* Source, United States Department of Agriculture, "The Farm Income Situation."

† Subject to further revision, April 1946.

‡ Subject to further revision, February 1946.

CULTIVATED BLUEBERRY INDUSTRY IN NEW JERSEY DURING 1944

The survey of the cultivated blueberry industry in New Jersey has been completed and the results printed as Circular No. 356. The main objectives of the survey for the year 1944 were: (1) To determine the acreage by varieties and age; (2) to ascertain the areas where berries are grown; (3) to list every grower; (4) to arrive at the 1944 total production and average yield per acre; (5) to trace the trend of the industry as to whether it is expanding or contracting; (6) to find out what insects and diseases are attacking plants and berries; and (7) to study marketing practices.

BRIEF SUMMARY OF THE FINDINGS

The number of cultivated blueberry plantations has tripled. There were 166 plantations in 1944 against 53 in 1932.

Cultivated blueberries were grown during 1944 in Atlantic, Burlington, Camden, Cumberland, Gloucester, Hunterdon, Monmouth, and Ocean counties.

The counties leading in the number of plantations were Burlington, Atlantic, and Ocean.

The leading townships were: In Burlington County—Pemberton, Southampton, Woodland, Washington, and Medford; in Atlantic County—Hammonton, Galloway, and Hamilton; and Plumstead, Manchester, and Berkley townships in Ocean County.

The total acreage of all cultivated blueberries in 1944 was 1,693.72 acres, as compared with 1,044.71 in 1939, and 419.46 acres in 1932.

The following varieties are listed in the order of their importance in 1944: Rubel, 22.2 per cent of the total acreage; Rancocas, 15.1 per cent; Jersey, 14 per cent; Cabot, 12.8 per cent; Concord, 11.9 per cent; Pioneer, 6.4 per cent; Stanley, 3.6 per cent; June, 3.1 per cent; Burlington, 0.6 per cent; Weymouth, 0.5 per cent; Pemberton, 0.4 per cent; Atlantic, 0.3 per cent; and Adams, 0.08 per cent.

There were more plants five years old and over than from one to four years old, inclusive.

The Jersey variety seems to be gaining a strong position.

The 1944 production amounted to 481,066 crates of 12 pints each.

The average yield per acre in 1944 amounted to 299 crates. The variation in average yield per acre in 1944 among counties and townships was great.

During 1944, blueberry growers planted 164.79 acres of plants. The varieties planted are listed in the order of their importance: Jersey, Rubel, Concord, Rancocas, Burlington, Cabot, Weymouth, June, Stanley, Pemberton, Pioneer, Atlantic, Gov. Hybrid, and Dixi.

Sixteen different distances of planting were found in 1944.

The greatest acreage was planted at 4' x 8'; the next was 8' x 8'.

In 1944, about one-third of the plants were set at 8' x 8', the next favored planting was 4' x 8'. The plants set out in the field during 1944 were planted at greater space.

During 1944, approximately 23.71 acres of plants were pulled out for the following reasons: stunt disease, ground too dry, poor variety, changing distance, high water, poor soil, etc.

There were 994,100 propagated rooted cuttings in 1944, as compared with 405,562 in 1939. The Jersey variety led in the number of cuttings.

The total 1944 number of young plants in nurseries was 204,337 against 270,909 in 1939. The decline is due to the strong demand for young plants in 1944.

During the past five years, the growth of the industry was most intensive.

Numerous insects and diseases are attacking the blueberry plants and berries.

The cultivated blueberries are sold by the growers through three different channels: (1) the Blueberry Cooperative Association, (2) the Independent Blueberry Cooperative Association, and (3) individually.

In 1944, the 92 members of the Blueberry Cooperative Association possessed 1,108.86 acres of plantations, or 66.1 per cent of the State's total acreage. The 11 members of the Independent Blueberry Cooperative Association owned 93.23 acres or 5.6 per cent of the State's total acreage, and the 53 growers who did not belong to either organization possessed 474.64 acres, or 28.3 per cent of the State's total.

The opinion prevails that for the purpose of marketing the crop all growers should belong to the same organization.

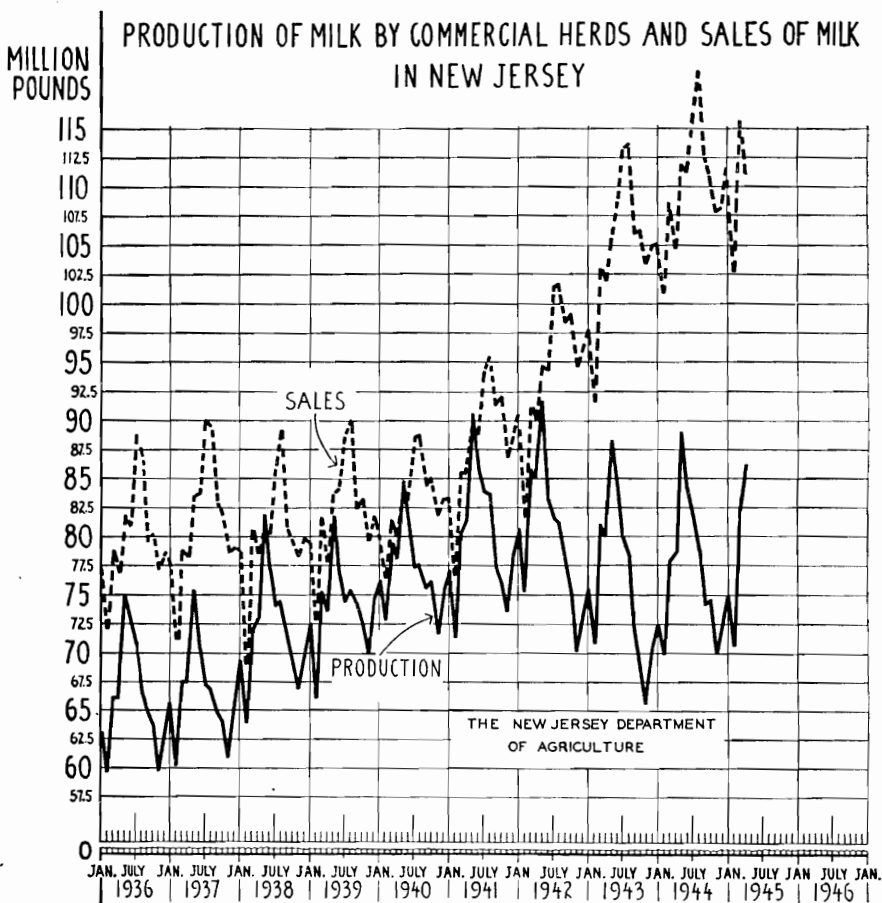
In the opinion of many growers, competition with other States is not serious at the present time. In the future, however, competition may be stronger on account of the expansion of the industry. For that reason, canning and freezing of berries should be encouraged to avoid glut in the market. New markets should be developed.

Frequent advertising on the radio, in the newspapers, magazines and through posters is advocated by the growers.

ECONOMIC CONDITION OF DAIRY FARMERS

PRODUCTION OF MILK

The New Jersey Milk Control Board was created by the Legislature in 1933 to help the dairy industry from economic depression. At that time, the cow population had declined considerably, milk production had slackened and the price received by the farmers had reached a bottom of about 2.8 cents per quart. The Milk Control Board began its work under those trying circumstances. From the start, the Board took the proper attitude, realizing that the regulation of the industry on purely theoretical basis would lead nowhere. The practical approach was emphasized. The dairy farmers, milk dealers, and consumers were consulted constantly, and not one single regulation was imposed by the Board without an impartial hearing and the recording of all sides of the problem under discussion. The farmers, dealers and consumers knew from their personal experience the shortcomings of the industry. They also had plans to alleviate these deficiencies. These plans were presented and discussed at the hearings of the Board. The Board usually served as an arbitrator, with the main objective of guiding the industry toward recovery and stability on a sound economic basis. Under such procedure, the recuperation of the industry



became a certainty. The cow population increased considerably, production of milk went up and the price received by the farmers for milk was reasonable. In 1935, the commercial herds produced approximately 643,573,000 pounds of milk while in 1942, it went up to 961,477,000 pounds. The increase amounted to about 318,000,000 pounds. From 1935 to 1942, the annual rate of increase was 45,415,000 pounds. This was the result of cooperative work between the Milk Control Board, farmers, dealers, and consumers. In 1943, Federal control began. The performance of the smoothly running machine was disorganized to some extent by the policies of administrators who were far removed from the knowledge of local situations and needs. As a result, production of milk by commercial herds began to fall off, and in 1943 and 1944, it was 918,077,000 and 925,491,000 pounds, respectively. The decline from the 1942 production amounted to 43,400,000 pounds in 1943 and 35,986,000 pounds in 1944. This decrease, although it is substantial, would have been more severe had farmers been less patriotic. The country called for a tremendous quantity of milk, and

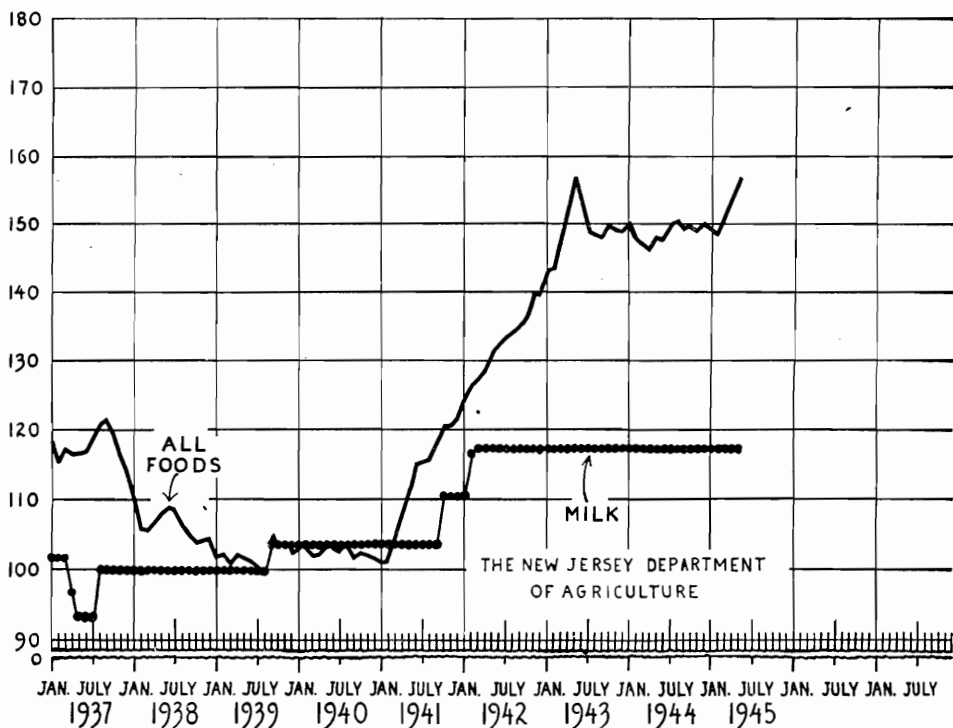
despite hampering regulations, farmers supplied it. Among the few food commodities which are abundant is fresh milk. The Milk Control Board and the Director of Milk Control repeatedly endeavored to obtain price adjustments commensurate with the cost of production from the Office of Price Administration in Washington, but to no avail. However, in October 1943, Washington saw the error of its ways and in place of the price increase, decided to pay the producers a subsidy to balance the cost of production with the farm price of milk. With the advent of this subsidy, production began slowly to revert to the normal level and there are indications that the 1945 milk production in New Jersey may reach the 1942 level.

CONSUMPTION OF MILK

The annual sale of milk to consumers progressed slowly from 1934 to 1941. Sales varied from the low of 392,124,000 quarts in 1934 to the high of 463,778,000 quarts in 1940. In 1941, sales began to advance sharply,

NEW JERSEY
INDEX NUMBER OF RETAIL PRICE OF ALL FOODS AND MILK
(AUGUST 1939=100)

INDEX NUMBER



being 493,072,000 quarts in 1941, 528,079,000 quarts in 1942, 584,549,000 quarts in 1943 and 612,983,000 quarts in 1944. The 1944 sales were 149,205,000 quarts greater than the 1940 sales. This represents an increase of 32.2 per cent. The industry was called upon to exert its whole power and resources in order to satisfy the strongly increasing demand. And the industry did it, unflinchingly providing fresh milk. Up to July 1945, there was no shortage of milk, and milk could be obtained by consumers without trouble at any time. Black market practices were unknown in the field of fresh milk.

Why do consumers buy more milk than ever before? There are many reasons for that, and the outstanding ones, in our judgment, are: (1) Consumer income has increased, and the average family has had more money at its disposal to buy available goods; (2) consumers frequently substitute milk for other foods, the supply of which is short, or the quantity of which is limited by rationing; (3) while the consumer price of many essential food items has increased since August 1939, fifty per cent or more, the New Jersey price of milk has gone up only 17.3 per cent, making milk the cheapest food on the market; and (4) more babies have been born during the war than ever before, and milk is indispensable for them and nursing mothers.

OPERATION OF FOOD PROCESSING PLANTS IN NEW JERSEY AS IT AFFECTS NEW JERSEY FARMERS, 1944

The food processing industry in the State is growing from year to year. It has become a very important branch of agriculture, because considerable acreage is devoted to it and the farm gross receipts are influenced by it to a great extent. During 1944, the processing plants utilized the following principal commodities grown in New Jersey: tomatoes, asparagus, lima beans, spinach, cranberries, beets, peas, snap beans, blueberries, peppers, pumpkins, rutabagas, white potatoes, huckleberries, citron, raspberries, and cucumbers.

ACREAGE, TONNAGE, AND FARM PRICE

Since 1934, the acreage devoted to the processing of crops more than doubled. In 1944, the processing plants absorbed the raw products from 89,893 acres, as compared with 40,683 acres in 1934, and 61,561 acres, the ten-year average acreage, 1934-1943. The increase is 121 and 46 per cent respectively. In 1944, the acreage of vegetables and berries grown for the processing plants (white potatoes excluded) constituted 41.9 per cent of the total acreage of vegetables and berries grown in the State, while in 1934 it was 26.9 per cent; and the ten-year, 1934-1943, average percentage was 35.3. It must be remembered that the acreage of all vegetables and berries during the last ten years was increasing, so the acreage for processing went up faster than the acreage of all vegetables and berries.

The 1944 tonnage of all crops for processing stood at 299,687 tons. This consists of produce contracted and bought on the open market by the processors. The 1934 tonnage amounted to 117,765 tons and the ten-year, 1934-1943, average was 208,949 tons. The increase is 154 and 43 per cent, respectively.

The total money received by New Jersey farmers for produce delivered to the processing plants, whether contracted or sold on the open market, amounted in 1944 to \$15,573,959.00 against \$2,144,673.00 in 1934 and \$6,009,479.00, the ten-year, 1934-1943, average. The increase was 626 and 159 per cent, respectively.

The 1944 average gross receipts per acre of land cultivated for produce to be sold to the processing plants was \$173.25 as compared with \$52.72 in 1934 and \$97.62, the ten-year, 1934-1943, average. The increase was 229 and 77 per cent, respectively.

TOMATOES

One of the most important commodities for processing is tomatoes. The 1944 acreage of that crop reached 40,261 acres, or 44.8 per cent of the total acreage of all crops devoted to processing. The 1944 total tonnage delivered to the processing plants amounted to 218,609 tons against 107,692 tons in 1934, and 176,619 tons, the ten-year, 1934-1943, average. The 1944 average price received by farmers for the contracted and open market crop stood at \$33.38 against \$15.49 in 1934 and \$18.90, the ten-year average, 1934-1943. The total money received by the farmers for their 1944 tomatoes, whether sold under contract or on the open market to the processing plants amounted to \$7,297,585.00 as compared with \$1,668,149.00 in 1934 and \$3,337,857.00, the ten-year, 1934-1943, average. The 1944 money received by farmers for their tomatoes constituted 46.9 per cent of the total money received for all crops sold to the processors.

ASPARAGUS

The crop, second in importance from the monetary point of view as it affects farmers, is asparagus. The processing plants in 1944 absorbed the produce from 10,647 acres against 1,443 acres in 1934 and 5,485 acres, the ten-year, 1934-1943, average acreage. The 1944 tonnage utilized by the plants stood at 15,204 tons as compared with 1,954 tons delivered in 1934 and 6,433 tons, the ten-year, 1934-1943, average. The 1944 average price received by the farmers was \$184.41 a ton against \$118.00 in 1934 and \$140.59, the ten-year, 1934-1943, average. The gross monetary return to the farmers in 1944 was \$2,803,703.00 compared to \$230,572.00 in 1934 and \$904,420.00, the ten-year average. This return constituted 18 per cent of the total receipts for all processing crops.

Lima beans, green peas, and spinach are very important commodities as far as acreage, tonnage and gross farm receipts are concerned. The actual figures, however, cannot be revealed because only a few plants are processing these vegetables, and the data must be kept in confidence.

The 1944 acreage of snap beans for processing stood at 3,279 acres against 214 acres in 1934 and 1,707 acres, the ten-year, 1934-1943, average acreage. The 1944 tonnage absorbed by the plants was 3,462 tons compared to 321 tons in 1934 and 2,523 tons, the ten-year, 1934-1943, average tonnage. The average price received by farmers per ton in 1944 was \$122.86 against \$39.33 in 1934 and \$85.10, the ten-year, 1934-1943, average. The 1944 gross receipts by farmers amounted to \$425,298.00 compared to \$12,625.00 in 1934 and \$214,723.00, the ten-year, 1934-1943, average gross receipts.

OTHER VEGETABLES PROCESSED

The processing plants absorbed 1,734 tons of cranberries in 1944 against 525 tons in 1934 and 1,891 tons, the ten-year, 1934-1943, average tonnage. The 1944 gross receipts by growers amounted to about \$832,320.00 against \$115,500.00 in 1934 and \$373,718.00, the ten-year, 1934-1943, average gross receipts.

The 1944 acreage of pumpkins utilized by the processors was 2,383 acres against 203 acres in 1934 and 442 acres, the nine-year, 1934-1943,* average. The 1944 tonnage equaled 7,360 tons, compared to 687 tons in 1934 and 1,199 tons, the nine-year, 1934-1943,* average. The 1944 total receipts by farmers were \$119,915.00 against \$5,949.00 in 1934 and \$10,246.00, the nine-year, 1934-1943,* average.

During 1944, the processing plants absorbed the green pepper crop from 1,201 acres, against 279 acres in 1938 and 732 acres, the six-year, 1938-1943, average. The 1944 tonnage was 2,605 tons compared to 165 tons in 1938 and 1,298 tons, the six-year, 1938-1943, average. The average farm price per ton stood at \$53.75 in 1944, compared to \$40.00 in 1938 and \$38.17, the six-year, 1938-1943, average. The total 1944 receipts amounted to \$139,993.00 against \$6,600.00 in 1938 and \$49,551.00, the six-year, 1938-1943, average.

A considerable quantity of cultivated blueberries went into the processing plants during 1944. This crop is gaining in importance from year to year. Huckleberries also were utilized by the processing plants. Raspberries, citron, cucumbers, rutabagas and white potatoes went into the processing plants in considerable quantities. The detailed information on the last mentioned seven crops cannot be given, because only a few processors utilized each crop and by publishing the data the size of the individual business would be revealed.

* During 1936, no pumpkins were processed.

ACREAGE, QUANTITY DELIVERED TO PROCESSING PLANTS, AND MONEY RECEIVED BY NEW JERSEY FARMERS
FOR PRODUCE GROWN FOR PROCESSING PLANTS FROM 1934 TO 1944

Year	Total N. J. Acreage Devoted to Crops for Processing <i>(acres)</i>	Tons Delivered by N. J. Farmers to Processing Plants <i>(tons)</i>	Money Received by N. J. Farmers for Produce Delivered to Processing Plants <i>(dollars)</i>	Average Price Received by N. J. Farmers per Ton of All Commodities Delivered to Processing Plants <i>(dollars)</i>	Average Gross Income per Acre of Pro- duce Deliv- ered by N. J. Farmers to Processing Plants <i>(dollars)</i>	Approximate Total Acre- age of Vegetables and Cranber- ries, White Potatoes Ex- cluded, Har- vested in N. J. <i>(acres)</i>	Per Cent of Acreage of Vegetables and Cran- berries for Processing of Total Acre- age of All Vegetables and Cranber- ries Grown in the State* <i>(per cent)</i>	N. J. Total Cash Receipts of Farmers <i>(dollars)</i>	Per Cent of Money Received by N. J. Farmers for Process- ing Crops of Total Cash Receipts <i>(per cent)</i>
1934	40,683	117,765	2,144,673	18.21	52.72	151,000	26.9	67,861,000	3.2
1935	41,109	162,172	3,047,197	18.79	74.12	153,000	26.9	79,107,000	3.9
1936	49,934	232,015	4,334,590	18.68	86.81	163,000	30.6	98,995,000	4.4
1937	70,247	169,124	4,683,113	27.69	66.67	174,000	40.4	99,716,000	4.7
1938	58,133	148,106	3,853,122	26.02	66.28	185,000	31.4	158,626,000	4.0
1939	59,428	210,377	4,959,353	23.57	83.45	184,000	32.3	98,530,000	5.0
1940	62,451	214,028	5,376,056	25.12	86.09	181,000	34.5	104,665,000	5.1
1941	74,482	298,167	8,401,103	28.18	112.79	178,000	41.8	121,540,000	6.9
1942	82,306	272,143	10,752,430	39.51	130.64	190,000	43.3	158,522,000†	6.8†
1943	76,834	265,597	12,543,157	47.23	163.25	184,000	41.8	199,940,000†	6.3†
1944	89,893	299,687	15,573,959	51.97	173.25	213,000	41.9	203,434,000	7.7
Ten-Year, 1934-1943, Average	61,561	208,949	6,009,479	28.76	97.62	174,300	35.3	112,450,000†	5.3†

* White potatoes excluded from the total acreage.

† Revised.

STATE DEPARTMENT OF AGRICULTURE

QUANTITY OF EACH COMMODITY DELIVERED TO THE PROCESSING PLANTS EXPRESSED
IN TERMS OF PERCENTAGE OF ALL PRINCIPAL COMMODITIES
GROWN FOR PROCESSING

Year	Tomatoes (per cent)	Asparagus (per cent)	Lima Beans, Green Peas, and Spinach (per cent)	Snap Beans (per cent)	Beets (per cent)	Other Principal Crops (per cent)
1934	91.4	1.7	0.5	0.3	1.9	4.2
1935	92.5	1.2	3.3	0.2	1.2	1.6
1936	94.1	0.6	1.9	0.6	0.9	1.9
1937	84.0	2.6	5.7	2.1	1.5	4.1
1938	80.0	3.6	8.8	1.5	3.6	2.5
1939	85.5	2.6	5.0	1.1	0.4	5.4
1940	83.3	2.6	7.8	0.8	1.4	4.1
1941	83.0	3.0	6.9	0.5	2.3	4.3
1942	79.0	5.2	7.2	1.7	3.1	3.8
1943	78.7	5.7	7.1	2.8	3.0	2.7
1944	72.9	5.1	7.8	1.2	7.4	5.6
Ten-year, 1934-1943, Average	84.5	3.1	5.7	1.2	2.0	3.5

RECEIPTS BY FARMERS FOR EACH COMMODITY FOR PROCESSING EXPRESSED IN TERMS
OF PERCENTAGE OF TOTAL RECEIPTS FOR ALL PRINCIPAL COMMODITIES
DELIVERED TO THE PROCESSING PLANTS

Year	Tomatoes (per cent)	Asparagus (per cent)	Lima Beans, Green Peas, and Spinach (per cent)	Snap Beans (per cent)	Beets (per cent)	Cranberries (per cent)	Other Principal Crops (per cent)
1934	77.8	10.8	2.9	0.6	0.7	5.4	1.8
1935	74.1	9.4	13.4	0.3	0.5	1.6	0.7
1936	77.8	4.2	8.7	1.5	0.6	6.7	0.5
1937	48.1	14.2	17.7	3.7	0.5	15.4	0.4
1938	47.8	19.6	24.0	2.3	1.8	3.6	0.9
1939	60.6	12.1	14.9	2.8	0.2	6.9	2.5
1940	51.2	14.0	21.1	1.9	0.7	6.2	4.9
1941	57.2	13.4	19.6	1.3	1.1	5.6	1.8
1942	48.6	19.6	17.5	4.1	1.5	7.2	1.5
1943	50.7	18.7	15.7	8.0	1.2	4.0	1.7
1944	46.9	18.0	19.1	2.7	3.7	5.3	4.5
Ten-year, 1934-1943, Average	55.5	15.0	16.5	3.6	1.0	6.2	2.2

AVERAGE PRICE PER TON RECEIVED BY FARMERS FOR ALL PRINCIPAL COMMODITIES
SOLD TO PROCESSING PLANTS

Year	
1934	\$18.21
1935	18.79
1936	18.68
1937	27.69
1938	26.02
1939	23.57
1940	25.12
1941	28.18
1942	39.51
1943	47.23

THIRTIETH ANNUAL REPORT

151

AVERAGE PRICE PER ACRE RECEIVED BY FARMERS FOR ALL PRINCIPAL CROPS
GROWN FOR PROCESSING

Year	
1934	\$52.72
1935	74.12
1936	86.81
1937	66.67
1938	66.28
1939	83.45
1940	86.09
1941	112.79
1942	130.64
1943	163.25
1944	173.25

TOMATOES FOR PROCESSING

Year	Acreage (acres)	Quantity Delivered to Processing Plants (tons)	Average Price per Ton Received by Farmers (dollars)	Total Receipt by Farmers (dollars)
1943	32,760	209,131	30.42	6,361,765.02
1944	40,261	218,609	33.38	7,297,585.00
Ten-Year Average, 1934-1943	33,788	176,619	18.90	3,337,857.00

ASPARAGUS FOR PROCESSING

1943	11,572	15,178*	154.21	2,340,599.00
1944	10,647	15,204*	184.41	2,803,703.00
Ten-Year Average, 1934-1943	5,485	6,433	140.59	904,420.00

SNAP BEANS FOR PROCESSING

1943	2,873	7,318	137.72	1,007,835.00
1944	3,279	3,462	122.86	425,298.00
Ten-Year Average, 1934-1943	1,707	2,523	85.10	214,723.00

BEETS FOR PROCESSING

1943	1,521	7,912	19.64	155,392.00
1944	3,106	22,245	26.16	581,863.00
Ten-Year Average, 1934-1943	661	4,117	14.70	60,537.07

CRANBERRIES FOR PROCESSING

1943	4,000	1,841	270.00	497,070.00
1944	5,780	1,734	480.00	832,320.00
Ten-Year Average, 1934-1943	4,237	1,891	197.65	373,718.00

PUMPKINS FOR PROCESSING

1943	278	625	10.20	6,375.00
1944	2,383	7,360	16.29	119,915.00
Nine-Year Average, 1934-1943*	442	1,199	8.55	10,245.89

* Utilized by the processing plants.

GREEN PEPPERS FOR PROCESSING

Year	Acreage (acres)	Quantity Delivered to Processing Plants (tons)	Average Price per Ton Received by Farmers (dollars)	Total Receipt by Farmers (dollars)
1943	755	710	39.23	27,853.30
1944	1,201	2,605	53.75	139,993.00
Six-Year Average, 1938-1943	732	1,298	38.17	49,550.55

* During 1936, no pumpkins were processed.

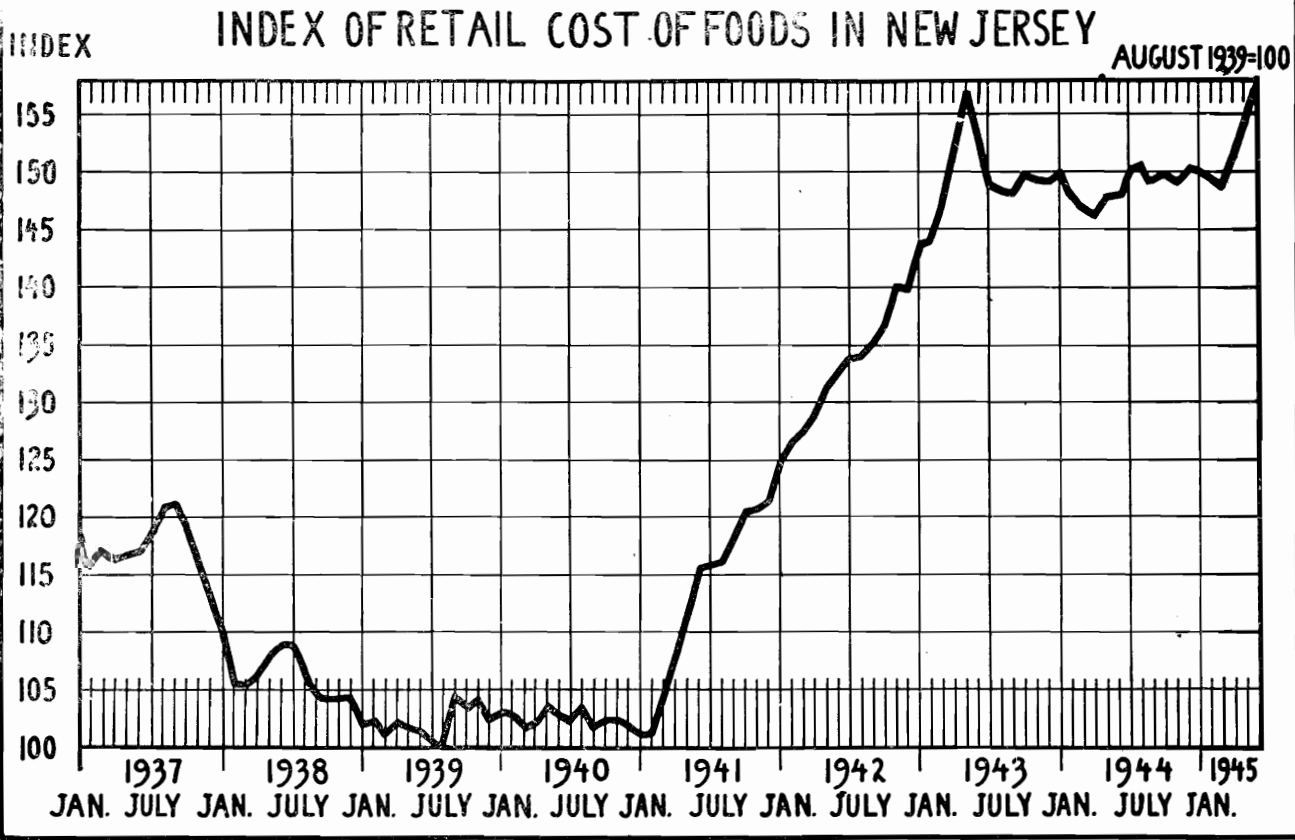
FOOD PRICES IN NEW JERSEY SINCE 1937

Since 1937 the people of New Jersey have lived through four distinct periods of rising and declining food prices. Each period reflected the socio-economic condition of the country. The first period of gradually declining prices lasted from October 1937, to August 1939. The second period of almost stable prices occurred between September 1939, and February 1941. The third period of violently rising prices saw its inauguration in March 1941, and ended during May 1943. The fourth period of small decline and gradual leveling of prices started in June 1943, and is still continuing.

In 1937, up to about the middle of the year, employment and business were improving. It was the only year of the secondary post-war depression during which the level of business activity in our country stood for several months above the normal. Retail prices of food followed the upward trend of business activity. But in the second half of 1937, business activity and employment began to decline, and with it the prices of food started to go down. The slump in retail prices of foods between September 1937, and August 1939, amounted to 21.3 per cent.

The second period from September 1939, to February 1941, may be characterized as a period of almost stable prices at a level somewhat higher than the August 1939 prices. When in September 1939, the Second World War began in Europe, the market in our country reacted immediately and quite violently. The rise in food prices from August to September 1939, was 4.5 per cent. However, when in October 1939, people realized that involvement of the United States in the European conflict was quite distant, the market quieted and the tendency for food prices to go up was checked. From September 1939, to February 1941, food prices were almost steady and they exceeded the August 1939 prices only about 2.5 per cent.

The third period covers the time from March 1941, to May 1943. This was the period of very sharp increases in prices. The steadily climbing prices of foods were primarily due to the record civilian and military demand and to substantially higher prices paid to the farmers. The purchasing power of the mass of people was constantly increasing on account of higher hourly wages and full employment, not only of heads of families,



but, in many instances, their wives and children. Demand for foods was very strong. Prices went up. The military demand for food grew stronger and stronger. Farmers began to receive higher prices because the cost of production soared. From February 1941, to May 1943, the average retail price of foods in New Jersey rose 55 per cent. All groups of food commodities shared in the sharp advance.

The fourth period may be called the period of "Government Controlled Prices." It began in June 1943, and it is still in effect. By the middle of 1943, government machinery for control of food prices was very well established, and it succeeded to a certain degree in holding the prices at a level about 50 per cent above the August 1939 prices. Relative shortage of some food articles developed, but people had enough to eat, and, as a matter of fact, many of them ate better than ever before. European countries, impoverished by the long destructive war, have received a substantial quantity of highly concentrated food from us. They depended and still depend, in a great degree, on the labor and ingenuity of our farmers and food processing industries. In other words, our farmers performed a miracle, and our distributive system, i.e., wholesalers and retailers, was very efficient. Moreover, up to the present time our country has escaped serious monetary inflation, due primarily to the abundant production of food by the farmers and due to the well-organized system of distribution.

From December 1941, when Japan attacked our country, up to June 1945, the average retail price of foods in New Jersey has advanced 28.9 per cent; and from August 1939, the month before war broke out in Europe, up to June 1945, the price went up approximately 56.8 per cent.

INDEX NUMBER OF RETAIL PRICE OF FOODS IN NEW JERSEY (AUGUST 1939 = 100)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average Annual
1937	118.3	115.5	117.3	116.6	116.9	117.1	118.8	121.0	121.3	119.7	115.8	113.3	117.6
1938	109.8	105.6	105.5	106.6	108.3	109.0	108.8	106.1	105.0	104.4	104.4	104.5	106.5
1939	102.0	102.4	101.2	102.3	101.9	101.6	100.6	100.0	104.5	103.7	104.2	102.3	102.2
1940	103.1	102.9	101.9	102.3	103.7	102.8	102.6	103.7	101.6	102.4	102.2	101.9	102.6
1941	101.2	101.3	105.3	107.8	111.6	115.5	115.8	116.0	118.4	120.5	120.7	121.6	113.0
1942	124.7	126.6	127.3	128.9	131.4	132.8	133.9	134.2	135.2	136.7	140.1	140.0	132.6
1943	143.4	143.9	147.0	152.2	157.0	153.6	148.8	148.2	148.1	150.0	149.4	149.2	149.2
1944	150.1	148.0	147.1	146.3	148.1	148.2	150.3	150.7	149.2	149.9	149.2	150.4	149.0
1945	150.3	149.5	148.7	151.4	154.0	156.8							

RISE IN NEW JERSEY CONSUMER PRICES SINCE THE OUTBREAK OF THE
SECOND WORLD WAR

When war broke out in Europe in September 1939, the New Jersey index of average retail prices of "All Goods and Services" stood at 101.5, or 1.5 per cent higher during the base period, i.e., June 1939. The average price of each commodity group was above the base period, but the range was narrow—from 100.5 for miscellaneous items to 102.8 for the all foods group.

Prices remained almost steady for the following year, and the September 1940 index for "All Goods and Services" was only 102.0, or 0.5 per cent above September 1939. Price fluctuation among the various goods was mixed. Food was down to the September 1939 level while all other groups showed advances. The price of housing, clothing, and furniture went up with indices standing between 104 and 105. Fuel and light and miscellaneous items had respective indices of 102.1 and 101.2.

From September 1940 until this country entered the war in December 1941, prices advanced sharply and the index for "All Goods and Services" stood at 116.2 on a June 1939 base. The increase from September 1940, to December 1941, amounted to 13.9 per cent. Furniture and clothing registered the largest relative upswing, being respectively 38.2 and 23.4 per cent higher than in June 1939. Food rose 19.5 per cent. The price of other groups went up as follows: housing, 15.2 per cent; fuel and light, 8.9 per cent, and miscellaneous items, 7.2 per cent.

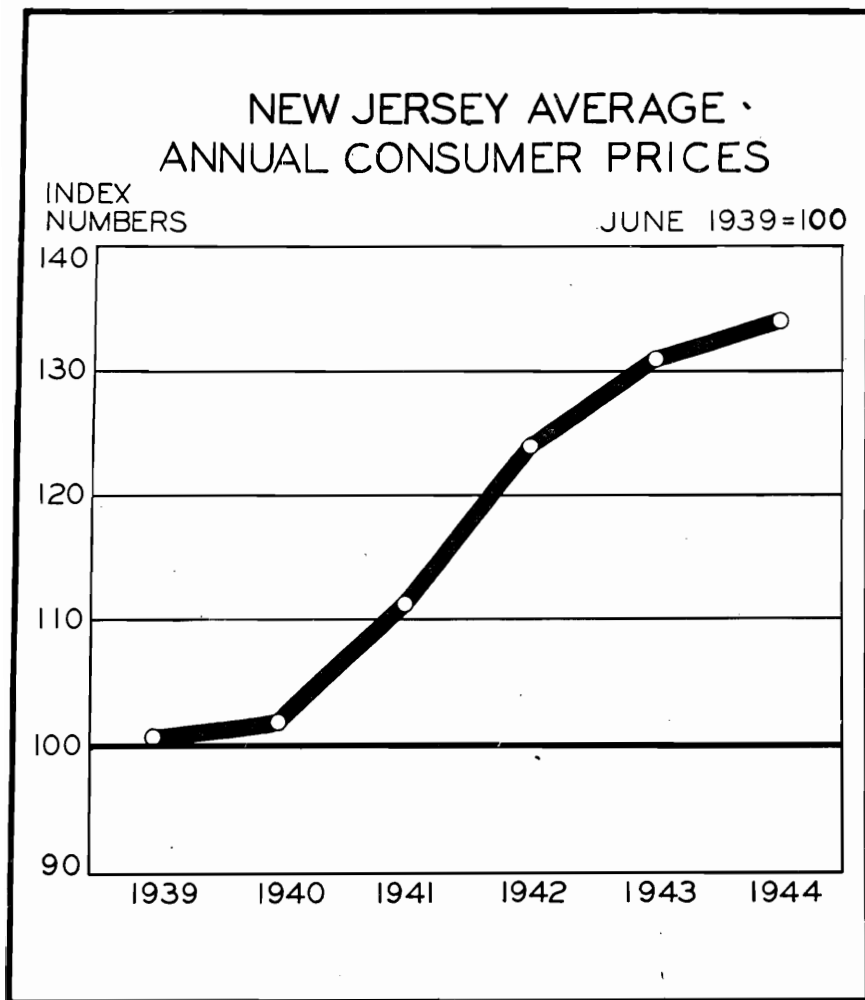
From December 1941, until April 1943, the rise in price of "All Goods and Services" continued unchecked, amounting to 12.9 per cent, and the April 1943 index for "All Goods and Services" was 131.2 on a June 1939 base. From June 1939, to April 1943, the rise in prices was not evenly distributed among the various groups. Rents, under OPA control, were 15.3 per cent above the June 1939 figure. Fuel and light rose 15.7 per cent and miscellaneous items were 14.3 per cent higher. Clothing was up 36.7 per cent; food was 49.6 per cent higher, and furniture registered the largest advance, amounting to 51.5 per cent.

From April 1943, to February 1944, prices remained steady. The February 1944 index was 131.5 on a June 1939 base, or only 0.2 per cent higher than in April 1943.

From February 1944, to June 1945, there has been a steady upward trend and the June 1945 index stood at 139.2, or 5.9 per cent higher than in February 1944.

Some of the causes which influenced the price behavior between June 1939 and June 1945 were: (1) During the first year of war in Europe New Jersey consumer prices remained practically steady. The declaration of war in September 1939 caused a short, relatively violent price rise, which, however, was abated during the next month when people realized that our country would not be involved in the war for many months to

come. (2) From September 1940, to April 1943, the price rise was rapid and amounted to 28.6 per cent. Government buying for Lend-Lease and for use by our own armed forces became heavy, employment reached a high level, purchasing power of the population went up and supplies of many durable and non-durable commodities were becoming more or less scarce. All of these factors caused prices to rise. (3) From April 1943, to February 1944, prices were steady. Although OPA came into being early in 1942 its method of enforcement did not hold prices down until April 1943, when the President issued his "hold-the-line" order, as a consequence of which price ceilings were enforced. (4) From February 1944, to June 1945, the trend was upward and the increase amounted to 5.9 per



cent. By this time many consumer goods had become scarce and, with more money in the buying public's hands than usual, it was inevitable that prices rise. In other words, supply and demand was the ruling factor in price setting during this period, with OPA tending to curb "runaway" prices.

CONSUMER PRICES IN NEW JERSEY

This study was published from October 1938 through June 1944, bearing the title "Cost of Living in New Jersey." The title was changed in August 1944 to "Consumer Prices in New Jersey," but the continuity of content and its meaning was not disrupted.

The mailing list for this publication as of July 1941 amounted to about 450 names. By July 1944 this number had increased to 900 addresses. At the present time, July 1945, our mailing list includes 1,001 addresses, to which 1,088 copies of the publication are mailed. The difference in the number of names and the number of copies is due to the fact that some firms request extra copies for distribution among various departments; some schools use them in classrooms; chambers of commerce keep them on file for their members, etc. Copies of this publication are mailed to 17 States, the District of Columbia, and one has an "APO" address.

A breakdown of our mailing list shows that the publication is distributed to the following:

- 158 manufacturing industries
- 144 business enterprises other than manufacturing (retail stores; service corporations, such as telephone companies, public service companies, laundries, real estate agencies, etc.)
- 161 New Jersey State and municipal government agencies (includes county agricultural agents and extension specialists in agriculture)
- 82 libraries
- 79 schools and colleges
- 54 professional men
- 48 labor unions
- 44 insurance companies, banks, chambers of commerce
- 24 Federal Government agencies and state departments other than those of New Jersey.

The remainder of the copies go to individuals.

NEW JERSEY PRODUCTION OF MILK BY COMMERCIAL HERDS AS REPORTED BY DEALERS AND PRODUCER DEALERS
Entire State (Pounds)

Month	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944
January	46,203,697	63,048,114	65,515,319	69,415,325	72,683,447	76,344,720	77,196,554	80,915,077	75,685,718	72,406,415
February	43,748,438	59,527,141	60,118,842	63,966,958	66,126,994	72,806,549	71,372,011	75,316,730	70,933,144	69,990,094
March	50,427,668	66,143,850	67,549,501	72,078,005	75,392,054	79,784,787	80,270,949	85,915,751	81,194,278	78,126,172
April	48,828,947	66,161,307	67,528,043	73,182,664	73,646,582	78,189,075	81,666,897	85,223,861	80,162,994	78,940,520
May	55,978,692	74,957,422	75,493,198	81,955,133	81,894,076	84,883,769	90,643,354	91,735,384	88,444,622	89,074,817
June	56,607,326	72,963,783	70,408,211	77,432,912	76,891,602	80,900,380	85,795,915	83,153,821	84,994,223	84,251,013
July	51,203,570	70,635,250	67,222,192	74,008,537	74,428,863	77,348,077	83,848,929	81,576,906	80,101,595	81,686,937
August	52,983,500	66,910,227	66,729,520	74,554,578	75,332,629	77,681,334	83,632,553	81,230,019	78,457,977	78,863,512
September	60,059,833	64,990,225	64,839,824	71,195,811	74,411,199	75,543,195	77,421,312	77,570,339	72,592,653	74,101,288
October	59,528,855	63,796,844	64,008,976	69,209,848	72,359,776	76,285,129	76,073,363	75,137,498	69,226,043	74,532,377
November	56,926,321	59,721,931	60,969,599	66,925,499	69,932,343	71,651,699	73,564,683	70,170,255	65,737,468	70,174,731
December	61,076,180	62,945,370	65,124,380	70,024,313	74,833,261	75,581,596	78,560,504	73,531,169	70,546,764	73,343,042
Yearly Total	643,573,027	791,801,464	795,507,605	864,170,583	887,932,826	927,000,310	960,047,024	961,476,810	918,077,479	925,490,918
Monthly Average	53,631,086	65,983,455	66,292,300	72,014,215	73,994,402	77,250,026	80,003,919	80,123,068	76,506,457	77,124,243

NEW JERSEY SALES OF MILK FOR CONSUMPTION AS REPORTED BY DEALERS AND PRODUCER DEALERS (QUARTS)

Month	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944
January	31,493,213	32,088,254	35,680,098	35,982,284	36,703,303	37,068,571	37,112,775	38,836,158	42,121,042	45,552,018	48,951,417
February	28,859,404	29,347,922	33,493,638	33,044,424	32,114,304	33,891,058	35,554,367	35,680,836	38,014,507	42,613,412	46,900,819
March	31,627,313	32,580,309	36,657,867	36,706,445	37,479,488	38,009,674	37,916,947	39,889,998	42,437,020	47,993,865	50,563,139
April	31,534,574	31,602,719	35,759,846	36,417,213	36,537,867	36,209,622	37,214,159	39,770,816	41,875,178	47,240,468	48,682,115
May	34,085,063	32,952,690	38,126,894	38,852,532	37,604,668	38,923,870	38,897,626	41,685,172	44,162,347	49,219,148	52,037,075
June	33,908,327	32,340,331	37,659,017	38,885,887	37,315,444	39,116,455	38,770,564	41,371,404	43,952,736	50,607,535	51,798,565
July	35,663,384	36,519,992	41,332,059	41,896,569	39,944,386	41,250,108	41,257,818	43,914,495	47,247,206	52,764,803	54,018,062
August	35,035,393	37,343,807	40,430,152	41,733,375	41,500,359	41,931,509	41,340,757	44,510,043	47,369,991	52,950,354	55,808,210
September	32,880,171	34,316,892	36,985,454	38,644,949	37,619,238	38,347,464	39,226,967	42,454,393	45,732,127	49,274,027	52,169,836
October	33,751,095	34,238,395	37,376,098	38,115,852	36,911,574	38,768,743	39,636,726	42,894,785	46,171,047	49,403,791	51,728,873
November	32,017,747	32,892,783	35,900,816	36,598,804	36,401,423	37,098,900	38,027,192	40,425,868	44,043,511	48,134,428	49,941,983
December	31,367,528	32,332,337	36,636,285	36,830,822	37,212,958	38,093,663	38,822,380	41,638,428	44,952,008	48,794,886	50,382,566
Yearly Total	392,124,212	398,556,431	446,038,224	453,709,156	447,345,012	458,709,637	463,778,278	493,072,397	528,078,721	584,548,735	612,982,660
Monthly Average	32,677,018	33,213,036	37,169,852	37,809,096	37,278,751	38,225,803	38,648,190	41,089,366	44,006,560	48,712,395	51,081,888

THIRTIETH ANNUAL REPORT

161

INDEX NUMBERS OF RETAIL PRICE OF ALL FOODS IN NEW JERSEY
August 1939 = 100

Month	1937	1938	1939	1940	1941	1942	1943	1944	1945
January	118.3	109.8	102.0	103.1	101.2	124.7	143.4	150.1	149.5
February	115.5	105.6	102.4	102.9	101.3	126.6	143.9	148.0	148.7
March	117.3	105.5	101.2	101.9	105.3	127.3	147.0	147.1	151.4
April	116.6	106.6	102.3	102.3	107.8	128.9	152.2	146.3	154.0
May	116.9	108.3	101.9	103.7	111.6	131.4	157.0	148.1	156.8
June	117.1	109.0	101.6	102.8	115.5	132.8	153.6	148.2	
July	118.8	108.8	100.6	102.6	115.8	133.9	148.8	150.3	
August	121.0	106.1	100.0	103.7	116.0	134.2	148.2	150.7	
September	121.3	105.0	104.5	101.6	118.4	135.2	148.1	149.2	
October	119.7	104.4	103.7	102.4	120.5	136.7	150.0	149.9	
November	115.8	104.4	104.2	102.2	120.7	140.1	149.4	149.2	
December	113.3	104.5	102.3	101.9	121.6	140.0	149.2	150.4	
Average	117.6	106.5	102.2	102.6	113.0	132.6			

INDEX NUMBERS OF RETAIL PRICE OF MILK IN NEW JERSEY
August 1939 = 100

Month	1937	1938	1939	1940	1941	1942	1943	1944	1945
January	101.7	100.0	100.0	103.5	103.5	110.4	117.3	117.3	117.3
February	101.7	100.0	96.9	103.5	103.5	116.3	117.3	117.3	117.3
March	101.7	100.0	100.0	103.5	103.5	117.3	117.3	117.3	117.3
April	96.5	100.0	100.0	103.5	103.5	117.3	117.3	117.3	
May	93.1	100.0	100.0	103.5	103.5	117.3	117.3	117.3	
June	93.1	100.0	100.0	103.5	103.5	117.3	117.3	117.3	
July	93.1	100.0	100.0	103.5	103.5	117.3	117.3	117.3	
August	100.0	100.0	100.0	103.5	103.5	117.3	117.3	117.3	
September	100.0	100.0	103.5	103.5	103.5	117.3	117.3	117.3	
October	100.0	100.0	103.5	103.5	110.4	117.3	117.3	117.3	
November	100.0	100.0	103.5	103.5	110.4	117.3	117.3	117.3	
December	100.0	100.0	103.5	103.5	110.4	117.3	117.3	117.3	

COST OF PRODUCTION OF MILK IN NEW JERSEY

From about the middle of 1936 up to January 1941, the average cost of producing milk on New Jersey farms remained relatively stable. It fluctuated from the lowest point of 71.1 per cent in November 1938, to the highest point of 91.4 per cent in May 1937 (the corresponding months in 1923-1927 were equal to 100 per cent). During that period the industry has been stabilized with respect to production, distribution, and price.

One outstanding feature of all prolonged wars is monetary inflation, or diminishing purchasing value of a unit of currency. Because demand exceeds supply of certain commodities, their prices increase. Since 1941, this condition has prevailed among the items constituting the cost of production of milk. The cost of producing milk in New Jersey, as it is measured by the prices of concentrate feeds, hay, hired farm labor, taxes, and milk cows, is steadily climbing. For example, in July 1944 it stood at 168.3, or 68.3 per cent above the July 1923-1927 cost. The July 1944 cost of producing milk was 102 per cent above July 1940, 75 per cent in excess of July 1941, 44 per cent greater than July 1942, and 11 per cent above July 1943. Let us take the cost of producing milk in a more recent month, namely, May

1945. The index of the costs stood during that month at 162.9, or 62.9 per cent above May 1923-1927. The May 1945 cost was 92 per cent higher than the May 1940 cost, 95 per cent above that of May 1941, 50 per cent in excess of May 1942, 21 per cent higher than in May 1943, and 5 per cent above May 1944. Consequently, since the beginning of war in Europe the cost of producing milk in New Jersey has more than doubled. Has the price received by New Jersey producers for milk doubled since that time? It has not. In May 1940 it was \$2.61 per 100 pounds and in May 1945, it stood at \$3.93 without government subsidy. Adding the subsidy of 45 cents per 100 pounds, the average May 1945 price was \$4.38, or 68 per cent above the May 1940 price. Thus, the farmers received on the average during May 1945, 68 per cent more per 100 pounds of milk while the cost of producing milk rose 92 per cent.

The price of concentrate feeds has advanced steadily; for example, in May 1945 it was 57 per cent above May 1940. In July 1944 the price exceeded that of July 1940 by 76 per cent.

The price of tame mixed hay has also been constantly on the rise. During May 1945, for example, it was 55 per cent higher than during May 1940. In November 1944, when the buying of hay by farmers was quite heavy, the price of hay exceeded that of November 1940 by 99 per cent.

The price of hired farm labor during the last two or three years had advanced by leaps and bounds. In May 1945, for example, it was 161 per cent higher than in May 1940, and in December 1944 it surpassed December 1940 by 144 per cent.

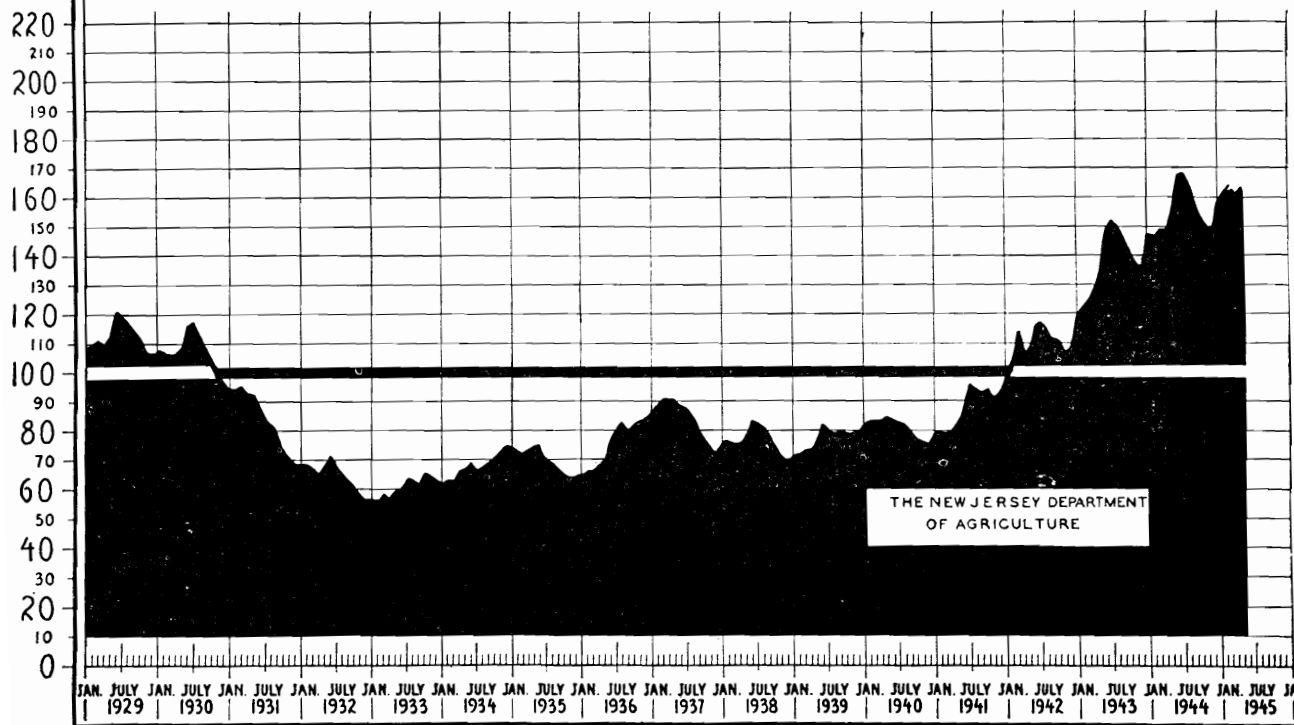
During the last four years farm real estate taxes have shown a very moderate increase amounting on the average to not more than 3 per cent.

The price of milk cows is increasing at a rate close to that of hired farm labor. In May 1945, for example, it was 87 per cent higher than during May 1940.

The law of supply and demand, despite the creation of artificial obstacles, is still the controlling factor as far as price of concentrate feeds, hay, hired labor and milk cows are concerned.

INDEX NUMBER OF COST OF PRODUCTION OF MILK IN NEW JERSEY (1923-1927=100)

INDEX
NUMBER



THE NEW JERSEY DEPARTMENT
OF AGRICULTURE

COST OF PRODUCTION OF MILK IN NEW JERSEY

GENERAL INDEX NUMBERS OF PRICES OF FEEDSTUFFS, HAY, LABOR, TAXES AND MILK COWS IN NEW JERSEY
1923-1927 = 100

Month	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
January	108.4	107.6	94.5	69.1	56.9	62.3	74.9	64.9	86.6	76.5	71.9	82.3	79.5	99.7	119.5	147.2	158.1
February	109.9	106.9	94.9	68.1	56.6	63.2	73.7	66.1	88.7	76.7	72.3	83.0	79.8	104.2	122.7	147.1	161.7
March	110.5	105.2	95.7	67.1	58.3	63.1	72.8	66.3	91.1	75.8	73.5	83.6	79.7	113.7	124.8	148.7	164.1
April	108.7	107.2	92.7	65.6	56.9	66.2	73.9	68.8	90.9	76.1	74.0	84.0	80.6	106.3	129.0	148.4	160.9
May	112.3	108.8	92.4	68.0	59.7	67.0	74.8	70.1	91.4	78.3	76.9	85.0	83.5	108.6	134.9	154.9	162.9
June	120.5	116.5	89.0	71.6	60.4	69.2	75.2	76.5	88.2	83.4	82.3	84.0	90.0	116.1	149.0	166.8	....
July	118.7	117.2	83.7	67.2	63.9	67.3	70.4	80.5	87.8	82.6	81.0	83.3	96.0	117.2	151.9	168.3	....
August	117.1	111.4	82.6	65.5	63.8	67.9	69.4	82.7	85.0	81.3	79.1	82.3	93.6	115.4	150.0	164.3	....
September	113.9	109.3	78.5	63.6	62.0	69.5	67.1	80.2	80.9	77.3	80.1	79.1	93.5	111.6	146.0	156.7	....
October	112.1	103.6	73.0	61.3	65.6	71.0	65.5	82.1	76.7	74.4	79.6	76.9	94.3	110.9	141.7	152.7	....
November	106.8	100.3	71.1	58.3	64.9	73.5	64.4	83.6	73.7	71.1	79.1	76.1	91.9	106.7	136.6	150.1	....
December	105.7	96.3	68.8	56.8	63.6	75.3	64.5	84.4	72.5	69.8	79.4	75.9	93.1	109.2	136.4	148.0	....

THIRTIETH ANNUAL REPORT

165

 INDEX NUMBERS OF PRICES OF CONCENTRATE FEEDS IN NEW JERSEY
 (1923-1927 = 100)

Month	1937	1938	1939	1940	1941	1942	1943	1944	1945
January	100.4	76.3	68.4	76.3	75.4	91.3	100.9	127.9	121.3
February	102.4	77.1	68.7	77.1	75.0	95.2	104.1	127.7	122.2
March	105.5	77.5	71.1	78.4	75.4	97.3	108.5	132.6	125.8
April	110.5	76.5	73.4	81.4	79.2	99.9	114.1	133.1	128.7
May	109.3	76.5	74.3	80.9	77.4	98.4	113.7	133.8	127.2
June	105.9	74.3	73.0	78.2	77.4	96.8	115.0	130.1	
July	87.8	74.5	71.1	74.1	81.8	96.8	115.2	130.2	
August	79.3	70.8	65.1	70.9	78.1	92.4	110.7	125.3	
September	75.5	69.7	74.7	70.1	85.3	93.5	114.0	125.9	
October	72.7	69.8	74.4	71.9	86.9	94.4	120.4	125.4	
November	73.1	67.6	73.5	73.9	86.1	95.8	119.7	123.5	
December	70.8	69.5	75.0	76.3	88.9	98.6	129.4	121.4	

 INDEX NUMBERS OF PRICES OF TAME, MIXED HAY IN NEW JERSEY
 (1923-1927 = 100)

Month	1937	1938	1939	1940	1941	1942	1943	1944	1945
January	86.1	64.8	59.8	84.7	67.0	81.1	90.6	117.8	138.1
February	91.7	66.5	61.0	85.8	67.9	89.0	94.0	116.9	146.3
March	99.2	64.7	64.7	89.8	69.0	96.4	99.2	120.5	154.5
April	94.7	67.9	65.1	90.4	68.4	95.6	105.0	120.9	153.2
May	102.2	68.6	67.7	97.4	74.0	95.9	112.0	127.1	150.9
June	86.0	65.6	66.0	83.3	70.7	88.8	97.7	109.8	
July	71.9	57.1	62.0	67.4	71.0	75.1	78.7	109.7	
August	80.8	69.7	81.3	71.7	78.3	84.3	90.9	125.3	
September	74.8	66.9	83.7	64.4	76.8	85.2	118.9	129.8	
October	68.2	69.2	87.9	69.2	79.8	96.0	116.2	139.5	
November	64.7	66.7	86.0	71.1	80.0	90.4	121.0	141.8	
December	63.6	61.3	84.8	68.8	82.9	91.9	115.5	138.1	

 INDEX NUMBERS OF PRICES PAID FOR HIRED FARM LABOR IN NEW JERSEY
 (1923-1927 = 100)

Month	1937	1938	1939	1940	1941	1942	1943	1944	1945
January	61.1	68.4	67.9	69.8	75.8	103.5	132.9	165.2	187.8
February	61.1	68.4	67.9	69.8	75.8	103.5	132.9	165.2	187.8
March	61.1	68.4	67.9	69.8	75.8	103.5	132.9	165.2	187.8
April	60.7	68.0	66.9	68.0	75.8	105.1	134.5	163.2	177.8
May	60.7	68.0	66.9	68.0	75.8	105.1	134.5	163.2	177.8
June	60.7	68.0	66.9	68.0	75.8	105.1	134.5	163.2	177.8
July	68.9	68.2	66.2	70.0	84.3	106.4	144.5	168.9	
August	68.9	68.2	66.2	70.0	84.3	106.4	144.5	168.9	
September	68.9	68.2	66.2	70.0	84.3	106.4	144.5	168.9	
October	66.8	64.8	67.9	68.8	91.1	113.2	143.7	168.0	
November	66.8	64.8	67.9	68.8	91.1	113.2	143.7	168.0	
December	66.8	64.8	67.9	68.8	91.1	113.2	143.7	168.0	

STATE DEPARTMENT OF AGRICULTURE

INDEX NUMBERS OF NEW JERSEY REAL ESTATE FARM TAXES

(1923-1927 = 100)

Month	1937	1938	1939	1940	1941	1942	1943	1944	1945
January	100.0	100.0	101.0	94.0	100.0	100.0	101.0	103.0	103.0
February	100.0	100.0	101.0	94.0	100.0	100.0	101.0	103.0	103.0
March	100.0	100.0	101.0	94.0	100.0	100.0	101.0	103.0	103.0
April	100.0	100.0	101.0	94.0	100.0	100.0	101.0	103.0	103.0
May	100.0	100.0	101.0	94.0	100.0	100.0	101.0	103.0	103.0
June	100.0	100.0	101.0	94.0	100.0	100.0	101.0	103.0	
July	100.0	100.0	101.0	94.0	100.0	100.0	101.0	103.0	
August	100.0	100.0	101.0	94.0	100.0	100.0	101.0	103.0	
September	100.0	100.0	101.0	94.0	100.0	100.0	101.0	103.0	
October	100.0	100.0	101.0	94.0	100.0	100.0	101.0	103.0	
November	100.0	100.0	101.0	94.0	100.0	100.0	101.0	103.0	
December	100.0	100.0	101.0	94.0	100.0	100.0	101.0	103.0	

INDEX NUMBERS OF PRICES OF MILK COWS IN NEW JERSEY

(1923-1927 = 100)

Month	1937	1938	1939	1940	1941	1942	1943	1944	1945
January	126.9	131.2	124.7	132.3	135.6	163.0	212.0	231.0	233.2
February	128.4	125.2	123.0	134.9	136.0	173.1	220.9	228.6	239.4
March	123.6	120.4	118.3	126.7	130.9	165.4	214.7	219.9	230.4
April	120.5	118.4	118.4	125.8	128.9	157.2	219.1	220.1	225.4
May	116.8	119.9	119.9	119.9	129.3	159.5	218.9	224.1	224.1
June	116.0	117.0	117.0	117.0	127.2	157.7	215.7	218.7	
July	118.8	114.8	115.8	115.8	131.9	161.1	211.4	216.4	
August	117.5	114.5	115.5	117.5	129.5	164.3	219.1	214.1	
September	107.9	103.3	108.9	110.7	125.5	155.9	207.6	193.7	
October	107.6	103.1	105.8	107.6	125.6	149.8	201.8	188.3	
November	115.0	106.7	111.3	115.9	139.1	157.7	204.0	194.8	
December	114.7	104.6	112.8	114.7	137.6	174.3	192.7	192.7	

NEW JERSEY GROSS VALUE OF AGRICULTURAL PRODUCTS PRODUCED DURING 1943* AND 1944*

(1944 data are preliminary)

(As Tabulated by the New Jersey State Department of Agriculture)

Commodity or Group of Commodities	1943	1944
	Gross Value	Gross Value
Vegetables, white potatoes excluded	\$47,155,000	\$47,496,000
Milk	39,860,000	42,286,000
Eggs	32,936,000	34,912,000
Poultry (chickens, turkeys, ducks, geese, baby chicks)	16,571,000	17,612,000
Nursery and greenhouse products	15,000,000	15,500,000
White potatoes	16,003,000	14,967,000
Grains	11,625,000	13,829,000
Hay	10,496,000	9,774,000
Meat animals (bulls, steers, heifers, hogs, cows, calves)	9,150,000	9,500,000
Tree fruits	9,392,000	8,564,000
Berries	4,962,000	5,647,000
Miscellaneous (seeds, honey, lumber, etc.)	1,000,000	1,000,000
Total	\$214,150,000	\$221,087,000

* Government payments are excluded.

AVERAGE RETAIL PRICE OF FARM SEEDS AND PLANTS IN NEW JERSEY

The index number of the combined price of all seeds and plants as paid by New Jersey farmers showed no change in 1945 as compared with 1944 and stood at 179, using the average of 1936-1939 as a base.

The various groups of seeds and plants showed fluctuations in price both up and down. Truck crop seed declined 14 per cent and truck crop plants remained steady in average price, placing truck crop seeds and plants 3.2 per cent lower in 1945 than in 1944. Grains and grasses rose 6.8 and 0.6 per cent, respectively, placing grains and grasses combined 5.2 per cent higher than last year. White potato seed was 1.2 per cent higher.

SEED CERTIFICATION

WHITE POTATO SEED CROP

GROWING CONDITIONS

Although the growing season ended with the soils mostly on the wet side, drought was the most important single factor in determining the size of the crop. The entry list was the lowest since 1938, 475.5 acres, from which 90.25 acres were rejected or withdrawn during the inspection season. A crop of 46,317 bushels was harvested from the 385.25 acres passing the field inspections. This is even less than the small 1943 crop of 53,193 bushels. Yields ranged from 25 bushels to 260 bushels with an overall average of 120 bushels per acre. The reduced yield is easily understood when one realizes that most of the early part of the growing season was very dry and hot with the rainfall below normal during July and August, being -7.33 inches and -3.97 inches as recorded at the Hightstown and Bridgeton weather stations.

The dry weather was broken by the cloudbursts of September 13 and the hurricane of September 14. The plants were badly whipped and shredded by this storm and parts of fields were drowned out. As the excess water drained away the middles between the rows contained many small fragments of leaves appearing as though someone had sprinkled green confetti. The rough treatment of the storm thus added to the reduced yield.

Following the storms some fields in which the plants were young recovered and resumed growth. These were the fields which made the larger yields. The early maturing varieties and those fields which had been most retarded by the drought and the hurricane then showed a noticeable increase in the amount of early blight. From all these causes, some fields came to an early death. These were the fields which made the lower yields.

A killing frost on October 16 killed most of the fields in both Central and Southern New Jersey. In a number of cases this was a week or ten days too soon for maximum tuber size.

Of the rejections and withdrawals, eight fields totalling $29\frac{3}{4}$ acres were disqualified for excessive virus disease counts, eight fields of $41\frac{1}{2}$ acres were disqualified because of bacterial ring rot, 1 acre because of excessive varietal mixture, 1 field of 15 acres was withdrawn because the grower needed all of the seed and more. One field of three acres planted next to a field of early commercial potatoes was so severely infested with the potato tuber moth while the plants were young that the growing tips were killed and the balance of the plant was severely stunted. It would be well, therefore, for seed growers to remember that if an infestation builds up in commercial potatoes they will migrate to any seed field close by and severely infest the young plants. The rejections because of ring rot do not represent an increase of that disease among seed growers but are simply a reflection of a number of growers buying seed of one shipment that happened to contain the disease which had escaped previous detection.

Of the seed used to plant the crop, 40 per cent came from Maine; a third of the seed was grown the previous year in New Jersey; about 10 per cent came from New Brunswick; another 9 per cent from Nova Scotia; about 6 per cent from Prince Edward Isle, and the balance from New York and North Dakota. Most of the seed from the North was of foundation or tuber unit quality.

Only one grower reported the use of a chemical seed treatment. This is in marked contrast to a few years ago when a major portion of the seed planted had been previously treated.

INSECT PROBLEMS

The aphid population was very light throughout the season as was the leaf hopper population except in Central New Jersey where the leaf hoppers were very numerous. Tuber moths were found in the foliage in many fields in Southern New Jersey although mostly as light infestations. However, in a few cases the moth population was much heavier. At digging time only a very few of the sun-greened tubers showed the presence of the insect.

Because the insect has been found in several scattered localities in the State, it was the concensus of opinion of representatives of both producers and users of seed potatoes at a conference held in Trenton in November that a compulsory fumigation of lots of seed potatoes was necessary only where the infestation was sufficient to indicate that damage would accrue.

An outbreak of a virulent strain of cucumber mosaic affecting more than 50 per cent of the plants in one entry was encountered. Members of the staff of Rockefeller Institute were called in to identify the virus. This disease caused a stunting and distortion of the plant together with mottling characteristics which varied according to the presence of another virus, latent X. It is presumed that some insect vectors carried this disease into the field from some wild host plant and spread it about. One affected milk-

THIRTIETH ANNUAL REPORT

169

near other seed growers although a few plants of the same type were rogued from two other growers' fields.

A REVIEW OF THE INSPECTION AND CERTIFICATION WORK OF NEW JERSEY
LATE CROP WHITE POTATO SEED IN 1944

Acres Entered for Certification:

County	Acres	Per Cent
Cumberland	384.0	80.76
Middlesex	41.0	8.62
Salem	26.0	5.47
Burlington	12.0	2.51
Camden	9.0	1.89
Mercer	3.5	.74
Total	475.5	100.00

Seed Source:

	100-lb. Bags	Per Cent
Maine	2,459	40.20
New Jersey	2,039	33.33
New Brunswick	596	9.74
Nova Scotia	562	9.18
Prince Edward Isle	365	5.97
North Dakota	50	.80
New York	48	.78
Total	6,119	100.00

PRODUCTION AND DISTRIBUTION

CERTIFIED CROP OF WHITE POTATO SEED OF NEW JERSEY

	1944	1945
Acres of seed certified	385.25	391.87
Total yield (field run) in bushels	46,317	53,193
Average yield per acre in bushels	120	135.7
Bags of certified seed sold	11,462	10,909
Bags sold within the State	11,462	10,909
Bags sold out of State	.....	.....
Bags sold untagged (old sacks used) (tags not allowed)	2,324	2,498
Total bags of seed sold	13,786	13,407
Bags seed unsold December 31st	3,210	6,019
Baskets of seed retained own use	19,465	21,549
Bushels of seed retained own use	12,165	13,468

Note: Seed packed and sold in 100-pound bags

170

STATE DEPARTMENT OF AGRICULTURE

WHITE POTATO SEED CERTIFICATION INDUSTRY OF NEW JERSEY

Year	Number of Growers	Acres Entered	Percentage Rejected	Varietal Distribution	
1939	57	584.50	7.44	Cobblers	257.25
				Chippewas	178.75
				Katahdins	87.00
				Red Skins	48.00
				Green Mts.	12.00
				Houmas	1.50
1940	74	732.99	31.45	Chippewas	271.53
				Cobblers	252.04
				Katahdins	142.17
				Red Skins	43.50
				Green Mts.	11.75
				Houmas	10.00
				Sebago	2.00
1941	59	567.05	19.04	Katahdins	188.10
				Chippewas	168.50
				Cobblers	157.10
				Red Skins	28.00
				Green Mts.	9.75
				Houmas	9.50
				Sebago	4.00
				Sequoia	2.10
1942	54	658.41	15.1	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
1943	59	840.25	53.36	Katahdins	406.83
				Chippewas	165.58
				Sebago	119.92
				Cobblers	48.25
				Red Skins	34.25
				Bliss Triumph	30.25
				Sequoia	20.17
				Houmas	10.50
				Green Mts.	4.50
1944	36	475.50	18.98	Katahdins	246.00
				Chippewas	96.00
				Cobblers	54.50
				Red Skins	36.00
				Sequoia	29.50
				Sebago	7.00
				Green Mts.	4.50
				Houmas	2.00

POTATO ACREAGE ENTERED FOR CERTIFICATION, 1944

County	Growers	Katahdin	Chippewa	Sebago	Irish Cobbler	Red Skin	Sequoia	Houma	Green Mt.	Total
Cumberland	25	200.0	83.0	7.0	43.5	28.0	17.0	1.0	4.5	384.00
Salem	2	11.5	9.0	...	...	...	5.5	...	...	26.00
Camden	1	...	...	...	...	8.0	1.0	...	...	9.00
Middlesex	6	28.0	...	...	9.0	...	4.0	...	...	41.00
Burlington	1	3.0	4.0	...	2.0	...	2.0	1.0	...	12.00
Mercer	1	3.5	...	...	...	...	...	...	...	3.50
Total	36	246.0	96.0	7.0	54.5	36.0	29.5	2.0	4.5	475.50

ACREAGE FAILING AND PASSING CERTIFICATION

	Acres	Per Cent
Acreage rejected at first inspection	5.50	1.16
Acreage withdrawn at first inspection	12.00	2.53
Acreage rejected at second inspection	72.75	15.29
Total acreage rejected at end of two inspections	78.25	16.45
Acreage rejected at third tuber inspection	...	...
Acreage rejected and withdrawn three inspections	90.25	18.98
Acreage passing three inspections (certified)	385.25	81.02

VARIETAL DISTRIBUTION OF REJECTIONS AND WITHDRAWALS
(Acres Rejected and Withdrawn by Inspections)

Variety	Acres Entered	Acres Rejected and Withdrawn by Inspections		Acres Certified
		First	Second	
Sebago	7.0	...	...	7.0
Katahdin	246	1.0	56.0	189.0
Chippewa	96	3.0	6.25	86.75
Cobblers	54.5	4.5	1.0	49.0
Red Skins	36	8.0	...	28.0
Sequoia	29.5	1.0	9.5	20.0
Green Mountains	4.5	...	...	4.5
Houma	2	...	...	2.0
Total	475.5	17.5	72.75	385.25

SUMMARY OF WEATHER CONDITIONS

	Bridgeton				Hightstown			
	July	August	September	October	July	August	September	October
Number of days during which rain fell	5	7	11	7	9	10	13	10
Heaviest daily rainfall (inches)	0.95	1.96	3.05	0.95	0.16	1.42	5.46	1.09
Lightest daily rainfall (inches) .....	.03	.03	.07	.06	.01	.02	.02	.09
Total rainfall (inches)	1.46	3.69	7.67	2.26	0.45	2.16	11.54	1.82
Deviation from normal (inches)	-2.99	-0.98	+4.36	-0.84	-1.47	-2.86	+8.33	-1.88
Average relative humidity at 7:30 A. M.*	79	79	84	84	74	62	83	79
Normal for month at 7:30 A. M.*	73	76	77	75	78	81	80	82
Per cent of possible sunshine*	52	64	42	39	79	... †	52	63
Deviation from normal (per cent)*	0	+2	-21	-24	+19	+4	-13	+6
Highest temperature reached	97	95	92	84	95	97	93	85
Average of high temperatures	89.3	86.6	78.9	65.1	89.0	87.0	76.9	65.7
Normal of the high temperatures	87.5	85.3	79.3	68.8	85.3	82.4	76.9	66.0
Lowest temperature reached ‡	54.0	49.0	43.0	30.0	51.0	42.0	38.0	28.0
Average of the low temperatures	66.0	64.6	60.3	44.6	62.8	61.6	56.5	41.5
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 New Jersey respectively where certified seed potatoes are grown.

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

† Not recorded.

‡ Average date of first killing frost in Autumn—Bridgeton, Oct. 22; Hightstown, Oct. 14. Earliest killing frost, Sept. 22 (both).

THIRTIETH ANNUAL REPORT

173

TOMATO SEED CERTIFICATION

During the 1944-1945 fiscal year, 38 seed treatment declaration certificates were issued at various times to four New Jersey seedsmen for validation of shipments to Cuba, Mexico, and Porto Rico. These certificates covered 10,625 pounds of tomato seed and 699 pounds of pepper seed.

Tomato seed certification was conducted in 1944. The following tables present a summary of the acreage approved, varietal distribution, pounds of seed certified, and a statement of the certification work since its beginning in 1921.

TOMATO SEED CERTIFICATION FOR 1944

ACREAGE CERTIFIED, 1944

Name	Marglobe	Rutgers	Stokesdale	Baltimore	Garden State	Pritchard	Campbell (No. 178)	Totals
Edgar Hurff Company	387	1,660	72	75	...	105	...	2,299
Francis Stokes Company	450	1,257	92	...	...	...	...	1,799
Joseph White Company	258	1,497	...	...	...	...	...	1,755
Campbell Soup Company	68	481	...	...	155	...	13	717
H. J. Heinz Company	...	200	...	...	...	...	...	200
Total	1,163	5,095	164	75	155	105	13	6,770

POUNDS OF SEED CERTIFIED, 1944

Name	Marglobe	Rutgers	Pritchard	Garden State	Stokesdale	Campbell (No. 178)	Baltimore	Totals
Edgar Hurff Company	11,912	46,653	4,333	...	1,832	...	1,591	66,321
Francis Stokes Company	12,500	34,800	...	...	3,200	...	...	50,500
Joseph White Company	7,475	39,945	...	...	...	...	...	47,420
Campbell Soup Company	...	10,340	...	2,953	...	450	...	13,743
H. J. Heinz Company	...	944	...	...	...	...	...	944
Total	31,887	132,682	4,333	2,953	5,032	450	1,591	178,928

TOMATO SEED CERTIFICATION FROM 1921 TO 1944
 VARIETAL DISTRIBUTION OF CERTIFIED TOMATO SEED ACREAGES

Year	Bonny Best	J. T. D.	Baltimore	Marglobe	Valiant	Break- O'Day	Stokesdale	Rutgers	Grothens Globe	Pritchard	Glovel	Garden State	Campbell (No. 178)	Totals
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
1943	35	...	...	1,143	1	...	188	3,865	...	155	...	116	1	5,504
1944	...	...	75	1,163	...	...	164	5,095	...	105	...	155	13	6,770

GRAIN SEED CERTIFICATION

Although a drought in midsummer and a tropical hurricane on September 14 ruined some fields of hybrid corn and many acres of soybeans the season closed with slightly more bushels of certified grain seeds than for the previous year. New varieties of crops which prove superior by test to those in use are added to the list of varieties certified. Thus U. S. No. 13 hybrid corn and Vicland oats have been added recently.

A summary of the inspection results follows:

GRAIN SEED CERTIFICATION, 1944

Crop	Number of Growers	Acreage Entered	Acreage Passed	Bushels Sealed
Hybrid Corn:				
N. J. No. 2	16	191	191	4,029
N. J. No. 4	12	124	124	3,505
N. J. No. 5	5	20	18	76
U. S. No. 13	5	88	84	1,924
Oats:				
Keystone	7	92.5	92.5	2,046.5
Vicland	6	155	108	3,270.5
Soybeans:				
Chief	22	621.5	612	646
Granger	7	72.5	41	0
Hokkaido (vegetable type)	3	69.0	64	228
Giant Green (vegetable type)	1	25.0	25	0
Winter Wheat:				
Leap's Prolific	12	318.5	233.5	3,962
Yorkwin	2	31	31	106
Winter Barley:				
Maryland Smoothawn	9	203.5	126.0	3,486.5
Nassau	9	98	98	1,973.5
Total	126	2,109.5	1,848.0	25,253.0

RASPBERRY PLANT CERTIFICATION

The demand for plant material of this crop has declined. Only four lots, consisting of 11 acres, were inspected and certified.

STRAWBERRY PLANT CERTIFICATION

The strawberry plants of nine dealers and growers were inspected for the Red Stele disease. A total of 22.5 acres of plants proved satisfactory for certification.

BLUEBERRY PLANT CERTIFICATION

A recently named virus disease called "stunt" made considerable inroads into bearing fields of blueberries. Growers were prompted to ask this

Department if some control could be affected by a system of plant certification. After several hearings with growers and plant propagators, a set of rules and regulations for blueberry plant certification with stunt control in view was set up.

Twelve growers and propagators entered approximately 150 acres of plants for inspection and the work was started in the spring season of 1945. It was necessary to train inspectors in "stunt" detection for the new project. Time did not permit the inspection of the full acreage requested, so that it was necessary to pro-rate the acreage among the growers.

A tolerance of 2 per cent was allowed and the rules call for prompt killing of all diseased bushes detected by the use of ammate, a new herbicide. By the spring of 1946 certified blueberry cutting wood will be available from fields twice inspected and from which stunt-infected bushes have been removed.

NURSERY INSPECTION

Certificates of inspection were issued beginning September 1, 1944, to a total of 403 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 their occurrence:

INSECT INFESTATIONS

Insect Pests	Number of Infestations
Juniper Scale	57
Bagworm	32
European Pine Shoot Moth	31
Spruce Gall Aphid	27
Pine Sawfly (<i>Neodiprion sertifer</i>)	25
Rhododendron Lace Bug	20
Oyster Shell Scale	19
Azalea Lace Bug	15
Pine Leaf Scale	13
Euonymus Scale	12
Juniper Webworm	11
Boxwood Leaf Miner	5
Taxus Mealy Bug	3
Willow Galls	3
San Jose Scale	2
Lilac Borer	2
Elm Scale	1
Fire Blight	1
Large Sphinx Larvæ	1
Tulip Scale	1
Putnam Scale	1
Pine Weevil	1
White Pine Weevil	1

In all, there were 109 nurseries in which 284 infestations were found. These were satisfactorily controlled and 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. From July 1, 1944 to June 30, 1945, a total of 1,148 permits was issued.

DEALERS' CERTIFICATE

Certificates were issued to 50 dealers in nursery stock for the year beginning September 1, 1944. 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 have requirements other than the copy of a 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 105 of these certificates was issued.

REQUEST INSPECTIONS

Requests are received from time to time for advice in the control of various insects and on other nursery and horticultural problems. In some cases, special calls are necessary. Twenty-six such calls were made during the year ending June 30, 1945.

CANADIAN CERTIFICATES

Fifteen special Canadian certificates were issued to persons making shipments of plant material to Canada in accordance with Canadian regulations.

EUROPEAN CORN BORER SURVEY

In the fall of 1944 corn fields were sampled in 19 counties of New Jersey so that information as to the status of the population of this insect could be obtained. This 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 larvæ found per 100 plants in each of these counties for several years. There follows a list of borers per 100 plants for each of the counties surveyed for the years 1943 and 1944, and there is also listed the percentage of plants found infested in the 1944 sampling.

THIRTIETH ANNUAL REPORT

179

CORN BORER INFESTATION

County	Average Number Borers per 100 Plants		Percentage of Plants Infested
	1943	1944	1944
Atlantic	17.8	92.4	35.6
Bergen	471.2	133.7	40.0
Burlington	395.8	431.8	69.2
Camden	212.5	325.4	62.4
Cape May	35.0	83.4	35.2
Cumberland	187.1	106.2	23.6
Essex-Union	359.0	92.0	43.6
Gloucester	124.8	247.6	59.6
Hunterdon	205.6	30.2	14.4
Mercer	762.4	290.0	52.9
Middlesex	459.4	122.2	21.3
Monmouth	391.6	112.4	32.4
Morris	270.0	48.2	18.0
Ocean	136.3	267.0	64.4
Passaic	163.2	69.0	21.6
Salem	121.4	137.4	48.0
Somerset	178.6	60.2	19.1
Sussex	81.6	24.6	10.4
Warren	114.4	43.4	15.6
Average, 19 counties	246.7	143.0	36.2

GOLDEN NEMATODE SURVEY IN NEW JERSEY
AND ELSEWHERE

The discovery of an infestation of the golden nematode (*Beterodera rostochiensis*) in a small area near Hicksville, Nassau County, Long Island, in 1941, established the first record of this pest of white potatoes occurring in the United States. Subsequent intensive surveys conducted in the potato-producing area of Long Island by the New York State Department of Agriculture and Markets have indicated some local spread probably attributable to local movement of farming equipment and to water drainage. Observations have also indicated appreciable economic damage in the heavily infested fields.

In view of information relating to the Long Island infestation and of the common knowledge that for many years the golden nematode has been a serious economic pest of white potatoes in Northern Europe and the British Isles, it was deemed advisable to undertake surveys in our major potato-producing areas for the purpose of determining the possible existence of this pest elsewhere in the United States.

Preliminary surveys accordingly were undertaken during the summer of 1944 by the United States Bureau of Entomology and Plant Quarantine in cooperation with the Division of Nematology of the Bureau of Plant Industry, Soils and Agricultural Engineering and with the regulatory officials and the plant pathologists of the several States included in the activity. This initial survey was restricted to the Northern States, which areas are comparable ecologically to the known European habitat of this

organism. It included the Red River Valley of North Dakota and Minnesota, the North Central, North Atlantic, and New England States.

These activities were conducted in New Jersey and elsewhere during the period June 15 to September 15 with a field force of 16 full-time bureau men and extensive periodic assistance from the various States. The survey embraced 19 States, 147 counties, 1,480 locations, including 48,000 acres of potatoes, and more than 100 packing and warehouse sites. Four hundred and eighty specimens of potato roots and soil flotations were submitted for identification. No golden nematodes were found.

DUTCH ELM DISEASE CONTROL PROJECT FOR CALENDAR YEAR, 1944

This project continued throughout the calendar year of 1944 with the personnel of six field men again assigned to the same territory which they had covered in previous years. The accumulated familiarity with the elm situation in their respective territories together with their knowledge of property owners and their disposition toward cooperation has become increasingly valuable. These men by virtue of such information can now intensify their activities in the areas where the disease apparently is on an increase. The early months of 1944 were devoted to the scouting for devitalized trees which serve as bark beetle breeding material and also elm wood piles which are considered very hazardous from the standpoint of breeding and liberating beetles which are known to carry the Dutch elm disease fungus. Each of the field men reported that the interest of property owners within their respective areas in the control of this disease as manifested by their willingness to perform such work as wood pile disposition and tree felling and burning was becoming increasingly evident. However, the interest of the property owner is usually subordinated to the difficulty of hiring competent labor for the performance of such duties. Accordingly, many of the trees which should have been felled and burned were left intact because labor was not available.

The scouting for Dutch elm diseased trees began in mid-June. In many sections the field men again encountered the complications imposed by the feeding of the elm leaf beetle and canker worms. In several sections in North Jersey and in the lower Raritan Valley the elm leaf damage was so severe that satisfactory inspections could not be made. In several instances this defoliation was so serious that the trees were a mass of wilted leaves by the middle of July. The sustained sub-normal rainfall of the summer of 1944 aggravated this condition. The examination of trees for Dutch elm disease symptoms was extremely difficult, therefore it was deemed advisable to omit the second inspection in some of the areas because of the futility of any such effort.

A summary of the reported Dutch elm disease symptomatic trees follows. The control area designation refers to the area involving township and villages in which systematic scouting is conducted. The observation

trees are those which are detected along the roadside while driving from one control area to another. This division of labor has been considered advisable in view of the fact that the elm trees, generally speaking, are more valuable as shade trees in the urban and suburban areas than they are as casual trees in the rural area. Therefore, the greater portion of available time is devoted to these ornamental trees. The term "infested" and "non-infested" as used in the following table refers to the presence of elm bark beetles known to be responsible for the spread of the disease organism from diseased trees to healthy trees.

DUTCH ELM DISEASE SYMPTOMATIC TREES

	CONTROL AREA	
	Trees Infested	Trees Showing No Infestation
Bergen	10	4
Burlington	8	4
Essex	61	100
Hunterdon	39	10
Mercer	19	26
Monmouth	7	4
Morris	57	58
Middlesex	74	3
Passaic	4	1
Somerset	341	35
Sussex	22	18
Union	10	3
Warren	23	11
	<hr/> 675	<hr/> 277

Average DBH 13 inches (diameter breast-high).

OBSERVATION TREES
(Outside Control Areas)

	Trees Infested	Trees Showing No Infestation
Hunterdon	32	15
Mercer	18	6
Morris	70	25
Middlesex	2	0
Somerset	60	23
Sussex	16	27
Warren	2	0
	<hr/> 200	<hr/> 96

Average DBH 12 inches (diameter breast-high).

A summary of 1944 reports of trees infected with Dutch elm disease in New Jersey, compared with the findings of 1943, indicate that the Dutch elm disease incidence in the counties of Somerset, Middlesex, Mercer, Monmouth, Burlington, and Hunterdon is considerably higher with the principal centers of infection in Princeton, Somerville, Rumson, Lambertville, and Florence. Counties north of the aforementioned counties are only slightly more affected with disease than in 1943. In this northern area the

municipalities of Netcong, Stanhope, Chatham, Lincoln Park, Roseland, Wayne Township, Englewood, Plainfield, Montclair, and Nutley show a conspicuous increase.

In several of the counties definite areas of infection are responsible for the high number of reported trees. For example, Somerset County is listed with 341 symptomatic trees infested and 35 symptomatic trees non-infested. Of this total approximately 245 occur within Duke Park. Another center of infection is in the nearby Borough of Somerville. The infection in Duke Park continues uncontrolled because of the inability of the superintendent of this estate to hire help to remove the dangerous trees which are liberating beetles from trees known to be infested with this disease. In the case of Middlesex County, the disease in the Raritan Valley from New Brunswick to Bound Brook is quite serious. Many of these trees are in Johnson Park. The management of this park is extending itself to the limit to remove and burn all trees which our field men designate as diseased or devitalized. Princeton Borough and Princeton Township show an increase in the incidence of this disease. The United States Department of Agriculture decided in 1944 to establish an experimental plot around the Borough of Princeton to ascertain the benefits from sanitation and bark beetle trapping work on the disease condition within the Borough of Princeton. A progress report on this experimental work will be issued at the close of the work in 1945.

The workers with this project for many years have been aware that certain infected and bark beetle infested trees may be responsible for the spread of the disease to many other elm trees in the immediate environs. Circumstances in the Village of Orange permitted the collection of additional information for the confirmation of this belief. In 1944, a large American elm tree on Page Terrace Avenue, was observed to be in a wilted condition. A sample of the wilted portion was collected for laboratory diagnosis. The laboratory reported Dutch elm disease. During the ensuing winter of 1943-1944 this large elm tree on the rear of a property in a highly developed real estate section attracted many woodpeckers, apparently in search of the larvæ in the bark. This tree, thirty-five inches in diameter, sixty feet high and about a forty-five feet spread presented a rather formidable problem for eradication. As the winter progressed, the woodpecker attack on the bark of this tree caused many large slabs of bark to be loosened and dropped to the ground. An examination of these fallen bark pieces immediately revealed a considerable bark beetle population. The owner of the tree, residing in Virginia, was beseeched to destroy this tree before the emergence of the bark beetles. This was not accomplished largely because of the necessary expense, estimated at \$300.00, involved in its removal. With this tree still standing at the time of the spring bark beetle emergence, a spread of the disease to the area immediately next to this tree was anticipated.

By July 1944, a casual examination of this area indicated that many Dutch elm diseased symptomatic trees were present. Inasmuch as no

disease-infected tree was known to occur within one-half mile of this Page Terrace Avenue tree, this area was selected for further study. An area one-half mile radius from this tree was established for investigation. In September and early October the symptomatic trees were tagged and climbed for samples which were submitted to the laboratory at Hoboken for diagnosis. Of the 132 symptomatic trees climbed and sampled, 121 were classified as infected with Dutch elm disease, 8 with verticillium and 3 with miscellaneous fungi. About 65 per cent of these 121 disease trees occurred within an 800-foot radius of this source tree. This study will be continued in 1945.

A lesson of considerable importance can be gleaned from this situation at Orange. This work should certainly stress the detection of trees which will serve as source of infection trees in many localities of the State. Frequently the activity of woodpeckers is a very reliable index. Such trees should be felled and burned without delay, otherwise an epidemic of disease, such as has happened in the environs of this Orange tree, may result.

Researches on the subject of incapacitating such trees so that they will not liberate the developing bark beetles are in progress. If a practical procedure on this subject is evolved, it will permit punctual, effective treatment of such hazardous trees so that they will not liberate the bark beetles and without the necessity of felling and burning. Often the unavoidable delay in the removal of such dangerous trees permits the bark beetle to escape before the felling and burning operation is instituted.

A State-wide perspective of the Dutch elm disease situation in the State of New Jersey is that with the exception of the concentration of infected trees in about a dozen localities the disease is not alarming. This department published and distributed a bulletin entitled "The Recommended Disposition of Cut Elm Wood as an Aid in the Control of the Dutch Elm Disease in New Jersey." This publication, largely pictorial, has demonstrated its usefulness by the activity and interest observed on the part of property owners for the removal of diseased trees and the disposition of elm wood piles.

With the close of each year of work of this project, the property owners of the State of New Jersey concerned are displaying an increasing interest in the compliance with recommendation for the curbing of the ravages of this disease. A knowledge of its potentialities as evidenced by the circumstances in Duke Park and in the aforementioned experimental plot in Orange are sufficient reminders that undelayed action is necessary if the magnitude of this problem is not to multiply to considerable proportions.

GYPSY MOTH SURVEY

On July 1, as usual, gypsy moth assembling cages were distributed in selected locations in the northern part of the State. One male gypsy moth was caught in Englewood Borough, a short distance from where a male moth was captured in 1939. A total of 700 cages were put out in the following townships and boroughs:

STATE DEPARTMENT OF AGRICULTURE

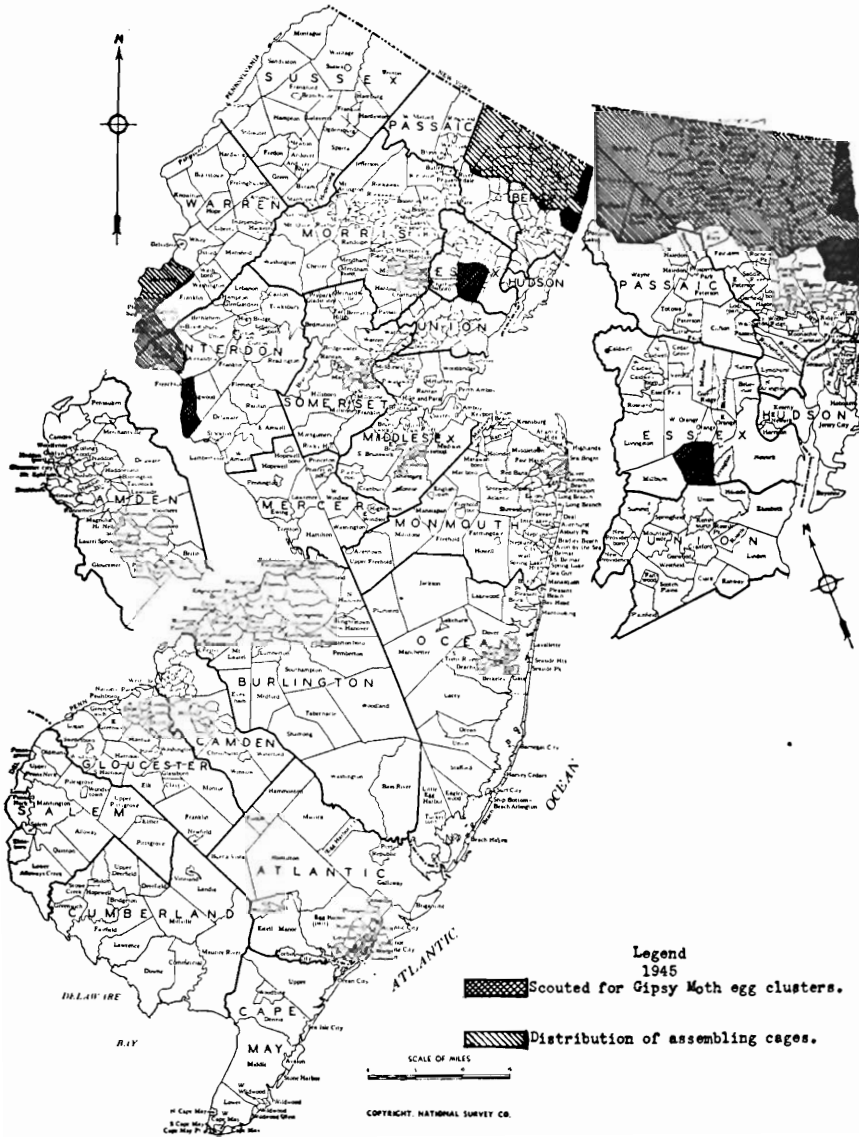
LOCATION OF ASSEMBLING CAGES

	No. of Cages
Bergen County :	
Alpine	49
Englewood Borough	50
Englewood Cliffs	33
Northvale	6
Norwood	10
Rock Leigh	6
Tenafly	44
Closter	22
Demarest	16
Teaneck	14
Allendale	9
Franklin Lakes	31
Hohokus	58
Hohokus Borough	4
Midland Park	2
Old Tappan	13
Orville	32
Paramus	9
Ramsey	15
Ridgewood	18
Waldwick	5
Washington	78
Wyckoff	20
Total	544
Hunterdon County :	
Holland	52
Total	52
Warren County :	
Harmony	65
Pohatcong	26
Lopatcong	13
Total	104
Total, All Counties	700

SCOUTING ACTIVITIES

The cage work was completed early in September and the men were assigned to scouting work in open country. The foliage dropped sufficiently to allow intensive scouting in woodland areas during the latter part of October and the scouts were assembled in one crew, working in the vicinity of the trap in Englewood Borough where a male gypsy moth was caught. This scouting work was done very carefully for a safe distance around the cage location. After this was completed, one nursery inspector was left with one member of the regular gypsy moth force to continue scouting in the Palisades section of Bergen County. One nursery inspector was assigned to scouting work in the Orange Mountains, in the Essex Park section of Essex County. This work is important as very little scout-

ing has been done here. One agent loaned by the Dutch Elm Disease Project was assigned to scouting work in Kingwood Township, Hunterdon County. This work is also very important as little is known of the conditions here. The weather was quite favorable for scouting during the season. Very little snow and ice, with good light most of the time, made the scouting results very satisfactory. No indication of the gypsy moth was found, and reports from the Federal bureau showed that no infestation



was found on the New York side of the Hudson River where male gypsy moths were found previously.

PLAN OF WORK FOR FISCAL YEAR, 1946

A report from the Greenfield office of the United States Department of Agriculture, Bureau of Entomology and Plant Quarantine, indicates that a male gypsy moth was captured at Ossining, New York, and that two male pupæ cases were found at Dobbs Ferry in Greenberg Township. This means that the gypsy moth infestation previously found here has not been exterminated. One male moth has been found in each of the towns of Delaware, Porter, and Price, in Pennsylvania. These towns are very close to the New Jersey border in Sussex County. Careful checking at once is necessary here. Also additional scouting work should be done in Bergen County, in the Interstate Park along the Hudson River.

SUMMARY OF GYPSY MOTH SCOUTING WORK, 1945

Place Worked	Acres Woodland Scouted Solidly	Acres Woodland Scouted Roughly	Isolated Trees Scouted	Shade Trees Scouted	Fruit Trees Scouted
Bergen County	...	76	...	13,972	...
Alpine	...	247	...	2,327	20
Englewood Borough	368	...	6,200	6,437	...
Englewood Cliffs	383	767	6,104	5,094	...
Essex County	...	60	...	500	350
West Orange	...	138	436	45	...
Maplewood	...	149	...	536	...
South Orange	...	108	...	350	...
Hunterdon County	1,234	69
Kingwood	...	568	2,623	28	1,357
Morris County	...	49	21,340	11,719	...
Hanover	...	442	2,740	475	...
Somerset County	...	27	9,676	8,376	761
Duke's Park	872	...
South Brunswick	...	221	...	1,123	...
Total	751	2,852	49,119	53,128	2,557

BEE INSPECTION SERVICE

The regular bee inspection work was continued during the first part of the fiscal year until winter, when the scouting program was discontinued to conserve tires and mileage for spring and summer work. Although the seasonal inspection work is considered more important in controlling bee diseases than the winter scouting program, nevertheless the removal of dead diseased colonies during the winter months has a definite influence in reducing the number of outbreaks of American foulbrood.

There was a decided increase in the number of requests for inspection from beginners in apiculture. It was necessary to compile all requests for

inspection in such a manner as to cover as large a territory as possible and conserve mileage.

The queen-rearing apiaries and package-producing apiaries received their seasonal inspections. All apiaries located within a reasonable distance of queen breeders and package bee producers were inspected in order to determine if any contagious bee diseases might be present in the neighborhood.

The three leading races of bees reared within the State are Italians, Caucasians, and Carniolans. The continuous selection of race characteristics was noticeable in each breeder's work. The demand for queens and package bees exceeded the available supply.

During the fiscal year 1944-1945, 514 apiaries were visited for inspections; 5,317 colonies and 1,174 nuclei of bees were examined for bee diseases. American foulbrood was found in 69 apiaries; 195 colonies were infected with the disease. It was necessary for the inspector to seize and destroy 32 infected colonies of bees and equipment in order to eliminate a further outbreak of American foulbrood. European foulbrood was found in five apiaries, and 14 colonies were infected. The introduction of vigorous young queens of resistant stock apparently controls this malady.

The number of colonies found in plain boxes was 57 and the number of colonies with immovable combs was 11. The transferring of colonies of bees from box hives to movable frames was demonstrated when necessary.

MICROSCOPIC DIAGNOSIS

During the year, 109 smears of dead bee brood were received by mail and diagnosed microscopically. The organism *B. larvæ* causing American foulbrood was found in 52 smears, and the organism *B. pluton* causing European foulbrood was found in 28 smears. There was apparently no organism in 29 of the smears. This branch of the bee inspection service continues to be popular among the experienced apiarists who sometimes are not positive of their own diagnosis.

CERTIFICATES ISSUED

One certified honey certificate was issued to a resident of Burlington County. Ten queen rearing certificates were issued during the fiscal year.

County	No. of Certificates	Race of Bees
Cape May	2	Italians
Hunterdon	4	Italian Caucasians Carniolans
Mercer	2	Italians
Burlington	2	Italians
Total	10	

APIARIES INSPECTED BY COUNTIES, JULY 1, 1944 TO JUNE 30, 1945

County	Apiaries	Colonies Inspected	Nuclei Inspected	Box Hives	Cross Combed	Apiaries A. fb.	Colonies A. fb.	Apiaries E. fb.	Colonies E. fb.	Colonies Destroyed		A. fb.	E. fb.
										and Burned	Negative		
Bergen	85	332	...	...	...	8	15	..	..	..	2	4	..
Burlington	18	561	...	...	...	...	...	4	12	..	..	6	4
Camden	5	9	...	...	...	1	1	..	..	..	..	..	..
Cape May	3	62	255	...	...	...	...	..	..	..	..	..	..
Cumberland	25	599	...	...	4	2	2	i	2	..	3	8	24
Essex	6	9	...	...	...	...	...	..	..	..	1	2	..
Gloucester	8	43	...	...	...	...	...	..	..	2	2	..	..
Hunterdon	76	1,468	735	12	2	2	4	..	..	..	3	2	..
Mercer	22	361	184	...	...	3	6	..	..	..	1	1	..
Middlesex	27	183	...	2	...	7	40	..	..	15	..	5	..
Monmouth	5	57	...	...	...	2	9	..	..	..	..	2	..
Morris	93	634	...	...	2	19	44	..	..	7	4	13	..
Ocean	1	16	...	...	...	1	4	..	..	4	2	..	..
Passaic	38	149	...	...	...	8	17	..	..	..	2	1	..
Salem	1	29	...	...	...	...	...	..	..	..	..	..	..
Somerset	15	121	...	...	...	3	5	..	..	..	2	2	..
Sussex	47	304	...	41	...	3	11	..	..	4	3	..	..
Union	6	56	...	...	...	3	10	..	..	..	1	..	..
Warren	33	324	...	2	3	7	27	..	..	..	3	6	..
Total	514	5,317	1,174	57	11	69	195	5	14	32	29	52	28

INSECT PARASITE INVESTIGATIONS

The major courses of work followed during the current year were: (1) the rearing and field distribution of *Microplectron fuscipennis*, a parasite of the European pine sawfly; (2) rearing and field distribution of *Macrocentrus ancylivorous*, a parasite of the Oriental fruit moth; (3) culture, field distribution, and study of *Beauveria bassiana*, a fungus disease of the adult Japanese beetle; (4) preliminary field work with the parasites of the European corn borer; (5) a small amount of continued work with *Neoaplectana glaseri*, a nematode parasite of the Japanese beetle.

REARING AND FIELD DISTRIBUTION OF *Microplectron fuscipennis*

The European pine sawfly, *Neodiprion sertifer*, continued to cause severe damage in plantations of red and Scotch pines. The northern half of New Jersey is now generally infested, except for those portions of Sussex and Warren counties northwest of the Kittatinny Mountains, or beyond a line from High Point to Culver's Lake to Millbrook to Dunnfield. The southern boundary of the infestation appears to run from South Amboy to Freehold to Imlaystown to Georgetown to Columbus. This indicates a southward extension of the infested area since the survey made in May 1944.

In general, the damage done in the older portions of the infested area appears slightly less severe, though many trees are still being completely defoliated in Morris and Essex counties. A special study area has been selected on the Ingersoll-Rand plantation at Phillipsburg. An incipient sawfly infestation has been present for the past several years in this plantation, and relatively enormous numbers of parasites have been repeatedly placed therein to determine the beneficial effects of repeated parasite introductions in a large plantation in advance of heavy or even moderate sawfly infestation. Since the first discovery of the sawflies, and coincident parasite release, there has been an apparent decline in this area in the sawfly infestation. It is important to continue this work in order to obtain a fuller understanding of the inter-relationship between this pest insect and its parasite.

A very heavy sawfly infestation occurred in Northwestern Mercer County, and cocoons for the parasite rearing work were collected here.

Field observations on the development of the sawfly were made throughout the year, most of these being made at Washington Crossing State Park. The first adults were found on September 26. Throughout the month of October they could be seen on clear warm days. The greatest number was observed on October 20. By the end of October the number had declined, but both males and females were still present.

The unseasonably warm weather in March caused the sawfly eggs to hatch nearly a full month earlier than usual. The first hatch was observed on March 28. Rapid larval development followed and appreciable damage

was present in heavily infested plantings by April 15. A period of cool, wet weather followed, and little additional hatching occurred until later. This unusual spring made the arsenate of lead spray less effective than usual. Spray material applied early enough to control the early-hatching larvæ was washed from the trees by heavy rains and the larvæ which developed later caused rather severe damage in some sprayed plantings. In a normal year one properly timed spray application effectively controls this insect.

By the end of May feeding was practically completed and cocoons could be found easily in plantings in the vicinity of Trenton.

A beginning was made to determine some of the parasites which are attacking *Neodiprion sertifer* in the field. Samples of cocoons were collected and incubated for parasite emergence. The emerging parasites were collected and submitted to the Division of Insect Identification of the United States Department of Agriculture for determination.

It has been recently stated in literature that the spruce sawfly (*Gilpinia polytoma*) and the European pine sawfly apparently are both subject to an extremely contagious and fatal polyhedral virus disease. This disease is at present being employed with considerable success in combating the spruce sawfly in Canada. A filtered extract of the virus was obtained through the courtesy of the Dominion Entomological Laboratory and tested on the pine sawfly. Field tests were made by spraying the diluted virus extract directly on pine branches infested by the sawfly and placing catch pans beneath the treated boughs. No significant mortality was found. Laboratory tests were made by dipping both larvæ and food pine needles in the diluted virus, and incubating the larvæ to maturity. In the laboratory tests there was a very significant difference in mortality rates between larvæ exposed to the virus and the control group. However, dissection and microscopic examination of dead larvæ subjected to the virus failed to show any of the polyhedral bodies which are a characteristic of this group of insect diseases, and it must be concluded that the larvae died of other causes.

Since 1941, this laboratory has been rearing and releasing a small chalcid, *Microplectron fuscipennis*, which is a parasite of the cocoon stage of the pine sawfly. During the current year a total of 3,876,000 *Microplectron* was reared, packaged, and released in the field. The average percentage parasitism obtained during the laboratory rearing was 39 per cent of all exposed cocoons. An estimated 330,000 sawfly cocoons were exposed to the parasites in the laboratory.

In general, the parasites were placed in sawfly-infested pine plantings at the rate of 3,000 parasites per acre. At present, the parasites are being placed in plantations having incipient sawfly infestations.

THIRTIETH ANNUAL REPORT

191

The following releases of *Microplectron fuscipennis* were made during the summer of 1944.

RELEASES OF *Microplectron fuscipennis* MADE DURING SUMMER, 1944

Date	Number of Parasites	Plantation
July 17	63,000	Echo Hill Camp, Sunnyside
	24,000	Eugene Salamon, Three Bridges
July 20	129,000	N. J. Sanitorium, Glen Gardner
July 25	225,000	Jersey City Watershed, Boonton
July 27	30,000	Mrs. Arthur Turnbull, Peapack
July 28	54,000	Camp Watchung, Newport
	18,000	Russell Marlatt, Port Murray
	6,000	C. M. Liske, Port Murray
August 2	114,000	N. J. Sanitorium, Glen Gardner
August 8	42,000	Fuhlbrugge, Clinton
	69,000	Goldwater, Mount Salem
	60,000	Geist, Califon
August 9	72,000	Howell, Chester
August 11	75,000	Borie, Chester
	120,000	Kay, Chester
August 16	45,000	Foster, Titusville
	90,000	Mathey, Princeton
	201,000	School of Advance Study, Princeton
August 17	300,000	Ingersoll-Rand, Phillipsburg
	300,000	Newark Watershed, Newfoundland
	150,000	North Jersey District Water Supply, Wanaque
August 18	150,000	North Jersey District Water Supply, Wanaque
August 22	90,000	Mercer County Airport, West Trenton
August 23	300,000	Hackensack Water Company, Hackensack
	18,000	Church, Stanton
	42,000	Pearson, Sunnyside
	60,000	Race, Belvidere
	123,000	Lawrenceville School, Lawrenceville
August 29	75,000	Goldstein, Washington
	84,000	Hawley, Milford
	54,000	Hooven, Lambertville
	57,000	Allen, Stockton
	45,000	Boonton Watershed, Boonton
August 30	21,000	Hammett, Andover
	48,000	Milburn, Andover
	51,000	Clark Allen, Montana
	63,000	Rutherford Estate, Allamuchy
	60,000	Dr. Percy Hughes, Belvidere
	60,000	Laura Creveling, Hackettstown
	93,000	Donald Zeek, Marksboro
	48,000	E. N. Brasefield, Ramseysburg
63,000	Charles Gutwirth, Oxford	
September 6	57,000	Riegal Paper Company, Milford
	33,000	B. F. Shepherd, Harmony
September 7	60,000	Paul Beardsley, Oakland
September 8	84,000	Lake Mohawk, Sparta
Total for Season	3,876,000	44 Colonies

REARING AND FIELD DISTRIBUTION OF *Macrocentrus ancyliworous*

During the current year the method of rearing *Macrocentrus ancyliworous* using the Oriental fruit moth as host, and green apples as host food, was discontinued, as the rearing of the parasite using the potato tuber moth as host required less labor and incubator space.

The procedures for rearing *Macrocentrus* on the potato tuber moth are not yet standardized and many changes in technique are to be anticipated. However, an outline description of the present method is given.

Both host moths and parasites are reared in cloth-paneled cages measuring 16" x 24" x 6" high. Each cage is fitted with a removable shallow tray having a coarse screen bottom to hold about five pounds of potatoes. The cages may be stacked in tiers in the incubator room.

Adult potato tuber moths (*Gnorimoschema operculella*) are confined in special oviposition boxes, where the eggs are deposited on paper sheets. The eggs are incubated (76° F.) until ready to hatch, and are then placed with small white potatoes to supply food for the moth larvæ. The potatoes are lightly punctured by rolling them on a tack-studded board to facilitate entry of the newly hatched larvæ and to assure a uniform infestation of the potatoes. Within three days of the time the eggs have hatched, the exhausted egg-sheets are removed and adult *Macrocentrus ancyliworous* introduced. About 100 female parasites are placed in each cage. It is best to also introduce from 50 to 100 males per cage to assure fertilization of the females. The parasites immediately attack the small moth larvæ and commonly parasitize as high as 90 per cent of them.

When the tuber moth larvæ have become fully developed, they leave the potatoes and spin a silken cocoon in silt or similar material placed on a removable paper sheet in the bottom of the rearing cage. Both parasitized and unparasitized moth larvæ cocoon in this manner. Shortly after cocooning, the parasitized larvæ are killed by the developing *Macrocentrus* larvæ, which latter then form cocoons within the host cocoons. Unparasitized larvæ pupate and soon emerge as adult tuber moths.

The cocooning sheets are removed from the cages and hung in emergence cages from which the moths and emerging parasites may be collected. The parasites are placed in field release cages as they are collected, usually placing 75 male and 125 female *Macrocentrus* in each cage. The parasites may be retained in the laboratory for as long as one week by keeping them cool. They show no apparent loss of vigor from such treatment.

The most serious difficulty encountered in rearing *Macrocentrus* on the potato tuber moth is the presence of a parasitic disease of the host insect. The disease is caused by a microsporidian (*Phylum protozoa*) similar to the *Nosema* disease of honey bees. This disease can infect 100 per cent of the tuber moths, but by proper precautions the spread may be held to a reasonably low figure. Parasites reared from infected tuber moth larvæ are adversely affected, many failing to emerge from their cocoons. Those

parasites which successfully mature from infected host insects are weak, do not live long, and the females are not as prolific as parasites derived from uninfected hosts. Much work remains to be done to overcome this obstacle before the rearing of *Macrocentrus* on the potato tuber moth becomes entirely satisfactory.

During the current year a total of 154,867 *Macrocentrus ancylivorous* was reared and released in experimental orchards throughout the State. All field work was under the direction of Dr. B. F. Driggers, of the New Jersey Agricultural Experiment Station. The purposes of these field investigations were: (1) to determine the over-all efficiency of *Macrocentrus* in reducing Oriental fruit moth damage; (2) to determine the relative efficiency of parasites released respectively on the first and second broods of Oriental fruit moths; (3) the future prospects of parasitic control methods as contrasted with the newly developed chemical control through the use of "DDT." Several seasons must necessarily elapse before any definite conclusions may be reached.

FIELD INVESTIGATIONS WITH *Beauveria bassiana*, A FUNGUS DISEASE OF ADULT JAPANESE BEETLES

Several investigations were continued to furnish additional information concerning the effectiveness of *Beauveria bassiana*, a fungus, as a control agent for the Japanese beetle.

In the South Mountain Reservation, Essex County, beetles were trapped in an attempt to find insects infected by the fungus. Large numbers of beetles had been trapped, dusted with the fungus spores, and liberated in this area in the summer of 1942. No further distribution of the fungus has been made, but beetles infected by the fungus were trapped here in 1943 and again in 1944, indicating that the organism has become established and survived under field conditions in this locality for two years. The weather has been extremely unfavorable, because of severe droughts during each of the two summers when recoveries were attempted.

During the summer of 1944 beetles were trapped, dusted and liberated at four points: Imlaystown, Cranbury, Princeton, and Washington Crossing. Despite the very dry weather which prevailed, infected beetles were found at each of these locations. Approximately one million beetles were directly exposed to fungus infection during the season. Fungus-infected beetles were later found as far distant as a half mile from the liberation points.

STATUS OF PARASITES OF EUROPEAN CORN BORER IN NEW JERSEY

On November 9, 1944, a meeting was held at the office of the New Jersey Department of Agriculture for the purpose of discussing the European corn borer problem in New Jersey and parasite work for the control

of the insect. Representatives of the Agricultural Experiment Station at New Brunswick, the United States Department of Agriculture's Corn Borer Laboratory at Moorestown, and the New Jersey Department of Agriculture participated.

Mr. Charles Clark summarized the parasite work which had been conducted by the Federal Department in New Jersey. He stated that liberations had been made at 16 different points in the State. Eight species of parasites have been released. Four are known to have become established in at least one locality. Two of the 16 points had been selected and intensively studied by the Federal Department. Insufficient collections had been made at the remaining 14 liberation points to determine the degree of establishment existing there.

It was the concensus of opinion of those present that the first step in a program of parasite work by the New Jersey Department of Agriculture should be the conducting of a survey to determine what parasites are now active in the field and to what degree they are effective in controlling the borer in various localities in the Garden State.

During the late fall of 1944 and, in a few instances, the early spring of 1945 corn borer larvæ were collected from fields in the vicinity of each of the 14 liberation points not previously studied. Five fields were surveyed at each point, and, wherever the infestation was sufficiently heavy, 100 borers were collected from each field.

No parasites had been released in Northwestern New Jersey, so five points were surveyed there to furnish information concerning the possible spread of parasites to that area. At these locations two fields were sampled, 50 borers being collected from each field.

This survey was conducted with the assistance of Messrs. Cobb, Webb and Sim, of the nursery inspection force; Messrs. Kintner and Braun, of Dutch Elm Disease Eradication, and Messrs. Daniels and Blurton and Miss Buchanan, of Japanese Beetle Control.

The material, as collected, was submitted to the European Corn Borer Laboratory of the United States Department of Agriculture at Moorestown, where it was processed under the direction of Mr. D. W. Jones. The material was stored under refrigeration until the fall collections were completed, then incubated under proper temperature and humidity conditions to rear the corn borers and parasites to the adult stage for identification.

THIRTIETH ANNUAL REPORT

195

SUMMARY OF RECOVERIES OF CORN BORER PARASITES
FALL 1944-SPRING 1945

Locality	Borers Collected	Borers Parasitized by			
		<i>Lydella griseascens</i>	<i>Macrocentrus gifuensis</i>	<i>Inareolata punctoria</i>	<i>Chelonus annulipes</i>
Paramus	467	6	*25	..	*..
Livingston	455	10	*52	..	..
Jamesburg	488	15	*13	1	*35
Clarksville	446	23	*..	..	..
Robbinsville	475	16	*..	..	*..
Laurelton	401	*24	*1	*6	*..
Bayville	492	41	..	..	..
State Colony	358	*20	..	..	..
Laurel Springs	500	30	*21	..	..
Hurfville	491	48	*4	..	1
Piles Grove	500	*29	*..	..	..
Millville	280	9	*..	..	..
English Creek	333	*50	*2	*2	*..
Cape May	230	23	*..	..	..
Sussex	93	1	..	..	..
Blairstown	94	1	..	..	..
Flanders	94	..	..	..	..
High Bridge	97	..	..	..	..
Malaga	73	..	..	..	..

* Indicates this species has been liberated in this vicinity.

The results of the survey described here were discussed with the Federal authorities and it was decided that this year's liberations should be in Northwestern New Jersey.

Accordingly, when parasites became available, they were liberated as follows:

June 21, 1945—500 *Lydella griseascens* and 2,000 *Macrocentrus gifuensis* were liberated at Califon, Hunterdon County.

June 25, 1945—1,904 *Macrocentrus gifuensis* liberated at Sergeantsville, Hunterdon County.

1,908 *Macrocentrus gifuensis* liberated at Hazen, Warren County.

June 26, 1945—1,882 *Macrocentrus gifuensis* liberated at Somerville, Somerset County.

1,874 *Macrocentrus gifuensis* liberated at Succasunna, Morris County.

1,880 *Macrocentrus gifuensis* liberated at Newton, Sussex County.

This completes the parasite liberation program for this year. In summary, seven colonies of parasites were liberated at six locations. The total number of parasites liberated was 11,948.

FIELD INVESTIGATIONS WITH *Neoaplectana glaseri*, A NEMATODE PARASITE
OF THE JAPANESE BEETLE

Experimental work with this parasite, which was widely distributed during the period 1939-1941, has been dropped except for one set of plots in the vicinity of Woodstown, Salem County.

These four plots were treated in May 1931 and the study is being continued to determine how successfully the parasite maintains itself under

field conditions. In these plots the Japanese beetle grub population has been maintained by the introduction of grubs from more heavily infested areas when necessary.

The soil in these plots was examined in July 1944 and again in June 1945. Large numbers of grubs parasitized by nematodes were recovered. In one plot dug in June 1945, 33 per cent of the grubs present were parasitized.

The recovery of parasitized beetles from these plots extends to 14 years, the period during which the nematode has maintained itself under field conditions.

SURVEY OF FOLIAGE DAMAGE BY FEEDING OF ADULT JAPANESE BEETLES

A survey of the damage to foliage caused by the feeding of adult Japanese beetles has been made each summer since 1940. This survey gives a reliable basis for comparing the severity of beetle damage in various sections of the State in different years and also for determining the trend of the beetle infestation over New Jersey as a whole.

The State average has remained constant for the past three years. This year, however, damage was less severe in Southern New Jersey and more severe in the northern counties than it had been in the summer of 1943.

The area of heaviest damage occurred in a band extending diagonally across Hunterdon County, bounded on the north by a line running from Frenchtown to Clinton to Califon and on the south by a line from Stockton to Flemington to Somerville. The severity of the damage is increasing quite rapidly in the northern parts of Warren and Sussex counties, especially in the areas near the Delaware River, with a surprisingly heavy infestation in the vicinity of Montague, Sussex County.

ADULT JAPANESE BEETLE DAMAGE SURVEY, SUMMER 1944

A survey of the damage to host plants caused by the feeding of adult Japanese beetles was conducted during the period August 1 to 25.

The methods of observation and scoring were the same as those employed in similar surveys described in previous reports. In order to make possible the drawing of reliable comparisons, the observations were made at the same locations each year. Comparative figures for the four surveys are given in the attached table.

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. 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.

THIRTIETH ANNUAL REPORT

197

The foliage damage throughout the State was, on the average, about the same as that which occurred last year. There was a general decrease in the severity of the damage in Southern New Jersey, especially in Salem and Cumberland counties, where it was quite severe in spots last year. The decrease in the southern counties was balanced by increased injury in Somerset, Union, Warren, and Hunterdon counties in the northern half of the State.

The areas of heaviest damage this year were found in a band extending diagonally across Hunterdon County bounded on the north by a line running from Frenchtown to Clinton to Califon and on the south by a line from Stockton to Flemington to Somerville. Other heavy damage occurred in small areas and was not general over a large area. The severity of damage is increasing quite rapidly in northern Warren and Sussex counties, especially in the areas adjoining the river, with a surprisingly heavy infestation in the vicinity of Montague, Sussex County.

OBSERVATIONS ON SEVERITY OF BEETLE DAMAGE, SUMMER 1944

County	1	2	3	4	5	6	1944 Aver- age	1943 Aver- age	1942 Aver- age	1941 Aver- age	1940 Aver- age
Somerset	23	2	5.1	4.4	4.6	3.7	4.1
Hunterdon	3	35	5	5.0	4.8	4.7	3.9	4.1
Warren	11	20	1	4.7	4.1	4.0	3.3	3.2
Union	3	5	..	4.6	4.0	4.5	4.0	4.2
Middlesex	19	22	1	4.6	4.2	4.5	3.7	3.6
Passaic	4	5	..	4.6	4.6	4.3	2.4	2.6
Mercer	18	21	..	4.5	4.3	4.3	3.5	4.3
Essex	5	4	..	4.4	4.3	5.4	5.0	4.4
Morris	28	22	..	4.4	4.5	4.5	3.9	4.0
Salem	1	45	18	..	4.3	4.7	4.3	4.2	4.8
Monmouth	25	10	..	4.3	4.3	4.3	3.8	3.6
Bergen	24	6	..	4.2	4.2	4.2	3.9	3.6
Gloucester	4	23	2	..	3.9	4.1	4.0	3.4	3.7
Cumberland	14	43	8	..	3.9	4.2	4.2	3.8	4.1
Burlington	1	..	7	48	5	..	3.9	3.9	3.7	3.3	3.4
Cape May	..	1	4	25	..	..	3.8	3.5	3.7	3.1	3.2
Ocean	1	3	..	..	3.8	3.8	3.5	3.2	3.6
Sussex	9	17	1	..	3.7	3.5	2.5	1.3	1.3
Atlantic	1	1	4	13	1	..	3.6	3.4	3.3	2.9	2.5
Camden	13	2	..	..	3.1	3.5	3.3	3.0	2.8
State	2	2	57	359	208	9	4.2	4.2	4.2	3.6	3.8

JAPANESE BEETLE QUARANTINE ACTIVITIES FOR FISCAL YEAR 1944-1945

SHIPMENTS OF FARM PRODUCE CERTIFIED BY FUMIGATION (METHYL BROMIDE)

Commodity	R. R. Cars	Units	Trucks	Units	Totals	
					Cars and Trucks	Units
White potatoes	2,114	634,400	9	2,078	2,143	636,478
Apples	8	5,954	4	1,536	12	7,490
Cabbage	6	3,000	1	446	7	3,446
String beans	...	....	1	393	1	393
Lima beans	...	....	1	594	1	594
Corn	...	....	1	610	1	610
Peaches	...	....	1	337	1	337
Onions	6	3,601	..	....	6	3,601
Mixed vegetables*	...	....	20	10,051	20	10,051
Total	2,134	646,955	38	16,045	2,192	663,000

* Mixed trucks consisted of spinach, peppers, corn, squash, celery, tomatoes, turnips, beets, scallions, parsley, radishes, asparagus, cucumbers, escarole, egg plants, carrots, cauliflower, peas.

SHIPMENTS OF FARM PRODUCE CERTIFIED BY MANUAL INSPECTION

Commodity	R. R. Cars	Units	Trucks	Units	Totals	
					Cars and Trucks	Units
White potatoes	..	....	62	13,274	62	13,274
Apples	5	3,148	1	200	6	3,348
Cucumbers	..	....	1	240	1	240
Total	5	3,148	64	13,714	69	16,862

FARM PRODUCE SHIPPED UNDER CERTIFICATE WITHOUT INSPECTION OR FUMIGATION (INTERIM BETWEEN END OF FUMIGATION PERIOD AND LIFTING OF QUARANTINE)

Commodity	R. R. Cars	Units	Trucks	Units	Totals	
					Cars and Trucks	Units
White potatoes	1,188	356,500	7	1,569	1,195	358,069
Peppers	4	2,845	..	....	4	2,845
Peaches	1	405	1	235	2	640
Mixed	...	....	1	368	1	368
Total	1,193	359,750	9	2,172	1,202	361,922

CUT FLOWERS CERTIFIED—317 boxes

SHIPMENTS OF FARM PRODUCE UNDER "P" PERMIT

Commodity	Trucks	Units
White potatoes	16	3,573
Cabbage	1	378
Total	17	3,951

THIRTIETH ANNUAL REPORT

EMPTY R. R. CARS FUMIGATED WITH CYANIDE—0

NURSERY AND GREENHOUSE ACTIVITIES
TOTAL AMOUNTS OF PLANTS, SAND, SOIL, PEAT, COMPOST, ETC., SHIPPED

Month	Outside Area			Inside Area		
	Certificates Issued	Plants	Soil, etc. (pounds)	Certificates Issued	Plants	Soil, etc. (pounds)
July 1944	670	120,080	....	27	37,521	....
August 1944	945	120,256	....	28	31,509	....
September 1944	1,400	85,974	....	56	48,578	....
October 1944	4,390	313,510	....	193	126,409	25
November 1944	3,657	401,288	....	117	152,337	....
December 1944	1,142	213,209	....	31	29,901	4,000
January 1945	1,298	135,753	....	65	48,699	4,000
February 1945	2,071	209,237	....	85	144,269	....
March 1945	4,203	406,240	....	165	392,563	8,000
April 1945	6,339	422,585	....	125	395,509	....
May 1945	6,763	297,634	....	71	132,491	....
June 1945	3,589	1,564,987	....	68	241,393	....
Total	36,467	4,290,753	....	1,031	1,781,179	16,025

SUMMARY OF PLANT TREATMENTS

Agent	Plants Treated	
Methyl bromide	802,398	
Ethylene dichloride	486,000	
Arsenate of lead (initial treatment)	47,912	(501,011 sq. ft.)
Arsenate of lead (re-treatment)	26,724	(512,744 sq. ft.)
Arsenate of lead (no lead required)	33,573	(762,820 sq. ft.)

POTTING SOIL TREATED

Agent	Cubic Yards
Carbon disulphide	440.82
Steam	14.6

SURFACE SOIL TREATED

Agent	Square Feet
Carbon disulphide	4,681
Napthalene	14,937

HEELING IN AREAS, ETC., ARSENATE OF LEAD (SQUARE FEET)

Initial	Re-Treatment	No Lead Required
256	18,546	1,854

STATE DEPARTMENT OF AGRICULTURE

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

	Number of Establishments Dealing in Nursery and Ornamental Stock, etc.
Nurseries	32
Greenhouses	10
Nursery and greenhouses	39
Plant growers	45
Miscellaneous establishments	10
Total	136

MEN EMPLOYED

Month	Farm Produce		Nursery and Greenhouses		Totals	
	Federal	State	Federal	State	Federal	State
July 1944	12	17	4	..	16	17
August 1944	12	17	4	..	16	17
September 1944	1	1	11	12	12	13
October 1944	..	..	11	12	11	12
November 1944	..	..	11	12	11	12
December 1944	..	..	11	12	11	12
January 1945	..	..	10	12	10	12
February 1945	..	..	10	12	10	12
March 1945	..	..	10	12	10	12
April 1945	..	..	11	12	11	12
May 1945	..	..	11	12	11	12
June 1945	..	4	10	12	10	16

NUMBER OF AUTOMOBILES OPERATED EACH MONTH DURING THE YEAR

July 1944	4	11	..	4	4	15
August 1944	5	10	..	4	5	14
September 1944	2	..	1	15	3	15
October 1944	..	..	2	16	2	16
November 1944	..	..	..	15	..	15
December 1944	..	..	1	15	1	15
January 1945	..	..	1	16	1	16
February 1945	..	..	..	18	..	18
March 1945	..	..	1	15	1	15
April 1945	..	..	2	16	2	16
May 1945	..	..	2	18	2	18
June 1945	..	2	2	15	2	17

Official Proceedings of the Thirtieth Annual State Agricultural Convention

The Thirtieth Annual State Agricultural Convention was held in the Assembly Chamber of the State Capitol at Trenton on Tuesday, January 23, 1945. The meeting was called to order at 10:00 A. M. by Edward H. Phillips, Jr., president of the State Board of Agriculture. The invocation was offered by Rev. Paul W. Kapp, former chaplain of the New Jersey State Grange.

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

DELEGATES OF THE STATE AGRICULTURAL CONVENTION

FROM COUNTY BOARDS OF AGRICULTURE

Name	Address	Term	County
Louis J. Sanguinetti	Minotola	2 years	Atlantic
William J. Slack	Hammonton	1 year	Atlantic
Richard R. Scoskie	Ridgewood, R. D.	2 years	Bergen
Steffen Olsen	Ridgewood, R. D. 1	1 year	Bergen
H. S. Simpkins	Burlington	2 years	Burlington
Stanley Coville	New Lisbon	1 year	Burlington
Norman A. Tomasello	Hammonton	2 years	Camden
Salvidore Donio	Hammonton	1 year	Camden
Clement B. Reeves, Sr.	Cape May, R. D.	2 years	Cape May
Arthur Cresse	Rio Grande	1 year	Cape May
Vernon. Keller, Newport, alternate for Clyde R. Harper	3ridgeton	2 years	Cumberland
Milton L. Davis, Newport, alternate for Joseph Han- cock	Bridgeton	1 year	Cumberland
William A. Crane	West Caldwell	2 years	Essex
Roderick MacDougall	Millburn	1 year	Essex
T. Russell McClure	Sewell	2 years	Gloucester
Carlton E. Heritage	Richwood	1 year	Gloucester
Charles E. Burd	Pittstown	2 years	Hunterdon
H. B. Everitt	Flemington	1 year	Hunterdon
Robert Simpkins	Yardville	2 years	Mercer
John W. Tindall	Princeton Junction	1 year	Mercer
Myron C. Hulse	Cranbury, R. D.	2 years	Middlesex
Alex Dembeck, Jr.	New Brunswick, R. D. 2	1 year	Middlesex
Peter Genovese	Keyport, R. D.	2 years	Monmouth
Walter W. Lott	Freehold, R. D. 3	1 year	Monmouth
Scott V. Parks	Flanders, R. D.	2 years	Morris
F. W. Ruzicka	Chatham	1 year	Morris
W. H. Bornemann	Toms River, R. D. 2	2 years	Ocean
Martin Schubkegel	Lakewood, R. D. 3	1 year	Ocean
Leonard Van Breeman	Clifton, R. D. 1	2 years	Passaic
Alfred Lowe	Clifton, R. D. 1	1 year	Passaic
Harvey M. Beal	Elmer, R. D. 2	2 years	Salem

Name	Address	Term	County
Joseph S. Ayares	Salem, R. D.	1 year	Salem
David W. Amerman	Neshanic	2 years	Somerset
Edward M. Haynes	Skillman	1 year	Somerset
Raymon V. Ayers	Sussex, R. D.	2 years	Sussex
Harry Vance	Glenwood	1 year	Sussex
Charles H. Brewer	Rahway, R. D. 1	2 years	Union
Walter M. Ritchie	Rahway	1 year	Union
Andrew W. Cummins	Vienna	2 years	Warren
Frank L. Pursell	Phillipsburg, R. D. 1	1 year	Warren

FROM POMONA GRANGES

Name	Address	Term	County
Martin Decker	Hammonton	1 year	Atlantic
John R. Van Houten	Wycoff, R. D. 1	1 year	Bergen-Passaic
W. D. Cowperthwait	Medford	2 years	Burlington
Samuel J. McCully, Jr.	Berlin	1 year	Camden
Lewis H. Simpkins	South Seaville	1 year	Cape May
William Terhune	Chester	1 year	Central District
F. D. Platt	Bridgeton, R. D. 2	1 year	Cumberland
J. W. Gardiner	Mullica Hill	1 year	Gloucester
Theo. H. Dilts	Three Bridges	2 years	Hunterdon
Isaac B. Lipman	Titusville	1 year	Mercer
Thomas E. Gibson	Princeton, R. D. 1	2 years	Middlesex and Somerset
Horace P. Cook	Farmingdale	2 years	Monmouth
F. Russell Layton	Woodstown	1 year	Salem
Irving Drew	Vernon	1 year	Sussex
W. E. Oberly	Stewartsville	1 year	Warren

FROM OTHER ORGANIZATIONS

- American Cranberry Growers' Association—Theodore H. Budd, Pemberton, 1 year; F. Allison Scammell, Toms River, 1 year.
- New Jersey State Horticultural Society—C. Richard Applegate, Freehold, 2 years; Lester Collins, Moorestown, 1 year.
- New Jersey State Grange—Henry M. Loveland, Bridgeton, 1 year; James Kirby, Mullica Hill, 1 year.
- New Jersey State Poultry Association—Max DeJonge, Ringoes, 1 year; E. H. Reeman, Vineland, 1 year.
- Jersey Chick Association—Nello Melini, Vineland, 1 year; Henry J. Reilley, New Brunswick, 1 year.
- New Jersey Association of Nurserymen—C. Russell Jacobus, Upper Montclair, 2 years; Col. Edward Philips, Andover, 1 year.
- New Jersey Florists' Association—Henry Hornecker, Sparta, 1 year; August Bosenberg, New Brunswick, 1 year.
- New Jersey Agricultural Experiment Station—James Andrews, Dover, 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, New York, 1 year.
- New Jersey Guernsey Breeders' Association—Lloyd B. Wescott, Clinton, 1 year.
- New Jersey State Potato Association—Robert C. Ewing, Greenwich, 1 year.
- New Jersey Beekeepers' Association—Elmer G. Carr, Pennington, 1 year.
- E. B. Voorhees Agricultural Society—H. Earl Propst, New Brunswick, R. D., 1 year.
- Blueberry Cooperative Association—Harold B. Scammell, Toms River, 1 year.
- New Jersey Field Crop Improvement Cooperative Association—Herbert W. Voorhees, Skillman.
- Cooperative Growers' Association—J. Cresswell Stuart, Beverly, 1 year.

APPOINTMENT OF COMMITTEES

At the delegates' dinner held on the evening preceding the convention, the following committees were appointed by President Phillips as follows:

NOMINATING COMMITTEE

E. H. Reeman, Chairman	.....	New Jersey State Poultry Association
C. Russell Jacobus	.....	New Jersey Association of Nurserymen
Stanley Roberts	.....	Holstein-Friesian Association of New Jersey
Walter W. Lott	.....	Monmouth County Board of Agriculture
Louis J. Sanguinetti	.....	Atlantic County Board of Agriculture
J. Willard Gardiner	.....	Gloucester County Pomona Grange
Robert Ewing	.....	New Jersey State Potato Association

COMMITTEE ON RESOLUTIONS

F. W. Ruzicka	.....	Morris County Board of Agriculture
Lloyd B. Wescott	.....	New Jersey Guernsey Breeders' Association
Henry M. Loveland	.....	New Jersey State Grange
Isaac B. Lipman	.....	Mercer County Pomona Grange
Harold B. Scammell	.....	Blueberry Cooperative Association

COMMITTEE ON CREDENTIALS

W. D. Cowperthwait, Chairman	.....	Burlington County Pomona
Frank L. Pursell	.....	Warren County Board of Agriculture
Clement B. Reeves, Sr.	.....	Cape May County Board of Agriculture
Robert Simpkins	.....	Mercer County Board of Agriculture

COMMITTEE TO WAIT ON THE GOVERNOR

Lester Collins, Chairman	.....	New Jersey State Horticultural Society
Herbert W. Voorhees	.....	New Jersey Field Crop Improvement Cooperative Association
Max DeJonge	.....	New Jersey Poultry Association
Harvey M. Beal	.....	Salem County Board of Agriculture

REPORT OF COMMITTEE ON CREDENTIALS

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

ELECTION OF MEMBERS OF THE STATE
BOARD OF AGRICULTURE

The chairman of the nominating committee placed the names of Russell C. Applegate, of Robbinsville, and Frank C. Pettit, of Woodstown, in nomination for membership on the State Board of Agriculture to succeed Edward H. Phillips, Jr., Cold Spring, and Roscoe C. Clayton, Freehold, whose terms would expire on June 30, 1945. Upon motion made and duly seconded, it was voted that the nominations be closed and Messrs. Applegate and Pettit were unanimously selected for recommendation to the Governor for a four-year period beginning July 1, 1945.

CITATIONS

CITATIONS FOR DISTINGUISHED SERVICE TO AGRICULTURE were awarded to Ernest C. Bell, of Mt. Ephraim; Joseph L. Hope, formerly of Madison; Martin Schubkegel, of Lakewood, and George H. Shull, of Princeton.

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

CITATION OF ERNEST C. BELL

In New Jersey the high position attained by agriculture is credited not only to favorable soil, climate and markets, but more especially to the man—the farmer himself. Today, we are proud to honor you as one of those who have contributed much to New Jersey's prestige.

Versatile, persevering, conscientious, ever seeking knowledge and always practical, you not only have attained outstanding success as a farmer but you have found time to serve your community, a long-standing tradition of your family.

Your farm is famous for the breeding of purebred Percheron horses, an enterprise which has brought renown to New Jersey and stimulated interest in better livestock.

Through your initiative and remarkable business acumen you have demonstrated that excellent market outlets are available nearby and can be developed successfully.

In addition to these outstanding accomplishments, you have exhibited equal ability and capacity for rural leadership as well as a willingness to serve in meeting the agricultural problems arising during the present emergency.

We are proud to point to you as a patriotic New Jersey farmer, conscientiously devoting every effort to insure an early victory and eventually to restore to agriculture some of the freedom it has temporarily surrendered.

The New Jersey State Board of Agriculture desires publicly to commend you and so confers upon you this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

CITATION OF JOSEPH L. HOPE

During the past half-century this nation has attained top rank as the recognized center of superior dairy cattle breeding. Today, we honor you because of your many contributions to the advancement of dairy husbandry in America, your adopted land.

Many of the present foremost herds of the Guernsey breed trace their blood lines and records back to the foundation stock which you so skillfully selected and imported from the Channel Islands. The benefits of your frequent missions to the Island of Guernsey take on increasing importance because, as a result of your life's work, the world's finest dairy cattle now are found in the American herds you helped to establish. Consequently, they have been spared from destruction at the hands of the greedy conqueror who oppresses those islands, and, after Victory, they will furnish much needed seedstock to restore the dairy herds of the stricken nations.

Your discerning skill in recognizing in fine cattle the qualities essential for both show ring and production are acknowledged. However, you are known best for your own personal integrity and sterling character. Your reputation for fair dealing and absolute honesty in every transaction inspired men of prominence and substance to join the ranks of purebred herd owners.

New Jersey is proud to honor you. Your host of friends throughout the nation joins us today in paying tribute to your lifetime accomplishments with this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

THIRTIETH ANNUAL REPORT

205

CITATION OF MARTIN SCHUBKEGEL

In little more than a score of years, New Jersey's rapidly growing poultry industry has advanced to a leading position in the agriculture of our State. Consequently, it is fitting that we honor you, the first poultryman to receive this citation, as one who has contributed much to our achievement.

With foresight and faith in the future of poultry husbandry, you helped to lay the splendid foundation on which this thriving New Jersey industry has been so well established. Your promptness in putting into practice the findings and recommendations of science, and your adoption of a pedigree-record plan are examples of your progressiveness and sound management.

You are recognized as the leader of those who founded the original egg auction market, one of the greatest contributions to the welfare of poultrymen in New Jersey and other States. To you, thousands of poultrymen in the Northeast forever will be indebted.

In your own community and county, you have answered every call for service, exhibiting a quality of leadership which always has been an inspiration to your farmer colleagues. You have been a loyal officer of your Ocean County Board of Agriculture and a strong supporter of the New Jersey Agricultural Extension Service.

At this 1945 session of the Agricultural Convention we are proud to commend you publicly for your years of useful service. The New Jersey State Board of Agriculture confers upon you this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

CITATION OF GEORGE H. SHULL

Yours was the ingenuity which revealed certain of the intricate processes of plant life and led to the development of hybrid corn.

Nearly two score years have passed since you discovered that the corn plant, upon which so much of our American economy depends, is an extremely complex hybrid organism which can be analyzed and separated into its elementary parts. Then you demonstrated the phenomenon that when certain combinations of those components are re-united the vigor of the progeny excels that of the original corn with which the experiment was begun.

Patiently and diligently pursuing your experiments, you perfected a procedure which was recognized throughout the world as a revelation in the practical application of genetics.

The results of your pioneer studies are a classic example of the fruits of pure research motivated by zeal for knowledge rather than for economic gain. However, even as a renowned plant scientist, you remained true to your own farm background by clearly stating the practical significance of your discovery.

In somewhat tardy response to your appeal, others put into practice your principles and techniques which now provide American farmers with the seed needed for millions of acres of corn.

Today, we pay tribute to your years of service in the science of genetics at Princeton University. We acknowledge our indebtedness to you, proud that New Jersey is your home, and thankful that our nation is so well blessed with a bountiful supply of food—one of our greatest assets as a weapon of war and an instrument of peace.

In the name of all friends of agriculture, the State Board of Agriculture confers this CITATION FOR DISTINGUISHED SERVICE.

CITATIONS FOR CONTRIBUTION TO FOOD PRODUCTION PROGRAM

Citations for rendering unique and enviable contribution to the wartime food production program were awarded to Frederick A. Fitch, superintendent of the State Home for Boys at Jamesburg; Lester S. Hess, vocational agriculture instructor, Moorestown; and Fred D. Osman, county agricultural agent for Union County.

The citations follow:

CITATION OF THE NEW JERSEY STATE HOME FOR BOYS AT JAMESBURG

The personnel of the New Jersey State Home for Boys at Jamesburg has been eminently successful in meeting their obligations to train youth coming under their influence in useful occupations and good citizenship.

More recently your agency, Mr. Fitch, went beyond the usual scope of activities to give direct aid to your neighbors—farmers who were sorely pressed for assistance in harvesting their crops which this nation and its allies need to assure a successful prosecution of the war.

The willingness of the boys under your jurisdiction to tackle the job, thus contributing more than 2,500 boy-days to the harvesting of a wide variety of perishable crops as well as able assistance in general farm work, speaks well for the patriotism of these youths and the genuine interest of you and your staff.

There are forty-four farmers and eleven commercial firms handling farm products and supplies that attest to the value of this good neighbor policy.

The State Board of Agriculture in the presence of this assembly pays tribute to the New Jersey State Home for Boys at Jamesburg, and presents to it through you this SPECIAL AWARD FOR SERVICES.

CITATION OF THE MOORESTOWN FARM VICTORY CORPS

The Moorestown Farm Victory Corps has firmly established itself in the hearts of many farmers within a wide radius of Moorestown by virtue of the real contribution its youthful members made in 1944 to the all-out food production effort.

The three hundred school students comprising this active group have the enviable record of collectively working 9,600 days on farms in the harvesting of fourteen different crops, but primarily extremely perishable crops of blueberries, asparagus, and tomatoes.

The success of this undertaking was due in great measure to the spirit, enthusiasm, and the faithfulness of these several hundred boys and girls, but just as important was the sound direction which you, Mr. Hess, gave to the Victory Corps through your efficient organization furnishing to the boys and girls leadership and responsibility and long hours of patient instruction on the job itself, wherein the young workers gained profit to the mutual advantage of themselves and their farmer employers.

This SPECIAL AWARD FOR SERVICE is presented on this occasion by the State Board of Agriculture to the Moorestown Farm Victory Corps.

CITATION OF THE UNION COUNTY VICTORY FARM VOLUNTEERS

The Union County Victory Farm Volunteers, an organization composed entirely of girls, made a distinctive contribution to the New Jersey Food Production Program in the season 1944.

This worthy effort by more than three hundred girls in the Union County area enabled seventy different farmers in the county to harvest more completely the food crops they were producing, in particular the intensively cultivated vegetables which make up so much of Union County's agriculture. Through their fourteen thousand hours of harvest toil these ambitious girl workers added to the supplies of the nation's food basket.

Beneath this successful endeavor, though, there lay a foundation which you, Mr. Osman, and your staff built well in the beginning. You recognized as fundamental the need for good organization and sympathetic and adequate supervision. The public-spirited twenty-nine adult leaders who guided the young folks in their daily tasks on the farms are entitled to share with them the fruits of their accomplishments.

With this SPECIAL AWARD FOR SERVICE the State Board of Agriculture hereby recognizes publicly these outstanding achievements of the Union County Victory Farm Volunteers.

REPORT OF COMMITTEE ON RESOLUTIONS

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

WHEREAS the Office of Price Administration, in carrying out its purposes of endeavoring to prevent inflationary costs of living, has established ceiling prices on a wide variety of articles, including thirty-five fruits and vegetables; and

WHEREAS the Department of Agriculture has arranged during the past year for certain of its personnel to confer frequently in Washington with officials of the Office of Price Administration, the War Food Administration, and national trade organizations, to acquaint them with New Jersey's practices and price needs in the fruit and vegetable industry, and at the same time to learn of proposed regulations and determine their application to and effect on New Jersey conditions; and

WHEREAS this field of endeavor has been of substantial value to our fruit and vegetable growers by serving to protect their interests through personal representation in Washington; now, therefore, be it

Resolved, That we record our appreciation to our State Board of Agriculture and its Secretary, Willard H. Allen, for their cooperation and foresight in making possible the development of this type of public relations; and be it further

Resolved, That we express our appreciation to the County Boards of Agriculture, the State Horticultural Society, the Cooperative Produce Auction Market Associations and Farmers' City Markets for their financial contributions toward the support of this enterprise.

WHEREAS we view with concern the growing rate of bovine tuberculosis infection in herds during the past year, particularly in counties with large dairy populations and where replacements in herds comprise both imported cattle and cattle purchased from nearby farms; and

WHEREAS infected cattle discovered on State test must be removed from herds and slaughtered in the interests of public health; now, therefore, be it

Resolved, That the Legislature of the State of New Jersey be petitioned by this body of agricultural delegates to appropriate the necessary moneys, first, to indemnify farmers for their losses sustained by reason of such condemnations, and second, to implement the State testing program to the extent that infection insofar as possible may be stamped out of all herds, particularly in communities and counties evidencing an increase in infection during the past twelve months; and be it further

Resolved, That a copy of this resolution be sent to every member of the Legislature, urging their whole-hearted support of the appropriation of State moneys necessary to carry out to the fullest extent the laws now on the statute books concerned with the eradication of infectious diseases in cattle.

Be It Resolved, That we concur with plans providing for the reorganization of the State Department of Education on a sounder, more practical and efficient basis; and be it further

Resolved, That we heartily commend the State Board of Education and the State Commissioner of Education, John H. Bosshart, for their keen interest in rural education, for their strong support of instruction in vocational agriculture now available to thousands of students in our high schools, and for their endorsement and active participation in the farm help program of the State Commission on Student Service.

WHEREAS the unabated onslaught of war has necessitated continual selection of manpower for our Armed Forces; and

WHEREAS the number of young men remaining on our farms who are experienced in modern farming operations and skilled in the use of power machinery so vital in attaining greater acreage and production, is even now insufficient to maintain New Jersey's high food production record; and

WHEREAS proposals have been made for Selective Service to draw still further on this dwindling supply of basic farm manpower; therefore be it

Resolved, That we petition Selective Service authorities to preserve that same fair consideration, *when requested*, that has been given in the past to the deferment of farm men deemed essential to agriculture. We especially refer to instances where removal of a *single* worker may necessitate abandonment of production on the farm where he is employed; and be it further

Resolved, That copies of this resolution be forwarded to State Selective Service headquarters and to the County Boards of Agriculture.

WHEREAS the program for promoting the sale and distribution of New Jersey farm products, sponsored by the New Jersey Council in cooperation with the State Department of Agriculture, is of inestimable value and benefit to many New Jersey farmers and to the agriculture of the State; and

WHEREAS by reason of this advertising and promotional activity our products have gained further recognition in the trade channels in which they are marketed; therefore be it

Resolved, That the delegates here assembled, representing all the principal agricultural organizations in this State, endorse the program of the New Jersey Council, and respectfully recommend to the Governor and to the Legislature that the activities of the New Jersey Council be continued and supported with adequate funds.

WHEREAS there is now under consideration a plan for reorganization of departments, boards, commissions and other units making up the State Government; and

WHEREAS this annual Convention of Agricultural Delegates is an institution of long standing, dating back to 1916, whereby the farmers of the State have developed a sound Department of Agriculture by reason of the privilege of electing each year two members to the State Board of Agriculture; therefore be it

Resolved, That if a reorganization of State Government is effected, the annual Convention of Agricultural Delegates be continued in fact and in principle; that there definitely be a Department of Agriculture and that it shall not be subordinate to any other department, commission or agency; that the Department of Agriculture shall be set up in such a manner that it will be a definite part of State Government and that there shall be no question as to its constitutionality; that the President of the State Board of Agriculture be petitioned to appoint a committee to make recommendations on what would be a sound and practical type of organization for a Department of Agriculture; and that any agencies or departments which might be added to the Department of Agriculture be limited to those which have a direct bearing on the agriculture and rural life of the State; and be it further

Resolved, That a copy of this resolution be forwarded to the Governor, members of the Legislature, and members of the Committee on Reorganization.

WHEREAS it is incumbent upon the farmers of the nation to produce an adequate supply of food in order to maintain our Armed Forces and our citizenry, and to aid in meeting the needs of our allies and the peoples of devastated countries now in allied hands; and

WHEREAS our Federal Government has again established goals which in its considered judgment will assure these adequate supplies, and has called upon all farmers to join in common effort to provide these essential needs of war; therefore be it

Resolved, That we here assembled as delegates to this Agricultural Convention of the State of New Jersey, accept our responsibilities and renew our pledge to strive for full attainment of these high goals of production, thereby hastening Victory and the Peace to follow; and be it further

Resolved, That copies of this resolution be forwarded to his Excellency, Franklin D. Roosevelt, President of the United States, to the Honorable Claude R. Wickard, Secretary of Agriculture of the United States, and to His Excellency, Walter E. Edge, Governor of the Sovereign State of New Jersey, in testimony of our pledge and obligation.

Be It Resolved, That this Convention publicly express its thanks to the workers and officials of our New Jersey Department of Agriculture, and to each and every member of the Farmers' Week General Committee, representing all the commodity and State agricultural organizations, for their tireless efforts and cooperation in promoting Farmers' Week, of which this Convention is a part, and in maintaining throughout the year those high standards of resolve and devotion to duty which have had their influence in bringing agriculture in the Garden State to its present fulfillment.

WHEREAS the death of David H. Agans has brought to a close the career of a man of high and noble principles, zealous public spirit and keen understanding; and

WHEREAS the agricultural life of New Jersey has been greatly benefited and will continue to benefit by his long years of conscientious devotion to creating better rural living by virtue of his active leadership in our legislative halls, in the State Grange, and in numerous other avenues of civic and agricultural enterprise, all of which will serve as a lasting memorial to his distinguished life; and

WHEREAS he served ably as a member of the State Board of Agriculture and for many years as a delegate to this Convention; therefore be it

Resolved, That this Convention pay its tribute to the memory of this great leader, and that a copy of this resolution be sent to the family.

WHEREAS school students in New Jersey have responded by the thousands to the need for additional seasonal labor on our farms, especially in the harvesting of perishable foods required in these days of high production needs; and

WHEREAS the utilization of these boys and girls has been accomplished in an orderly and efficient manner; therefore be it

Resolved, That we commend the State Commission on Student Service for carrying out so ably the task for which it was created by the Legislature, and that we further commend its County Commissions, the public and private schools and their officials, and all others who also have given, and are planning to continue to give, willingly of their time and talents to the end that the crop production efforts of our farmers will never be in vain.

210

STATE DEPARTMENT OF AGRICULTURE

Be It Here Resolved, That we honor those of our brave men and women who have given their life blood in the Great Cause of Freedom, by observing a moment of silence and solemn meditation.

Be It Further Resolved, That we pray devoutly and constantly for the safe and early return of our men and women now engaged in a mighty conflict in all the far quarters of the world to preserve this nation's great and glorious heritage of Eternal Freedom, So Help Us God.

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