

FAIRLEIGH DICKINSON UNIVERSITY

OCT 7 1967

46th Annual Report
of the
New Jersey
Department of Agriculture

July 1, 1960—June 30, 1961



Trenton, New Jersey

June 30, 1961

FOREWORD

Formerly, the complete annual report of the New Jersey Department of Agriculture was issued as a printed publication in the Department's regular series. This year, the complete printed report was discontinued. A much abbreviated version, generously illustrated and giving the highlights of the year's work, was issued in its place and received wide distribution. However, it was felt that some readers would still desire a fully detailed account of Department activities. This complete report is contained in the pages which follow.

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Secretary of Agriculture

NEW JERSEY STATE LIBRARY

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DISCARDED

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¹Messrs. Lowe and Collins will retire from the Board on June 30, 1961. The new members will be Joseph Maccarone, Swedesboro, and James P. Vreeland, Jr., Towaco.

D I V I S I O N O F A D M I N I S T R A T I O N

William E. Kenny, Assistant Director

The New Jersey Department of Agriculture is composed of five divisions and the Office of Milk Industry. The divisions of Animal Industry, Information, Markets and Plant Industry administer regulations and programs adopted by the State Board of Agriculture and enforce certain agricultural laws. The Office of Milk Industry administers laws which concern the production, distribution and sale of milk in New Jersey. The Division of Administration supports the foregoing divisions. The support is generally accomplished through fiscal, personnel and general service programs.

FISCAL

During the fiscal year 1960-61, the Office of Milk Industry functioned with a budget distinct from that of the Department. The Department budget was prepared and administered by the Division of Administration. Operating funds were received from three sources -- The General Treasury of the State of New Jersey, dedicated commodity promotion tax revenues, and Federal government appropriations for certain matched fund projects.

Department expenditures for the year totaled \$1,589,777. General Treasury funds provided \$1,214,921; commodity taxes, \$336,871; and the Federal government, \$37,985.

General Treasury funds were used for general agricultural programs established by laws and State Board of Agriculture regulations. Those programs included livestock and plant disease control, plant pest control, marketing, agricultural information, soil conservation projects and Rural Advisory Council studies. Following is a summary of General Treasury appropriation expenditures:

Division of Administration	\$157,439	12%
Division of Animal Industry	321,439	27%
Division of Information	62,661	5%
Division of Markets	243,703	21%
Division of Plant Industry	227,330	19%
Fairs and 4-H Show	62,661	5%
Miscellaneous	78,940	6%

The \$336,871 provided by commodity promotion taxes was used only for programs recommended by the respective promotion councils and approved by the State Board of Agriculture. All taxes collected by the Department were deposited in dedicated accounts for each council. All expenditures were made in accordance with State fiscal policies.

Expenditures for each council were:

Apple Industry Council	\$ 67,498
Asparagus Industry Council	97,432
Poultry Products Promotion Council	155,055
White Potato Industry Council	16,886

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The United States Department of Agriculture cooperated with the Department in sharing expenses for certain projects, which were administered by the Department under official agreements. Of the \$37,985 provided, \$9,240 was used for agricultural statistical work and \$28,745 for market expansion programs.

PERSONNEL

Department permanent employees numbered 197. The General Treasury appropriation to the Department provided for 141 permanent positions. The General Treasury appropriation to the Office of Milk Industry provided for 39. Federal matched funds supported seven jobs and commodity tax revenues ten.

Most all positions were in the classified Civil Service. Appointments were subject to Civil Service law and regulations. Exceptions were made in some instances. The commodity promotion councils were permitted to employ certain personnel without Civil Service regulation. The waiver was allowed so that the councils could employ program managers without restriction.

In addition to the permanent personnel, some 60 seasonal employees were assigned to plant pest eradication projects, poultry certification, and marketing programs. Also, 91 fruit and vegetable inspectors were hired on a temporary basis. The latter were employees of the New Jersey Agricultural Society and worked under Department direction.

There were no retirements during the year. The following staff changes did occur:

Appointments

George W. Harris, Inspector, Division of Animal Industry,
July 22, 1960.

Margaret M. LaBaw, Clerk Typist, Division of Animal Industry,
July 16, 1960.

Harriet S. Lavinson, Clerk Typist, Division of Administration,
March 22, 1961.

Bernard J. McLaughlin, Investigator, Licensing and Bonding,
October 24, 1960.

Donald P. Persing, Agricultural Market Reporter, October 3, 1960.

Walter M. Springer, Supervisor, Fruit and Vegetable Standardization, March 1, 1961.

Promotions

Edith M. Alpaugh, Principal Clerk Stenographer, February 10, 1961.

Reta P. Arensmeyer, Senior Clerk Stenographer, November 9, 1960.

William W. Metterhouse, Chief, Plant Laboratory, May 10, 1961.

William P. Murphy, Senior Inspector of Eggs, May 1, 1961.

GENERAL SERVICES

The machine data processing unit was continued. Livestock disease control records and Office of Milk Industry licensing were the major machine operations. During the year, the billing of veterinary practitioner services was added to the machine operation. This arrangement has yielded better fiscal control and expedited payments.

Considerable effort was devoted to the proposed Health-Agriculture building. The State intends to construct an eight-story office and five-story laboratory building for these departments. They will be included in a 25-acre site in Trenton where a Department of Labor building is already under construction.

The Health-Agriculture building is expected to cost \$7,000,000. Construction is scheduled to start in the very near future. Occupancy by January, 1963, is anticipated.

Personnel training was continued during the year. All supervisory personnel participated in a business writing course. There were 10 classes.

SPECIAL SERVICES

The Division of Administration was also responsible for certain programs which did not concern the operating divisions. These functions included the Department loan funds, the New Jersey Farm Show, and horse promotion activities.

New Jersey Junior Breeders' Fund

During the fiscal year, 171 loans amounting to \$17,022.55 were made to 4-H club members and vocational agriculture students by the New Jersey Junior Breeders' Fund. Loans for purebred dairy animals and steers accounted for the major portion of the total loaned.

Charges against the emergency fund for livestock losses incurred by members totaled \$756 for the year. Eight sheep and four dairy animals were lost.

Earnings from interest charges on loans provided all members with one-year subscriptions to breed journals. Ribbons and cash premiums or trophies totaling \$497.33 were awarded. Annual New Jersey Agricultural Society and Frelinghuysen Memorial awards were also made.

During the 40 years of its operation the New Jersey Junior Breeders' Fund has made 4,763 loans totaling \$419,095.04 to rural youth in the State.

State Board of Agriculture-Federal Loan Fund

The State Board of Agriculture Federal Loan Fund was established with assets from the defunct Rural Rehabilitation Corporation. Under the agreement which transferred the assets from the Federal government to the Department, the

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funds can be used only for programs which are compatible with the purposes of the former corporation.

State Board of Agriculture assets now total \$284,428. These are used to assist young farmers through farm purchase loans, farm operating loans and soil and water loans. All loans were negotiated and serviced through the Farmers Home Administration of the United States Department of Agriculture.

During the past year, five loans were made. They totaled \$41,900. On June 30, 1961, 26 loans totaling \$280,175.66 were outstanding.

Fairs and 4-H Shows

An appropriation of \$50,000 was made for allocation by the Secretary of Agriculture to the 19 agricultural fairs in New Jersey. This annual appropriation helps the fairs pay premiums and awards, and some limited related expenses. About three-fourths of the total amount went for 4-H Club or Future Farmers of America awards and expenses; the balance was used for premiums in adult open classes. "State Aid," as such funds are known in a number of states, actually made possible the holding of a number of free-admission 4-H fairs that would otherwise have had difficulty in operating. This gave the young folks over the State an opportunity to display their achievements and completed projects to the public.

Other 4-H activities aided in a very modest way were the 4-H Baby Beef Show, the 4-H Demonstration Contest and the 4-H Dress Revue.

An additional \$10,000 was used by the Department in staging the competitive and educational displays at the annual New Jersey Farm Show held as a part of Farmers Week, and in development of exhibits for fairs and other shows.

A total of \$3,000 was devoted to help stage one-day livestock shows of the more important breeds of dairy animals, as well as beef and sheep shows. These are competitions which materially assist in improvement of the breed, and the project therefore contributes to the welfare of agriculture.

New Jersey Farm Show

The New Jersey Farm Show was sponsored by the Department and the New Jersey Agricultural Society. It was held in the Trenton Armory, January 23 to 27, 1961, during the annual Farmers Week. Heavy snows restricted attendance. Otherwise, the show was well received.

Competitive commodity shows were held for apples, eggs, hay, honey, seed and grain, and sweet potatoes. Ribbons, trophies and premium awards totaling \$1,104 were made. Fifty-four commercial companies occupied 74 spaces. Educational exhibits and commodity shows filled the remaining area.

Horse and Pony Promotion

The State Board of Agriculture established a horse and pony promotion program in October, 1960. This industry has demonstrated rapid growth in recent years. There is considerable interest in breeding and in pleasure horses.

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Ronald C. Weyer was given temporary appointment to direct the new program. Working relationships were immediately established with breed organizations. The State Board of Agriculture designated the New Jersey Equine Advisory Board its official advisory group on the horse industry.

The first equine population census was initiated. The census is intended to be a determining factor for planning future Department efforts in this field.

D I V I S I O N O F A N I M A L I N D U S T R Y

Dr. E. L. Brower, Director

BUREAU OF LIVESTOCK DISEASE CONTROL

Bovine Brucellosis

The number of brucellosis infected herds declined slightly in 1960-61. Sixty-five infected herds remained at the end of the fiscal year, compared with 69 last year. Complete eradication of bovine brucellosis, the Department's goal, is becoming increasingly difficult.

Control measures employed include the following:

1. Calfhood vaccination.
2. Brucellosis ring testing of producers' milk.
3. Blood testing of herds.
4. Special laboratory tests of problem herds.
5. Rigid regulations controlling the importation of cattle into New Jersey.

There were 17,655 calves officially brucella vaccinated this year. Vaccination is one of the greatest aids in the prevention of brucellosis in cattle. Even though vaccination is estimated to be only 65 per cent effective, much emphasis is placed on this means of control.

Brucellosis ring testing was increased to three sampling periods this year. More frequent sampling has helped in the early detection of infection and in reduction of disease spread.

All dairy herds are blood tested biennially. Those herds in which it is not feasible to conduct a milk ring test, such as beef herds and dairy herds whose milk is not sold, are blood tested annually.

Problem herds receive further study. Milk samples are taken from suspect animals for bacteriological examination and animal inoculation to determine whether these cattle are infected and shedding brucellosis organisms.

A total of 17,366 breeding cattle was imported into New Jersey this fiscal year. To supplement the rigid control of cattle imports into New Jersey, bills number A 363 and A 364 were passed by the Legislature and signed into law. Bill A 363 increases from 24 to 30 months the age of calfhood vaccinated cattle which may enter the State without a blood test prior to entry. Bill A 364 deleted the provision of the law on illegal imports, which had provided that such animals could be held here, if they were tested at the owner's expense. The two remaining alternatives of returning the illegal entries to the state of origin or sending them to slaughter have been retained. This materially strengthens the control of illegal imports.

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Brucellosis Ring Test

The brucellosis ring test was conducted on 9,148 herds of 476,419 animals. Negative results were obtained on 8,906 herds of 462,220 animals. Blood tests were conducted on the 246 herds of 14,199 animals that showed suspicious results.

In collecting milk samples at milk receiving stations in New Jersey, some samples were obtained from producers located in neighboring states. The Division laboratory conducted tests on 1,624 samples from out-of-state herds. Reports on these herds were sent to the proper officials.

By reciprocal agreement with neighboring states, the Division received reports of brucellosis ring tests conducted on 276 herds of 11,146 animals whose milk is shipped to out-of-state dealers. Negative results were obtained on 273 herds of 10,975 animals. Blood tests were conducted on three herds of 171 animals which reacted suspiciously.

During the fiscal year nine counties were completely tested and qualified for recertification as modified brucellosis-free areas: Bergen, Camden, Cumberland, Essex, Mercer, Morris, Sussex, Union and Warren.

Certification of Atlantic and Cape May Counties

The Secretary of Agriculture presented brucellosis-free area certificates to Atlantic and Cape May counties on April 17. Bolton LeGates, president of the Cape May County Board of Agriculture, accepted for Cape May County, and Louis J. Sanguinetti, a member of the Atlantic County Board of Agriculture, accepted for Atlantic County.

A certified area is one where not more than 1 per cent of the herds, or one herd, whichever is greater, is infected and where the number of infected cattle does not exceed 0.2 per cent.

Modified certified status can be achieved when the number of infected herds is not more than 5 per cent and the number of infected cattle does not exceed 1 per cent.

Atlantic and Cape May counties now join 41 other counties in the nation which have been certified as brucellosis-free. Only one entire state, New Hampshire, has received the rating. Other states where certified counties now exist are Maine, Massachusetts, Pennsylvania, West Virginia, North Carolina and Minnesota.

The two South Jersey counties were also the first in the State to become modified certified brucellosis-free areas. Cape May county was so designated in 1950 and Atlantic County in 1956.

Bovine Tuberculosis

Tuberculosis tests were conducted on 5,748 lots of 190,296 animals. Results showed 282 reactors in 220 herds, an increase of 86 reactors over last

fiscal year. The main reason for this increase was that several extensive breaks were encountered, involving as many as 12 animals in one herd. Each year a high percentage of the reactors found are animals that originated in other states. Because New Jersey imports almost 20,000 animals a year, disease incidence here is affected by the control measures carried on in the source states.

The entire State of New Jersey is modified accredited tuberculosis-free. During the fiscal year, nine counties were completely tested and qualified for reaccreditation: Bergen, Camden, Cumberland, Essex, Mercer, Morris, Sussex, Union and Warren.

4-H Club Baby Beef

In cooperation with the New Jersey Agricultural Extension Service and the 4-H clubs, 87 steers entered in 4-H baby beef projects, were ear tagged with a special 4-H tag by State veterinarians.

Leptospirosis

Tests for leptospirosis were conducted on a request basis this fiscal year. A total of 7,442 samples were tested, of which 170 showed titres of 1:10 through 1:40, 25 showed titres of 1:160 or higher, and 7,247 were negative.

Sheep Scabies

Six flocks were found to be infected with sheep scabies during the fiscal year. Four of these have been released from quarantine. The remaining two were not dipped because of lack of facilities. To alleviate this problem, the Department ordered a sheep dipping vat which should enable prompt clean-up of infected flocks.

The dipping of infected flocks and semiannual inspections of all sheep should eventually lead to the designation of New Jersey, first, as an eradication area and later, as a free area. This is in accordance with proposals of the United States Department of Agriculture for the control of scabies in sheep. Regulations to implement this program have been submitted to the State Board of Agriculture and have passed the first reading. Surrounding states are joining in similar programs.

During this fiscal year 470 flocks containing 10,790 sheep were reported inspected.

Scrapie

No cases of scrapie or exposure thereto were reported during the year. Flocks are placed under surveillance for a period of at least 42 months when additions are made from infected or exposed flocks. Two flocks remain under surveillance. These may be released late this fall if no infection appears.

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Swine Disease Control

Swine farmers in the Secaucus area finally depopulated all of their farms by the end of September, 1960. This was in compliance with a court order of November 1, 1958, to vacate their premises. This brings to a close an era of more than 50 years of swine raising in the Secaucus area.

New Jersey has 259 swine farms licensed to feed garbage. They contain 149,704 hogs. New Jersey is second only to California in the number of garbage-fed swine. The garbage cooking law requires that garbage feeding farms be maintained in a sanitary condition, and that the garbage fed to swine be properly heat treated. Division inspectors maintain a close surveillance with biweekly inspections and periodic temperature checks of the cooking. Inspections made this year totaled 5,338.

Inspection of Disposal Plants

The Division of Animal Industry conducted inspections on 40 animal disposal plants prior to licensing, as required by State law.

Encephalitis

There were no confirmed cases of viral encephalitis in horses, pheasants or humans this year compared with the severe outbreak of last year. Four suspect cases occurred in horses, but specimens presented were negative.

The Governor's Interdepartmental Committee on Disease Control continued to meet frequently. Work conducted by the New Jersey Department of Health indicated that the viruses of both eastern encephalitis and western encephalitis were present in New Jersey. The summary of this virus isolation showed recovery of eastern encephalitis from three birds and four mosquito pools and western encephalitis from two birds and six mosquito pools. This is the first definite evidence that western encephalitis occurs in New Jersey. Veterinarians and horse owners were advised that all horses should be vaccinated with a bivalent type of vaccine.

Studies in the past year continue to point to encephalitis as being basically a disease of small wild birds, the virus being transmitted by several species of mosquitos from bird to bird. Man and horse become accidentally infected when the mosquito population greatly increases and is dispersed over a wide area by storms. The mosquito population was relatively low in 1960.

Anaplasmosis

Anaplasmosis was diagnosed in a steer on a Burlington County farm. The animal was one of a shipment of 18 steers, which had been purchased in the Lancaster Stockyards, Lancaster, Pennsylvania. The diagnosis was confirmed in the Division laboratory and also by the University of Pennsylvania. The steer was sent to slaughter, and the balance of the shipment was found on blood smears to be negative. This lot of steers will be kept under surveillance until sent to slaughter. This is the first report and the first confirmed case of anaplasmosis in New Jersey. The disease is not native to New Jersey but is

found in most southern states. Vigilance with animals imported from these areas is important.

Mucosal Disease

A case of mucosal disease involving three cattle was reported in September, 1960. The farm was quarantined, and sanitary measures were taken to protect the other animals in the herd. Only three other cases have been reported in New Jersey, all of which occurred in 1957. Mucosal disease is a more serious problem in the Midwest and West than in New Jersey.

Anthrax

Eighteen herds of 697 cattle were vaccinated against anthrax in the endemic area of Salem County. This is a routine measure and is done yearly by the Division of Animal Industry.

Eleven specimens suspected of having anthrax were submitted to the Division laboratory. One positive case was found on a Somerset County farm. The herd was immediately vaccinated and the premises thoroughly cleaned and disinfected. All animals on this farm were again vaccinated this spring as a precautionary measure.

Inspection of Turkeys for "State Seal of Quality"

The inspection of turkeys for the "State Seal of Quality" by veterinarians of this Division was concluded December 31. This work is carried on in cooperation with the New Jersey Poultry Products Council.

Once again the area veterinarians deserve a great deal of praise and thanks for doing a fine job. They worked nights, Saturdays, Sundays and holidays in excess of their regular working hours. To accomplish this work, 345 hours of overtime were drawn. A total of 48,254 birds were inspected. Ante mortem and post mortem inspections of 32,113 birds were made.

The following tabulation summarizes the work:

ANTE MORTEM INSPECTION

Month	No. Birds Inspected	Approx. Weight	No. Birds Condemned	No. Lbs. Condemned
September	6,720	147,785	...	...
October	8,281	157,403	2	25
November	15,163	301,412	6	101
December	<u>18,090</u>	<u>359,722</u>	<u>1</u>	<u>16</u>
Totals	48,254	966,322	9	142

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POST MORTEM INSPECTION

Month	No. Birds Inspected	Approx. Weight	No. Birds Condemned	No. Lbs. Condemned
September	424	7,400	...	...
October	2,573	43,922	...	...
November	11,343	185,764	14	257
December	<u>17,773</u>	<u>306,906</u>	<u>7</u>	<u>121</u>
Totals	32,113	543,992	21	378

BUREAU OF POULTRY DISEASE CONTROL

Pullorum Disease

Seven cases of pullorum disease were diagnosed during the year. Only two cases involved New Jersey hatcheries under State supervision. Investigations indicated four flocks were shipped to New Jersey from other states. The other flock was made up of two-year-old hens assembled from various poultrymen. Retests were conducted on outflocks of the two New Jersey hatcheries where infection was diagnosed. The source of the infection in both cases was located and corrected. The other cases were controlled.

The regular testing program was completed in cooperation with the Division of Markets with satisfactory results. The 20th annual Qualification and Examination for flock selectors and pullorum-typhoid testers was held August 9, 1960. All three applicants qualified as testing and selecting agents.

Fowl Typhoid

Laboratories in and out of the State continue to cooperate with this Department by reporting diseases on New Jersey farms. Immediate investigation and slaughter of infected chickens have helped to lower the incidence of fowl typhoid.

At present, 11 fowl typhoid cases are under surveillance, including three from the previous year. This compares with 24 for the 1959-60 season. During the 1960-61 season eight cases of fowl typhoid were diagnosed in chickens.

Avian Tuberculosis

A chicken farm on which avian tuberculosis was diagnosed was depopulated and thoroughly cleaned and disinfected. This farm was released from quarantine after being a problem flock for two years.

Avian tuberculosis was diagnosed in three flocks during the year. One case was found through the poultry diagnostic laboratory at Rutgers University. Another case was found on inspection in a poultry dressing plant. After investigation, the Division found that a neighboring flock was also infected. Tuberculin

tests were made on a percentage of the chickens on these farms to confirm the disease. The infected chickens from all farms were sent to slaughter. Cleaning and disinfecting programs were inaugurated to control the disease.

Paratyphoid

Five cases of paratyphoid have been reported since April, 1961. One case appeared in a lot of 100 turkey poults. The disease destroyed the entire lot. After cleaning and disinfecting were completed, these poults were replaced by the Pennsylvania hatchery which originally supplied them. The other four cases were diagnosed in young chickens. The chicks were fed nitrofurazone (nf/180), which stopped the mortality.

This disease is causing concern among research workers and regulatory officials. Investigations indicate that some of the chicks diagnosed as having paratyphoid originated in New Jersey hatcheries. The Division has prepared autogenous antigens and made tests on the breeder stock of these infected flocks. Good control measures at all times are necessary to check the spread of infection from these outbreaks.

Swine Erysipelas

Swine erysipelas was diagnosed in two flocks of White Leghorn chickens. One flock of 2,000 was depopulated immediately. The poultry houses were cleaned and disinfected. The other flock of 500 young pullets was fed penicillin and remained on the farm.

Cleaning and Disinfecting

A new program of cleaning and disinfecting infected dairy and poultry farms was inaugurated. Spray equipment was furnished through the cooperation of the Animal Disease Eradication Division of the United States Department of Agriculture. State and Federal personnel jointly operated the equipment with the farmers furnishing the required disinfectant. This program has been well received, and an increasing number of farmers have taken advantage of this aid.

NEW JERSEY STATE LIBRARY

CATTLE UNDER SUPERVISION

1951 - 1961

	Herds	Animals	Tuberculosis Reactors Indemnified	Brucellosis Reactors Indemnified	Calves Officially Brucella Vaccinated
1960 - 1961	6,327	175,278	230	418	17,655
1959 - 1960	5,717	173,532	148	440	18,033
1958 - 1959	6,771	174,203	150	759	16,305
1957 - 1958	6,987	175,026	175	1,224	15,665
1956 - 1957	8,014	185,327	162	1,830	16,179
1955 - 1956	8,488	194,937	141	2,133	17,514
1954 - 1955	9,483	204,620	173	1,801	17,886
1953 - 1954	9,797	214,212	188	653	22,029
1952 - 1953	10,415	215,660	135	362	23,626
1951 - 1952	10,683	207,959	193	254	22,394

CATTLE AND GOAT SURVEY

June 30, 1961

County	CATTLE		GOATS	
	Herds	Animals	Herds	Animals
Atlantic	55	182	12	60
Bergen	36	616	12	87
Burlington	530	20,392	12	43
Camden	70	1,185	6	56
Cape May	46	424	1	1
Cumberland	279	5,277	8	23
Essex	16	371	1	1
Gloucester	358	4,371	23	50
Hudson	...	...	...	...
Hunterdon	1,084	28,105	46	236
Mercer	239	5,474	4	12
Middlesex	194	4,299	17	48
Morrmouth	413	7,264	15	69
Morris	296	7,528	28	228
Ocean	74	955	12	141
Passaic	46	260	16	57
Salem	625	16,661	8	30
Somerset	424	10,550	37	222
Sussex	750	33,163	5	27
Union	15	76	6	18
Warren	<u>777</u>	<u>28,125</u>	<u>33</u>	<u>132</u>
Totals	6,327	175,278	302	1,541

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SUMMARY OF TESTING

July 1, 1960 to June 30, 1961

TUBERCULOSIS ERADICATION PROGRAM

Veterinarians Testing	CATTLE		GOATS	
	Lots	Animals	Lots	Animals
State	395	15,848	15	274
Federal	315	9,399	49	224
Accredited	5,038	165,049	106	798
Totals	5,748	190,296	170	1,296

Reactors - 284 - 0.15%

BRUCELLOSIS ERADICATION PROGRAM, BLOOD TESTING

Veterinarians Testing	CATTLE		GOATS	
	Lots	Animals	Lots	Animals
State	525	12,741	17	282
Federal	357	11,824	50	232
Accredited	3,954	88,113	102	672
Totals	4,836	112,678	169	1,186

Reactors - 427 - 0.38%

BRUCELLOSIS ERADICATION PROGRAM, BRUCELLOSIS RING TESTING

	Division of Animal Industry Laboratory	Out-of-State Laboratories	Total
Herds tested	9,148	276	9,424
Animals in tested herds	476,419	11,146	487,565
Clean herds	8,906	273	9,179
Animals in clean herds	462,220	10,975	473,195
Suspicious herds	246	3	249
Animals in suspicious herds	14,199	171	14,370

BRUCELLOSIS TESTS OF IMPORTED ANIMALS

Veterinarians Testing	CATTLE	
	Lots	Animals
State	690	6,873
Federal	360	4,769
Accredited	256	5,191
Totals	1,306	16,833

Reactors - 14 - 0.09%

TUBERCULOSIS REACTORS INDEMNIFIED

July 1, 1960 to June 30, 1961

	Total	
Cattle appraised		
Registered	52	
Grade	<u>178</u>	
Total	230	
Salvage		Average
Registered	\$ 8,455.72	\$ 162.61
Grade	<u>26,794.38</u>	150.53
Total	35,250.10	153.26
State Indemnity		
Registered	\$ 7,800.00	\$ 150.00
Grade	<u>13,350.00</u>	75.00
Total	21,150.00	91.96
Federal indemnity		
Registered	\$ 2,700.00	\$ 51.92
Grade	<u>4,550.00</u>	25.56
Total	7,250.00	31.52
Sum of salvage, Federal and State indemnity	\$ 63,650.10	\$ 276.74

Total State indemnity paid for tuberculin test reactors
from the beginning of this work in 1916 to June 30, 1961: \$4,049,999.68

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BRUCELLOSIS REACTORS INDEMNIFIED

July 1, 1960 to June 30, 1961

		Total	
Cattle appraised			
Registered		23	
Grade		<u>395</u>	
Total		418	
Salvage			Average
Registered	\$ 3,601.56		\$ 156.59
Grade	<u>60,210.58</u>		152.43
Total	\$ 63,812.14		152.66
State indemnity			
Registered	\$ 3,450.00		\$ 150.00
Grade	<u>29,619.20</u>		74.99
Total	\$ 33,069.20		79.11
Federal indemnity			
Registered	\$ 1,150.00		\$ 50.00
Grade	<u>9,875.00</u>		25.00
Total	\$ 11,025.00		26.38
Sum of salvage, Federal and State indemnity		\$ 107,906.34	\$ 258.15

Total State indemnity paid for brucellosis test reactors
from the beginning of this work in 1940 to June 30, 1961: \$ 1,005,264.18

BRUCELLOSIS SERVICE FEES AND INDEMNITY PAID

1951 - 1961

	State Indemnity Paid	Federal Indemnity Paid	State Veterinary Service Fees for Testing	Federal Veterinary Service Fees for Testing	State Veterinary Service Fees for Vaccination	Federal Veterinary Service Fees for Vaccination
1960 - 1961	\$ 33,069.20	\$ 11,025.00	\$ 8,105.50	\$ 17,473.75	\$ 11,014.15	\$ 8,589.50
1959 - 1960	34,878.77	11,647.20	15,761.75	13,735.45	10,862.40	10,488.50
1958 - 1959	61,368.35	20,559.71	543.75	34,004.10	1,292.50	17,370.50
1957 - 1958	98,268.10	33,164.99	2,279.90	37,373.95	1,051.95	17,242.50
1956 - 1957	143,400.01	48,048.65	8,542.85	47,336.63	9,636.50	10,173.50
1955 - 1956	168,913.00	56,516.13	14,433.25	41,585.98	22,024.50	...
1954 - 1955	142,561.23	46,105.99	24,880.25	18,554.00	20,790.50	...
1953 - 1954	53,787.83	8,071.00	37,602.55	...	24,121.50	...
1952 - 1953	30,883.20	10,339.77	33,826.95	...	25,771.50	...
1951 - 1952	23,676.13	7,950.45	12,427.85	...	24,480.50	...

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CATTLE AND GOATS IMPORTED AND RELEASED

July 1, 1960 to June 30, 1961

Origin	Adult Dairy and Breeding	Calves Under 6 Mos. and Vaccinated Ani- mals Under 24 Mos.	Feeder Steers	Goats
Alabama	...	...	50	...
Arkansas	...	...	...	1
Canada	1,742	...	...	7
Colorado	1	...	...	...
Connecticut	209	17	...	...
Delaware	82	33	9	...
Florida	38	...	4	...
Idaho	129	...	...	...
Illinois	8	12	...	...
Indiana	192	...	...	...
Iowa	16	...	...	...
Maine	18	1	...	...
Maryland	163	152	81	...
Massachusetts	21	13	...	...
Michigan	620	...	...	...
Minnesota	625	59	...	...
Missouri	3	...	112	...
New York	3,854	105	5	24
North Carolina	4	...	...	...
Ohio	19	4	...	...
Oregon	1	...	...	...
Pennsylvania	833	182	937	1
Rhode Island	2	...	...	...
South Carolina	...	1	...	...
Tennessee	2	11	...	...
Texas	1	...	...	...
Vermont	...	2	...	...
Virginia	53	21	223	1
Washington	7	...	...	...
West Virginia	...	3	...	...
Wisconsin	7,651	221	...	...
Wyoming	166	69	...	...
Totals	16,460	906	1,421	34

CATTLE AND GOATS SHIPPED OUT OF NEW JERSEY

July 1, 1960 to June 30, 1961

Destination	Cattle		Goats	
	Lots	Animals	Lots	Animals
Alabama	1	1	...	...
Arkansas	1	1	...	...
California	3	6	...	...
Canada	27	167	...	...
Central America	8	19	...	...
Colorado	11	57	...	...
Connecticut	15	18	...	...
Costa Rica	4	25	...	...
Delaware	39	270	1	13
Florida	10	120	...	...
Georgia	6	36	...	...
Greece	1	1	...	...
Idaho	2	2	...	...
Illinois	14	93	...	...
Indiana	10	14	...	...
Iowa	1	1	...	...
Kansas	...	...	2	2
Kentucky	2	2	1	1
Louisiana	3	22	...	...
Maryland	134	369	...	...
Massachusetts	12	13	...	...
Mexico	3	4	...	...
Michigan	7	10	...	...
Minnesota	15	15	...	...
Mississippi	6	9	...	...
Missouri	8	11	...	...
Nebraska	3	29	...	...
Nevada	1	1	...	...
New Mexico	5	8	...	...
New York	101	544	...	...
North Carolina	67	605	...	...
Ohio	29	45	1	3
Oklahoma	19	114	...	...
Oregon	1	1	...	...
Panama	1	5	...	...
Pennsylvania	583	2,172	6	9
Russia	1	4	...	...
South America	11	57	...	...
South Carolina	7	14	...	...
South Dakota	2	70	...	...
Tennessee	3	3	...	...
Texas	20	36	...	...
Utah	1	1	...	...
Vermont	4	5	...	...
Virginia	71	471	...	...
Washington	2	2
West Virginia	13	15
Wisconsin	8	29
Wyoming	9	11
Totals	1,305	5,528	11	28

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VACCINATION REPORT OF IMPORTED ANIMALS

July 1, 1960 to June 30, 1961

Origin	Animals Imported	Animals Vaccinated
Canada	1,742	1,343
Colorado	1	...
Connecticut	226	209
Delaware	115	72
Florida	38	25
Idaho	129	67
Illinois	20	12
Indiana	192	89
Iowa	16	16
Maine	19	19
Maryland	315	204
Massachusetts	34	27
Michigan	620	373
Minnesota	684	311
Missouri	3	3
New York	3,959	2,254
North Carolina	4	1
Ohio	23	16
Oregon	1	1
Pennsylvania	1,015	627
Rhode Island	2	1
South Carolina	1	1
Tennessee	13	11
Texas	1	...
Vermont	2	2
Virginia	74	58
Washington	7	6
West Virginia	3	3
Wisconsin	7,872	6,795
Wyoming	235	162
Totals	17,366	12,708

SHEEP INSPECTION

July 1, 1960 to June 30, 1961

Number flocks under supervision.	470
Number sheep in flocks under supervision.	10,790
Number inspections conducted.	494
Number sheep inspected.	14,433
Number farms affected.	6
Number farms remaining under quarantine at end of year. . .	2

INSPECTION OF SWINE HERDS

July 1, 1960 to June 30, 1961

	State	Federal	Total
Farms feeding grain	226	7	233
Farms feeding heat-treated garbage	2,825	2,513	5,338
Totals	3,051	2,520	5,571

SWINE IMPORTED FOR FEEDING AND BREEDING

Feeder.	33,025
Breeder.	19
Totals.	33,044

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SWINE SURVEY
(Garbage Fed Swine)

June 30, 1961

County	Licensed	
	Herds	Animals
Atlantic	29	19,260
Bergen	2	4,350
Burlington	27	18,995
Camden	8	2,450
Cape May	20	5,967
Cumberland	5	939
Essex	...	...
Gloucester	78	78,805
Hudson	...	...
Hunterdon	4	2,740
Mercer	11	1,380
Middlesex	7	1,195
Monmouth	15	8,174
Morris	11	2,065
Ocean	2	2,020
Passaic	...	...
Salem	2	90
Somerset	6	1,200
Sussex	1	50
Union	1	24
Warren	<u>...</u>	<u>...</u>
Totals	229	149,704

PULLORUM-TYPHOID CONTROL

July 1, 1960 to June 30, 1961

Fowl tested in field.	481,564
Number reacting.	26
Per cent reacting.	0.005
 Fowl tested in laboratory.	 12,058
Number reacting. . . . .	...
Per cent reacting. . . . .	...
 Total fowl tested.	 493,622
Total fowl reacting.	26
Per cent reacting.	0.005
 Retest of fowl typhoid suspects by field tests.	 47,966
Total fowl reacting.	4

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NEW JERSEY EXPORTS OF HATCHING EGGS AND POULTRY

July 1, 1960 to June 30, 1961

Country to Which Consigned	No. Permits Issued	Baby Chicks	Cockerels	Hatching Eggs	Pullets
Belgium	12	...	1,085	...	12,500
British Guiana	2	3,500	...	...	...
British West Indies	51	33,800	75,100	...	1,900
Cambodia	1	...	135	...	765
Canada	51	17,100	13,355	74,760	5,325
Central America	1	100	...	...	...
Chile	1	600	...	...	...
Columbia	1	...	...	...	1,000
Dutch Guiana	55	20,000	50,850	...	2,850
Formosa	1	...	...	60	...
Germany	1	300	...	...	...
Honolulu	1	...	150	...	150
Italy	11	500	325	...	7,300
Japan	8	...	...	3,615	...
Lebanon	1	...	500	...	500
Mexico	12	...	3,775	...	23,800
New West Indies	4	2,800	...	...	...
Peru	2	...	...	...	1,000
Portugal	4	...	525	...	...
Puerto Rico	131	61,200	110,450	339,320	22,200
Southern Rhodesia	2	300	25	...	75
Spain	9	300	2,864	...	13,345
Venezuela	34	...	...	447,840	...
West Africa	6	...	...	...	3,000
West Indies	2	600	...	...	...
Totals	404	141,100	259,139	865,595	95,710

DIVISION LABORATORY REPORT

July 1, 1960 to June 30, 1961

BLOOD TESTS MADE FOR BRUCELLOSIS ON INSHIPPED ANIMALS

Samples received	16,833 ¹
Unfit for test	3
Samples tested	16,830 ¹
Reactors	155
Negative	16,675

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

BLOOD TESTS MADE FOR BRUCELLOSIS ON ANIMALS IN HERDS
UNDER SUPERVISION

Samples received	114,870
Unfit for test	295
Samples tested	114,575
Reactors	464
Suspicious	4,519
Negative	109,592

MILK RING (BRT) TESTS FOR BRUCELLOSIS

Samples received	10,653
Unfit for test	102
Samples tested	10,551
Suspicious	313
Negative	10,238

BLOOD TESTS MADE FOR PULLORUM DISEASE OF POULTRY

Samples received	11,672
Unfit for test	...
Samples tested	11,672
Reactors	...
Suspicious	...
Negative	11,672

BLOOD TESTS MADE FOR LEPTOSPIROSIS OF ANIMALS

Samples received	7,499
Unfit for test	57
Samples tested	7,442
1:10 - 1:40 titres	170
1:160 or higher titres	25
Negative	7,247

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BACTERIOLOGICAL, MICROSCOPIC AND POST MORTEM EXAMINATION

July 1, 1960 to June 30, 1961

Lots	Animal	No.	Material	Condition Suspected	Findings
74	Avian	170	Chickens	<u>S. pullorum</u> or Fowl typhoid	Negative
3	Avian	7	Chickens	Fowl typhoid	Fowl typhoid
3	Avian	10	Chickens	<u>S. pullorum</u>	<u>S. pullorum</u>
4	Avian	11	Turkey livers, spleen, ovaries	Fowl typhoid or <u>S. pullorum</u>	Negative
1	Avian	3	Poults	Paratyphoid	Paratyphoid
3	Avian	149	Embryos	Paratyphoid	Negative
1	Avian	14	Chicks	Paratyphoid	Negative
1	Avian	2	Chickens	Paratyphoid	Negative
1	Avian	1	Chicken (dead)	Unknown	Visceral leukosis
1	Avian	2	Organs of turkeys	Cause of death	Blackhead
1	Avian		<u>E. coli</u> cultures		<u>E. coli</u> o, Group 88
1	Avian	1	Exudate of wattle	Cholera	Gram-positive staph.
1	Avian	4	Chickens	Fowl typhoid	Fowl typhoid and visceral lymphom- atosis
1	Avian	2	Chickens	Pathogenic bacteria	<u>E. coli</u>
4	Bovine	4	Ears	Anthrax	Negative
1	Bovine	1	Ear	Anthrax	<u>B. anthracis</u>
1	Bovine	1	Spleen, ear, blood swabs	Anthrax	Negative
1	Bovine	1	Spleen	Anthrax	Negative
2	Bovine	2	Blood samples	Anthrax	Negative
2	Bovine	4	Culture plates of milk	Pathogens	Gram-positive strep. and gram-positive staph.
1	Bovine	1	Culture plate	Pathogens	<u>E. coli</u>
1	Bovine	1	Culture plate	Pathogens	Gram-positive non- pigmented staph.
1	Bovine	1	Culture plate	Pathogens	Gram-positive non- pigmented non-hem- olytic staph.
1	Bovine	2	Culture plate	Pathogens	Beta-hemolytic staph. and gram-positive strep.
1	Bovine	1	Culture plate	Pathogens	Gram-positive hemolytic staph.
1	Bovine	4	Culture plate	Pathogens	Gram-positive strep.
5	Bovine	5	Feti	Brucella, vibrio, and leptospirosis	Negative

Lots	Animal	No.	Material	Condition Suspected	Findings
10	Bovine	31	Milk samples	Pathogens	Negative
1	Bovine	1	Milk sample	Pathogens	<u>Staph. aureus</u>
2	Bovine	9	Milk samples	Pathogens	<u>Brucella abortus</u>
2	Bovine	2	Milk samples	Mastitis	<u>Streptococcus</u> <u>agalactiae</u>
2	Bovine	2	Milk samples	Pathogens	<u>Corynebacterium</u> <u>pyogenes</u>
1	Bovine	2	Milk samples	Sensitivity and culture	Not sensitive to antibiotics and sulfoamides
1	Bovine	1	Milk culture	Pathogens	<u>Staph. aureus</u>
1	Bovine	1	Milk culture	Pathogens	<u>B. subtilis</u>
1	Bovine		Exudate	Pathogens	Gram-positive <u>B. subtilis</u> and gram-positive strep.
1	Bovine	1	Urine sample		Albumin
1	Bovine	2	Vaginal discharge	Pathogens	Negative
1	Bovine		Fecal material	Acid fast bacilli	Acid fast bacilli demonstrated
1	Bovine		Pus from skin lesions	Pathogens	Mixed infection, staph. and strep.
1	Bovine		Feces	Parasites	Negative
1	Bovine		Bronchial glands	Acid fast bacilli	Negative
1	Bovine		Liver, kidney, lungs	<u>Brucella abortus</u> , <u>vibrio fetus</u> , <u>leptospirosis</u>	Negative
2	Bovine	2	Semen samples	<u>Vibrio fetus</u>	Negative
1	Bovine	1	Semen sample	<u>Vibrio fetus</u>	<u>Vibrio fetus</u> , strep. and staph.
1	Bovine	3	Blood plates	Mastitis	Gram-positive strep.
1	Bovine	2	Blood plates	Mastitis	Gram-positive staph. and gram-positive strep.
1	Bovine	1	Blood plate	Mastitis	<u>B. subtilis</u> and <u>staph. aureus</u>
1	Bovine	1	Blood, milk uterine swabs	<u>Brucella abortus</u> , <u>leptospirosis</u> , <u>vibrio fetus</u>	Gram-positive strep.
2	Bovine	2	Feti and placentas	<u>Vibrio fetus</u> , <u>leptospirosis</u> , <u>Brucella abortus</u>	Negative
1	Bovine	1	Uterine discharge	Pathogens	Negative
1	Bovine	1	Exudate fetus	<u>Brucella abortus</u> , <u>vibrio fetus</u> , <u>leptospirosis</u>	Negative
1	Bovine	1	Lung, spleen, kidney	White scours	<u>E. coli</u>
1	Bovine	1	Blood sample	Mastitis	<u>Corynebacterium</u> <u>renale</u>
1	Bovine		Fetal organs	Pathogens	Negative

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Lots	Animal	No.	Material	Condition Suspected	Findings
1	Bovine		Lungs and stomach	Pathogens	Negative
1	Bovine	1	Blood sample	Listerellosis	Negative
1	Bovine	1	Blood sample	Complete blood count, leucopenia	Negative
1	Bovine	1	Blood samples	Complete blood count, anaplasmosis	Negative
1	Bovine	18	Blood samples	Anaplasmosis	1 <u>Anaplasma marginale</u> 17 negative
1	Canine	1	Pus on blood plate	Pathogens	<u>Staph. epidermidis</u>
1	Canine	1	Blood sample	Microfilariae	Negative
1	Canine	1	Blood sample	Canine calculi	Cystine
1	Canine		Blood sample	Complete blood count	Within normal limits
1	Caprine		Blood swabs	Anthrax	Negative
1	Cavy	3	Guinea pigs and feed	Pathogens	Hemolytic strep., non-hemolytic staph. isolated
1	Cavy		Skin scrapings buck rabbit	Mites	<u>Otodectes cynotis</u>
6	Equine	6	Blood samples	Pregnancy	Positive
6	Equine	6	Blood samples	Pregnancy	Negative
1	Equine		Swabs	Pathogens	Gram-positive rods and gram-positive staphylococcus
1	Equine		Heart, liver, kidney	Inclusion bodies	Negative
1	Equine		Semen	Sensitivity test	
3	Equine	3	Blood samples	Complete blood count	Within normal limits
1	Equine	1	Fecal culture	Pathogens	Negative
1	Equine	1	Blood sample	Pathogens	Gram-positive strep.
1	Equine	1	Blood sample	Complete blood count, infectious anemia	Within normal limits
1	Equine	1	Blood sample	Pathogens	Negative
1	Equine		Blood and swabs	Pathogens	Negative
1	Feline		Tissue from neck	Tuberculosis	Negative
1	Ovine		Skin scrapings	Scabies	<u>Psoroptes communis ovis</u>
1	Ovine		Skin scrapings	Scabies	Negative
1	Ovine		Ram blood and slide	Anthrax	Negative
1	Ovine		Wool samples	Scabies	Negative
1	Ovine	4	Milk samples	Blue bag	<u>Micrococcus pyogenes</u>
1	Ovine		Heart, liver, stomach, spleen	Pathogens	Gram-positive alpha-hemolytic strep.

Lots	Animal	No.	Material	Condition Suspected	Findings
1	Ovine		Fecal samples	Parasites	Negative
1	Ovine		Lung	Lung worms	Negative
1	Ovine		Fecal samples	Parasites	Nodular worms, lung worm
2	Ovine	2	Fecal samples	Parasites	Lung worms
2	Porcine	4	Blood samples	Pathogens	Negative
1	Porcine		Internal organs	Pathogens	Virus pneumonia
1	Porcine		Maxillary glands	Pathogens	Strep. and staph.
1	Porcine		Lymph glands of hogs	Pathogens	Strep. and staph.
1	Porcine	2	Live pigs		Iron deficiency anemia
1	Porcine		Spleen and heart	Erysipelas	Negative
1	Porcine		Kidney, lungs, liver, skin	Pathogens	Hemolytic strep.
1	Porcine		Rectal swabs	Pathogens	<u>E. coli</u>
1	Porcine		Lungs, kidney, swabs	Pathogens	<u>Negative</u>
1	Porcine		Lung, spleen, liver, and kidney	Chronic erysipelas	<u>Pasteurella</u> <u>multocida</u>
1	Porcine	1	Blood sample	Complete blood count and pathogens	<u>Negative</u>
1	Simian		Fecal samples	Worms	Negative
Miscellaneous	1		Water sample	Brucellosis	Negative

Antibiotic sensitivity tests 750 samples

Standard plate count on milk 12 samples

DIVISION OF INFORMATION

Fred W. Jackson, Director

INFORMATION ACTIVITIES

The primary function of the Division of Information is to keep the residents of the State, particularly the farmers, fully and promptly informed about the activities and services of the Department of Agriculture. Regular news services are maintained for press and radio, many special articles and services are provided for newspapers, trade papers and farm magazines, and photographs and mats related to Department work or to farming in New Jersey are supplied to the press. The Information section is also responsible for editing and processing all Department publications.

News Services

Press releases are mailed at least once each week to a list of about 350. About 150 of these are daily and weekly newspapers and radio stations in New Jersey, New York City and Philadelphia. Much of the balance of the list is composed of farm magazines, special commodity publications and trade journals. The 18 newsmen at the State House, representing the major wire services, as well as State and metropolitan dailies, are serviced several times each week by messenger.

During 1960-61, a total of 270 releases, covering Department activities or general news of New Jersey agriculture, was distributed. This amounts to an average of five a week. The releases were widely and regularly used in news columns and radio broadcasts.

In conjunction with the regular news service, approximately 1,500 photographs or mats were issued. Division personnel supervised the taking of pictures at numerous agricultural meetings and were responsible for their distribution. In addition, many requests for photographs for special purposes were filled.

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

In cooperation with the Agricultural Communications Office of Rutgers University, taped radio programs were produced on a regularly scheduled basis. Forty-seven three-minute programs and 12 one-minute "spots" were sent to 18 radio stations, which reach a wide New Jersey audience. In addition, 31 five-minute programs were sent to 12 key radio stations in New Jersey.

Programs included reports by the Secretary of Agriculture, weekly news summaries of Department activities and featurettes describing special programs of work by various members of the staff.

Four television programs featuring New Jersey agriculture, the State's farm products, and the services of the Department, were developed for Governor Robert B. Meyner's "Report to the People" on Channel 13, Newark. Technical assistance was given on a number of other television programs in which staff members participated.

Farmers Week

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

A total of 66 press releases were issued in connection with the 1961 Farmers Week and Farm Show. In addition to these general mailings, special articles were prepared for magazines and for the publications of various groups interested in individual meetings. Especial acknowledgement should be made of the generous cooperation of Business Farming which devoted much space in its January issue to advance publicity.

Daily radio coverage was provided. Radio tapes were mailed special delivery each evening to reach stations the following day.

Publications

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

It prepares six issues of Farm Service News each year. This four-page illustrated publication, devoted to news of the Department, and articles of current interest on New Jersey agriculture, is mailed to approximately 6,500 farm and rural readers in New Jersey.

The following circulars and reports were edited and published during 1960-61:

Circular 368 (Revised) - Supplement to the N.J.-U.S. National Poultry Improvement Plan and the N.J.-U.S. National Turkey Improvement Plan.

Circular 417 - 1960-61 List of Licensed Agricultural Dealers, Produce Dealers, Egg and Live Poultry Dealers, Cattle Dealers, Disposal Plant Operators.

Reports - Forty-fifth Annual Report of the New Jersey Department of Agriculture. July 1, 1959-June 30, 1960.

1960 Annual Reports for Four Soil Conservation Districts: Morris County, Sussex County, Mercer County and Warren County.

Publications prepared in connection with the 1961 Farmers Week and Farm Show were as follows:

1961 Farmers Week Program
Homemakers Program - 1961 Farmers Week
Highlights of Your Convention
Citations for Distinguished Service to New Jersey Agriculture, 1961
Commodity Shows Premium Lists

PROMOTIONAL ACTIVITIES

Four farm commodity Councils conducted sales promotion programs during fiscal 1960-61, functioning as official agencies within the Department, administratively parts of the Division of Information. In the order of their legislative creation, these are the Poultry Products Promotion Council, the White Potato Industry Council, the Asparagus Industry Council and the Apple Industry Council.

The Department also cooperated with other commodity groups which conducted promotional programs financed by voluntarily subscribed funds. In some instances the Department gave technical assistance; in others, space was provided at expositions and fairs; and help was given in developing exhibits and displays promoting specific products.

On a dollar-matching basis, small grants from funds provided by the State Promotion Section, New Jersey Department of Conservation and Economic Development, were allotted for product promotion literature and to pay for advertising space and time. The purpose of these grants was to encourage the development of comprehensive programs by each commodity or marketing group participating.

The State Promotion Section also financed the initial phase of a proposed three-stage project intended to: 1. Evaluate the effectiveness of the promotional work; 2. Plan new approaches and packaging innovations, and recommend on indicia for source-quality identification and promotional purposes; 3. Guide the development of any new plans. The first stage is under way, and a report on the findings will be presented next fall.

Another important aid in the overall program was the grant of funds by the Agricultural Marketing Service of the United States Department of Agriculture for market expansion activities through which the regular marketing services and the new promotional services are being supplemented by efforts to encourage quality improvement and product merchandising. Part of the Federal grant was used for statistical studies performed by the Crop Reporting Service to provide basic data needed to guide the market expansion work.

The Federal grant was greatly overmatched by the State. Several regular Department staff members, both in marketing work and information service, have been working on market expansion and promotion programs as part of their duties, and that part of their time so devoted is charged as a "matching fund" offset. Plans are to employ additional manpower from the Federal side of the ledger and to broaden the market expansion type of service so that any commodity group which wants to develop a program may benefit.

Regular staff members, official Councils' employees, and "matching fund" workers cooperated on joint promotional efforts. Such interrelated activities included promotional exhibits, attended by one-third of a million; four television programs, whose principal participants were the Governor and Secretary of Agriculture, in which all New Jersey farm products were covered; promotion of nutritional information; and the operation of the "Farmobile," a traveling showcase of New Jersey agriculture.

Advertising agency contracts on behalf of the four New Jersey Department of Agriculture promotion councils were prepared, approved by the

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councils, and executed by the Secretary of Agriculture after authorization by the State Board, and were submitted to the Director of the Division of Purchase and Property.

Fifteen hundred copies of a parchment-like reproduction of the "June Dairy Month in New Jersey" proclamation, signed earlier by Governor Meyner, were distributed to cooperators in the food industry and allied agencies. The printing costs were paid by the Garden State Milk Council.

Special efforts to evaluate the effectiveness of promotional work were undertaken, using a survey worker temporarily employed with Federal funds under the market expansion project. Observations at retail points were made to determine whether display materials provided by the various councils are actually being used. A high degree of cooperation was reported. Condition of asparagus and the practice of quality conservation recommendations as well as cooperation in use of point-of-purchase displays were observed. Utilization of display materials provided by the dairy and poultry industries was checked.

In efforts to solve the problems of expanding markets for the products promoted by the four official Councils, industry representatives guide the activities of the working staffs, and judge the quality and effectiveness of advertising copy, media, methods and all elements of each program.

Many persons on the New Jersey Department of Agriculture regular staff have participated in developing the new lines of work. All programs involving expenditures of State appropriated funds and the Federal grant and for the use of official agency manpower were submitted through the Secretary of Agriculture to the State Board of Agriculture for authorization. Plans of work were developed in consultation with the producers' organizations, official agencies, and special committees.

Eight articles describing new developments in New Jersey farming and agricultural marketing, together with illustrations, were prepared for NEW JERSEY BUSINESS June magazine. The feature article, "The Evolution of New Jersey Agriculture," developed the theme of the "farmer in a business suit." Subjects of other articles, illustrated with photographs selected from NJDA files and various sources, included the new automated egg marketing system under which farmers are paid on a quality yield basis; the capital requirements for starting a dairy farm and a poultry farm; farmers who practice "vertical diversification" by operating retail roadside markets, with emphasis on the Certified Farm Market program; the New Jersey Marketing Institutes and their influence upon the changing trends in food production and distribution; the thinking of some perceptive farm groups leading to mergers which are concentrating farmers' selling power to match the concentrated buying power of food distributors; examples of how commodity groups are advertising and merchandising quality-controlled products; and the story of cooperative marketing of blueberries under a comprehensive program involving all elements advocated by New Jersey Department of Agriculture to other commodity groups -- quality control, prepackaging and promotion. The magazine has a circulation of 15,000 among persons engaged in commerce, banking and industry, principally.

What has been described as the "most comprehensive campaign to promote New Jersey agricultural products" by a non-agricultural ally of farmers is underway as fiscal 1960-61 closes. It is the advertising campaign of Public Service Electric and Gas Company. In English and eight foreign languages, the company has sponsored advertisements for asparagus, eggs and

milk in 19 daily and 177 weekly newspapers; and will schedule advertisements of blueberries, sweet corn, peaches, potatoes, apples and sweet potatoes in the same media during coming months. Additionally, the company will publish a 20-page booklet in full color about New Jersey products, and will offer these to newspaper readers. Large display cards, also in full color, will be printed and used at appropriate seasons in 100 company show windows. The Department's staff has worked closely with the Public Service advertising department in developing copy and selecting illustrations.

A new plan of work for the market expansion project for fiscal 1961-62 was prepared, and submitted to the U. S. Department of Agriculture along with a request for a Federal grant under the Matching Funds program. The Federal grant for this work last year was \$31,740.00. The new plan, if approved by USDA, is to place all Federally-paid manpower in a pool, and all would work "across the board" instead of being dedicated to individual commodities. Better teamwork is the objective, along with the utilization of employees to to the full extent of their talents and capacities. Greater service to the market expansion projects of a number of commodity groups and marketing agencies should result. More emphasis upon the merchandising type of service is contemplated. The request for a Federal grant also proposed the employment of a food publicist trained in home economics and with experience in communications.

Poultry Products Promotion

During its fourth year of operation, the Poultry Products Promotion Council was able, through its programs of quality control, advertising and promotion, to contribute to the welfare of the State's poultry industry, despite increased competition from new production areas for New Jersey's traditional egg markets.

During fiscal 1960-61, a sustained program of advertising, promotion and merchandising was conducted at a total cost of \$83,151.53. Of this amount, \$7,115.11 was allotted for newspaper space, \$36,581.00 for radio time and \$25,978.00 for television time. The sum of \$3,011.47 provided point-of-purchase material. Production costs, including the creation and use of a singing commercial for radio and television, were \$6,005.39. An additional \$4,460.56 was used for public relations. Expenditures in this category included recipe folders, in-store merchandising unit, exhibits, egg decorating and chicken recipe contests and other miscellaneous items.

Services of three fieldmen and one clerical worker employed under The Federal grant for market expansion purposes were almost entirely devoted to the projects of the Poultry Products Council, in addition to the work of the Council's own staff of four. An advertising agency was also retained.

A final \$25,000 installment of the State loan of \$100,000 originally granted to initiate the program before the first tax receipts became available, was repaid.

Cooperating with the industry's national promotional organizations, the Council again this year authorized direct contributions to the Poultry and Egg National Board and the National Turkey Federation to support their consumer information programs.

In addition to its consumer information program, the Poultry and Egg National Board undertook a special national campaign designed to counteract unfavorable publicity regarding cholesterol in eggs. Known as the "Cholesterol Project" a series of advertisements appeared in 13 medical journals and allied professional papers. The nutritional statements in the advertisements were reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion. The Council made a special contribution of \$800 to aid in this campaign.

Consumer educational programs developed by the Poultry and Egg National Board were activated at the State level through the cooperation of the Council. In recognition of "Outstanding Service to PENB--New Jersey Poultry Products Council of the State Department of Agriculture and the poultrymen of New Jersey," an engraved plaque was presented at the annual meeting of the Poultry and Egg National Board.

Marketing pressure became particularly acute during the early months of 1961 because of an influx of a higher proportion of quality eggs from distant areas. The value of the quality control phase of the overall marketing program became quite evident and increasing emphasis was placed on quality yield at the candling line. Requests for technical assistance performed by Council fieldmen increased in number. There were 939 farm visits and 531 quality surveys made by the fieldmen during the past year.

Advertising and promotional programs were continuous throughout the year. Through the combined media, approximately 10 million consumers were reached in New Jersey, Metropolitan New York and the Philadelphia area each week.

The use of point-of-purchase material and merchandising assistance at the retail level continued to play a major part in the Council's egg promotional policy. Large colorful posters, seasonal in theme, were distributed to all major retail outlets during the year. More than 11,000 posters promoted New Jersey fresh eggs at the point of sale, where most shopping decisions are made. The Council provided 12,350 egg recipe leaflets for free dissemination at retail food stores, farm shows, county fairs, and special food trade events where consumers attend in large numbers.

Spearheaded by the Governor's March Egg Month Proclamation, key agricultural personnel, national, regional and local retail food organizations, home economists, extension specialists and many others cooperated with the Council to bring the story of New Jersey fresh eggs to the public. Through the interest and support of the State Department of Education, home economics supervisors and Future Homemakers of America advisors were alerted to the appropriateness of March as an excellent time to encourage the use of eggs. In addition, 420 over-wire banners, 577 large window posters and 998 egg posters were distributed to retail outlets throughout the State to emphasize "March is Egg Month in New Jersey." Approximately 140,000 bottle collars were made available to dairies handling State seal eggs on their delivery routes.

Continuing the Council's truckside poster distribution to egg and feed distributors, the Council provided 750 of the 25 by 36-inch posters, urging New Jersey consumers to buy New Jersey fresh eggs.

The field staff continued to conduct in-store merchandising and consumer egg candling demonstrations in retail outlets. In addition to 756 calls on independent retailers to promote the sale of identified New Jersey eggs,

fieldmen made 101 visits to county agricultural agents' offices to discuss farm problems in their respective counties.

The Council cooperated, for the second consecutive year, with a leading New Jersey department store in an egg decorating contest. Forty thousand entry blanks were distributed to the store's seven locations. There were over 4,000 actual entries. Attendant publicity was substantial.

Twenty-six growers, whose flocks ranged from 300 to 18,000 birds, and whose farms are located in 13 counties, participated in the 1960 Seal of Quality turkey marketing program. A total of 81,600 turkeys were eligible for seal identification, an increase of 25,600 over the preceding year. All the turkeys bearing the seal were processed in plants licensed by the State Department of Health. All carcasses were inspected for wholesomeness under the supervision of the veterinary staff of the Division of Animal Industry. Newspaper and radio advertising supplied by the Council supported the sale of New Jersey turkeys throughout the State. Lists of participating growers were disseminated.

"Finger Lickin' Chicken" was the name of the winning recipe in this year's New Jersey Chicken Recipe Contest, sponsored by the Council. One hundred and seventy-six recipes were received. A panel of professional judges selected the two best entries. The first and second place winners represented New Jersey at the 14th Annual National Chicken Cooking Contest in Seaford, Delaware. Excellent publicity for New Jersey's poultry meat industry was stimulated by this event, from the distribution of thousands of entry blanks at the retail level to the final selection of the winners.

The marketing of poultry meat identified with the New Jersey Seal of Quality did not materialize during the year. Plans are being studied leading to the development of alternative marketing practices that might be advantageous to the industry.

To keep all segments of the industry informed of its activities, the Council prepared and issued five interim progress reports entitled "Promotion Matters." Each report was distributed as follows: 1,571 producers, 266 feed dealers, 44 licensed Seal of Quality egg distributors and 132 agricultural organizations, trade papers and miscellaneous persons.

White Potato Promotion

Trade papers and radio were the principal media used by the White Potato Council to advertise the 1960 crop. Distribution of potato recipe books, use of point-of-sale material, and the proclamation of New Jersey Potato Week were other means used to promote New Jersey potatoes.

The Governor's proclamation stated that New Jersey Potato Week would be observed September 12 to 17. Publicity was prepared for release to press and radio. Proclamation posters were distributed to 600 banks through the cooperation of the New Jersey Bankers Association, and to all chain stores and other food outlets.

Distributors and retail buyers in the nearby New Jersey, New York and Pennsylvania areas were contacted by personal visits of the Council's manager, who presented the advertising program. Those interviewed were asked to buy New Jersey potatoes, and lists of suppliers were distributed.

Division heads and buyers were visited personally at the following:

The Great Atlantic & Pacific Tea Company, New York City, Newark, Freehold, Philadelphia; American Stores Company, Kearny and Philadelphia; Grand Union, Carlstadt; Safeway, New York City and Kearny; Mayfair, Elizabeth; Shop-Rite Chain Buying Office, Wakefern Food Co-op, Elizabeth; Watermaker and Davis, Newark; State Produce Company, Newark; Good Deal Chain, Irvington; King's Market Chain, Irvington; Valley Fair Chain, Paramus; H. C. Bohack Chain, Brooklyn, New York; Gristede Bros. Chain, New York City; U. S. Military Subsistence Market Center, Brooklyn; Phillipsburg Grocery Chain, Inc., Norristown, Pennsylvania; Wholesale Market Centers, Paterson; Wholesale Market Centers, Washington, New York City.

In numerous store units it was found that washed potatoes in consumer packs were desired by management. During August, New Jersey Seal of Quality 10-pound bags of washed potatoes were introduced to Acme Stores in the Kearny district. After a period of observation, the store's head buyer decided to buy and distribute such packages through 144 Acme stores. Over a period of five weeks, 113,198 10-pound bags of Seal of Quality washed potatoes were sent to the Acme warehouse for distribution. Management was so impressed with consumer acceptance that during this period 1,215 25-pound bags of washed potatoes were ordered packed in private brands. The buyer also appeared as a speaker at a meeting with producers and dealers sponsored by the Council, and urged general adoption of market preparatory practices to cater to consumer preferences, including uniform grading, washing and convenience packaging.

During July and August two fieldmen were employed under the Federal grant for market expansion to survey Central and South Jersey potato farms. Following is a summary of surveys of the 163 farms totaling 13,000 acres:

White Potato Industry Survey

Storage available:	1960 - approximately 1 million hundredweight.
Killing Vines:	Do you kill vines a week to ten days before digging? Yes - 126 No - 47
Digging Potatoes:	Under normal conditions, would it help the marketing situation if you extended the digging of potatoes over a period of ten to fifteen weeks instead of the customary eight weeks? Yes - 126 No - 30 Undecided - 7
Packing Potatoes:	The majority of growers recognized that consumers want uniformity of packs and convenient size containers; 89 stated modern packing is a must; balance gave various reasons for not doing so.
Cleaning Potatoes:	21 have washers 23 have brush cleaners
Potato Inspection:	Have you ever participated in a program requiring inspection? Yes - 122 No - 41
Centralized Packing & Grading:	Would you be in favor of a centralized packing and grading operation, with you delivering the potatoes? Yes - 113 No - 38 Undecided - 12

Shipping Potatoes: If you have shipped potatoes to distant markets, have you ever been charged with losses?
 Yes - 91 No - 72

Promotional Program: Do you believe the New Jersey potato industry needs promotion? Yes - 147 No - 7
 Undecided - 9

In October 1960, storage of a million hundredweight of potatoes was predicted for New Jersey, the largest volume to date. A trade contact trip was requested by the Council, and buyers were visited in Baltimore, Washington, D.C., and principal cities in Virginia, Tennessee and North Carolina. A relatively orderly movement of potatoes continued until storages were emptied in February 1961. Potato growers stated that all in all they had a successful season, and attributed credit to storage facilities which have been greatly expanded in recent years.

The White Potato Industry Council carried forward a surplus of \$10,487.59 from fiscal 1960; tax receipts for fiscal 1961 were \$15,734.45, making a total of \$26,222.04 available.

Administrative disbursements were: For salaries, \$2,939.62; travel, \$1,166.84; tax collection, \$800.00; telephone and postage, \$100.00; office furniture, \$136.40; rentals, \$43.62; and miscellaneous supplies, \$58.65.

Disbursements for promotion and research were: advertising agency billings, \$7,598.18; grant to New Jersey Agricultural Experiment Station for special variety research, \$500.00; Marketing Research, Rutgers University, \$500.00; National Potato Council, \$600.00; making a total of \$14,443.41.

The balance carried forward to fiscal 1962 is \$11,778.63.

The potato sizing survey conducted by Rutgers Department of Agricultural Economics, sponsored by the Council, was to determine the incidence of the various sizes of potatoes in the harvested crop. The survey summary has been published, and by reference is made part of this report. Briefly, on 48 farms, representative samples of field-run potatoes were sized between August 1 and September 23. A total of 77 farm samples of six varieties were studied. Interpreted in terms of the official State Seal of Quality size specifications, with a 2-inch minimum, it was found that 6.65 per cent of the Chippewa variety and 4.89 per cent of the Katahdin would have failed to meet the basic size requirements. Of the Cobbler variety, 8.12 per cent were less than two inches; Kennebec, 6.04 per cent; and Plymouth, 4.92 per cent. The weighted average of undersize potatoes was 6.21 per cent. Continuation of the study in 1961 has been recommended by Rutgers.

Asparagus Promotion

The Asparagus Industry Council promotes asparagus on a year-round basis, using proportionate amounts of tax money to move fresh asparagus in season, and processed products the rest of the year.

Because of the importance of impulse purchasing and the influence of fresh merchandise properly displayed, the Council decided not to use regular advertising media. Instead, emphasis was placed upon merchandising at the retail level supplemented by newspapers and magazine publicity.

During the past fiscal year the Council estimates that 80,000,000 readers were exposed to the Council's newspaper publicity; 30,000,000 to magazine publicity; 25,000,000 shoppers saw point-of-purchase material; 250,000 families heard Council members on local radio stations; and 250,000 fairgoers saw the Council's exhibits. Asparagus was featured four times on Philadelphia television stations and once on WBAL-TV, Baltimore.

A total of 2,684,000 window banners, produce cards and bunch tags promoting fresh New Jersey asparagus were placed in retail food stores during the fresh market season. Five thousand menu tip-on sheets and table tents were distributed for use in restaurants. During the processed season, 40,000 shelf-talkers were distributed to retail stores and 700 bumper strips were placed on automobile and truck bumpers.

Six attractive photographs, one in full color, of asparagus dishes were made under Council supervision. These will be included in a 16-page "South Jersey Asparagus Cookbook" to be published soon. Thirty-five thousand copies are scheduled for distribution by home economists and food editors. The photographs will subsequently be mailed to newspaper food editors at the rate of one per month.

During the fresh market season, 780 bunches of New Jersey asparagus were delivered to food editors in the New York, Philadelphia, Baltimore and Washington areas. These personal contacts with editors of major newspapers and national magazines were also used to urge more frequent mention of asparagus in staff-developed photographs and recipes. Six hundred glass containers of asparagus were delivered during the processed season.

A contest to uncover unusual or newsworthy asparagus recipes was held in conjunction with local County fairs. The first prize was a year's supply of frozen foods, 365 packages of assorted Seabrook Farms products. An engraved bowl was given to second and third place winners. In addition to stimulating interest in the Council's program among local farmers' wives, the contests provided more than 50 interesting asparagus recipes, suitable for publication. These are being released to newspapers and magazines at periodic intervals.

The Council displayed representative samples of each New Jersey processor's pack during the Burlington, Cumberland, Flemington, Gloucester, Morris, Salem County fair, the Trenton State Fair and New Jersey Farmers Week.

Each month the Council mailed a photograph of an attractive asparagus recipe to 105 metropolitan daily newspapers serving areas where New Jersey processors have established retail outlets. Approximately 20 per cent of these selected publications (average circulation 250,000) used the photo and recipe, giving Council-initiated photographic material a potential readership of 5,000,000 persons per month.

A separate mailing of "Prize Winning New Jersey Farm Kitchen Recipes" was issued every two weeks to major newspapers and also to a list of smaller (average 50,000 circulation) dailies and weeklies, and 28 television cooking

shows. Acceptance was approximately 30 per cent bringing the readership to a potential 35,000,000 per month.

Growers were kept informed of Council activities through a monthly bulletin, "Tips," which was mailed to their homes. These bulletins contained actual samples of point-of-sale pieces, recipe booklets and similar Council-sponsored printed literature. Supplementary bulletins were also mailed whenever an important issue arose.

News stories on Council activities were also released, whenever warranted, to local and city newspapers, farm publications, radio and television farm programs.

The Council initiated an Asparagus Week, the week before Thanksgiving, to provide impetus to processed asparagus sales during the holiday season. Most of the major listings of National Days, Weeks and Months supplied to newspapers, magazines, radio and television stations carry the dates of Asparagus Week.

The Council sponsored a motivation research study conducted by Rutgers University to determine consumer attitudes toward fresh and processed asparagus. When properly evaluated, the findings will guide the formulation of advertising and point-of-sale material.

In a continuing effort to keep food editors conscious of New Jersey asparagus, the Council mailed low-cost "gimmicks" at four-month intervals. One hundred and twenty-five of the nation's most important newspaper and magazine food editors received an apron imprinted with an asparagus motif, a pair of green bayberry candles molded in the shape of an asparagus spear and a "do-it-yourself asparagus grower's kit," consisting of an attractive flower pot, a one year old asparagus crown and packaged soil.

In order to standardize explanations of the Council's purpose and scope, a series of 34 slides was prepared which illustrated all details of Council make-up and activity. This slide presentation was shown to grower groups and to civic and farm organizations.

At the request of Public Service Electric and Gas Company, the Council provided color transparencies of bunched fresh asparagus for use in "The Riches of New Jersey" booklet and advertisements.

The Council is sponsoring accelerated research in cooperation with the New Jersey Agricultural Experiment Station. Ten male lines of asparagus have been developed and are under field test to evaluate rust resistance at the Experiment Station and in a nursery at Mullica Hill for rust evaluation. Rust resistant plants, selected in commercial fields in 1960, are also being evaluated for resistance to rust and Fusarium disease. Several selected plants look promising from the Fusarium resistance standpoint. Fusarium isolates are being collected and evaluated in hopes of finding highly pathogenic Fusarium for the breeding program. Seedlings which survive the attack of highly pathogenic isolates will be used as parents in a recurrent selection program.

A search is being made for male-inducing and female-inducing substances in plants which might be useful for sex conversion in asparagus.

If successful, this chemical approach would greatly facilitate asparagus breeding and hybrid seed production. It has been recently established in the laboratory that gibberellic acid can act either as a male-inducing agent or as a female-inducing agent, depending on the particular species of plants employed and the stage in development at which they are treated. This information is now being applied to asparagus. Male, female and hermaphroditic plants are being treated with gibberellic acid at different stages of development.

Studies were considered to develop information on the costs, potential, and problems of prepackaging asparagus. This involves working with a prepacker who will underwrite the investment of the physical operation. This past spring a prepacker in North Jersey was encouraged to prepackage asparagus for sale in a major chain's stores, which he normally serviced. Several lots were prepackaged and sold in test stores. Little costs or other data could be assembled on a few test shipments. In 1962, if conditions are right, this operation will be expanded.

Economics of asparagus cutting methods were again studied to determine the economic relationships existing between spears cut with specific different lengths of green color. The study was begun in 1960 and continued in 1961. Sample plots on three farm locations were cut for 55 days. Four cutting treatments tested were: 7" spear - $4\frac{1}{2}$ " green, 7" - $5\frac{1}{4}$ " green, $5\frac{1}{4}$ " - $5\frac{1}{4}$ " green, and 6" - 6" green. All asparagus was graded and weighed by a Federal-State inspector. A large amount of data were developed for analysis.

Experimental testing of a non-selective asparagus harvester was continued to determine the effects upon yield and distribution of length; also to learn the rheological properties of asparagus. A test plot was also cut by hand for comparison. Considerable data were collected and analyzed on this aspect of harvester research.

Work progressed on an experimental selective harvesting apparatus. Experimental cutting units were designed, built and tested, each unit having a power driven knife with a four-inch cutting surface. A number of such units would have to be combined to cover a row of asparagus. High speed photography was used to evaluate the performance of the cutting knife. A number of sensing devices were also built and tested.

Services of a marketing representative employed with Federal funds allotted to the State Department of Agriculture were used in special promotional campaigns. The Federally-supported worker supplemented on a part time basis the activities of the Council manager and advertising agency.

Apple Industry Promotion

The New Jersey Apple Industry Council concentrated its program on five major fields: Advertising and promotion; public relations and publicity; market research; grades and packaging; and cooperation with other apple-growing areas through the National Apple Institute. These phases of the program were integrated in a common objective to promote the sale of New Jersey apples.

The staff of the Council remained unchanged and consisted of a salaried manager and one clerical worker. An advertising agency under State contract was retained for professional advice and services. Part-time services of a Federal-State Matched Funds fieldman were utilized for market expansion work. Of the \$60,000 loaned from the State Treasury to initiate the

Council's work, \$45,000 has been repaid.

Extensive storm damage to the crop during harvest reduced the amount of tax collected. However, available funds still permitted an extensive program of promotion and research. Expenditures of \$12,380 were made for advertising and promotion. In addition \$6,080 was allotted to the National Apple Institute for promotion of apples nationally, and \$10,000 was allotted to Rutgers University for research on improved marketing techniques for New Jersey apples.

The research and promotion efforts of the Council were directed toward maintaining the per capita consumption of fresh apples and increasing the proportion of New Jersey apples sold in local markets. The promotion program emphasized public relations and publicity. Less funds than formerly were spent on paid advertising.

The summer green apple campaign was again a promotion-research project in cooperation with Rutgers University. The major activity of the promotion phase of the program was the development of a new summer apple recipe leaflet. Over 25,000 of these leaflets were distributed throughout New Jersey and neighboring states. Other promotional activities for green apples included a schedule of radio advertising aimed at the metropolitan New York market, distribution of 3,000 point-of-sale cards to stores and roadside stands, development of original green apple recipes, and publicity work with newspapers, food editors and utility company home economists.

An apple symbol was developed for use on promotional and publicity material.

Two promotional efforts highlighted the fall program. They were the Council's participation in National Apple Week and a special Halloween promotion. For National Apple Week, the Council cooperated with both the New York City and Philadelphia Apple Week Committees. The Council distributed 1,500 National Apple Week banners and posters to stores in New Jersey. Some complimentary radio and television time was made available for the Council's use.

To encourage apple sales at a time when a natural demand already exists, the Council created a special Halloween point-of-purchase card. Three thousand of these cards were given wide distribution to stores and orchard markets.

The Rome Beauty apple is the State's leading variety. A promotional campaign for this variety was conducted from February through April during its peak selling period. A Rome Beauty apple point-of-sale card was developed and 5,000 copies were distributed. Rome Beauty recipes were forwarded to newspaper and radio food editors throughout the State. Advertisements were placed in trade publications. The virtues of this variety were publicized in newspapers and among 1,200 school lunch supervisors.

One of the most effective public relations programs was that conducted in the public schools. Interesting and helpful information was supplied in the form of teaching aids, filmstrips and a film, "Gateway to Health". Distribution of this material continued the year round. At the annual convention of the New Jersey Education Association in November, over 6,000 pieces of educational materials were given out, 160 bookings were made for the "Gateway to Health"

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film, and requests were received for an additional 70,000 pieces of literature.

A leading New Jersey chain of department stores cooperated with the Council in a publicity campaign in August. Apples were used as the theme of the chain's back-to-school promotion. In addition to newspaper advertisements and circular mailings, the promotion featured apple displays in all the stores.

For many years, the New Jersey apple industry has been host to a conference and orchard tour for food publicists and trade representatives. Excellent relations and valuable publicity have resulted from these get-togethers. In 1960, the tour was held at Delicious Orchards, near Eatontown. Cooperation from these food communications representatives is achieved throughout the year by furnishing them with recipes, photographs and general news releases about New Jersey apples.

Many additional opportunities were utilized to publicize apples. A few of these include: Exhibits at many of the county fairs and at the State Fair; participation in various baking contests and cooking classes; work with dental groups; and tie-in promotions with other agricultural commodities and national manufacturers.

Liaison with the growers was maintained through monthly bulletins and also through an exhibit at the Farm Show during New Jersey Farmers Week in January, 1961. Through the Council all New Jersey growers received the bulletins of the National Apple Institute so that they were kept informed of market trends and developments on the national as well as local level.

To meet changes faced by the growers in modern marketing methods, the manager is serving on the Market Research Committee of the National Apple Institute. The Council is also sponsoring a three-year program of research in the marketing of apples at the New Jersey Agricultural Experiment Station at Rutgers University. A contract has been negotiated under which the Council has allotted \$10,000 per year for a period ending June 30, 1963, thus providing for the employment of a full-time apple marketing research specialist.

In the summer of 1960, the Council continued a project at the Experiment Station concerning the marketing of green cooking apples. The principal objectives of the program were to determine the sales of summer apples in stores serviced by direct delivery versus warehouse delivery and also to develop methods of packaging to avoid bruising. The study showed that there was considerably less bruising in the direct delivery program and greater sales in the stores using this method.

The Council also pursued a number of other projects concerned with marketing including:

1. Proposals for establishing enabling legislation on apples for the East coast.
2. Revision of apple quality standards to meet modern marketing trends.
3. Condition requirements for exported fruits.
4. Registration of apple storages in the State which use controlled atmosphere maintain quality.

5. More efficient packages and packaging techniques.

The Council recognizes the need for a strong growers' organization on the national level. In keeping with this view, the Council is fully backing the National Apple Institute, financially and in participation in its programs. The Council along with other state apple growers' organizations has prepared a set of recommendations to guide the program of the National Apple Institute.

NEW JERSEY CROP REPORTING SERVICE

This agency is a cooperative service of the New Jersey and United States Departments of Agriculture. The basic program of crop and livestock estimates, comparable to the statistics available for all states, is carried on by the United States Department of Agriculture as part of a program which was started almost a century ago. This is the seventh year that the State Department of Agriculture has joined in this program. State cooperation has made possible much more comprehensive and detailed statistical data on farm products of importance to New Jersey, including the publication annually of county estimates of crop and livestock production. State funds have also made possible special surveys to meet the needs of New Jersey agriculture. The cooperative effort of the two agencies provides a comprehensive statistical service for the State and eliminates duplication of effort.

Crop Reporters

The New Jersey Crop Reporting Service wishes to take this opportunity to express its appreciation to those individuals making voluntary reports to this agency. A basic concept of the Crop Reporting Service is that the statistical data are based on information obtained voluntarily from producers, local buyers, marketing cooperatives, feed mills, implement dealers and many others supplying goods and services to farmers. During the year about 7,500 farmers and business firms in this group receive one or more of some 40 different sets of questionnaires. Some report monthly and a few weekly on a seasonal basis. Others report only a few times during the year, depending on the type of survey made. The high degree of cooperation received by these public-spirited citizens who take time out of their own busy schedule without pay is to be commended.

Regular Reports

In the 1960-61 fiscal year the Crop Reporting Service published 132 reports dealing with some 25 different phases of New Jersey agriculture. Monthly reports of milk and egg production, chicks hatched, livestock slaughtered and agricultural prices are published. Through the growing season monthly reports show production forecasts for nine grain and feed crops, five fruit crops, 20 vegetable crops, potatoes and sweet potatoes. Also available are periodic reports on grain stocks, pig crops, turkeys, honey, meat chickens, cash return to farmers and estimates dealing with other commodities.

These reports are available free of charge to anyone requesting them. In serving New Jersey agriculture this last year, the Crop Reporting Service office handled nearly one-third of a million pieces of mail.

Special Reports and Surveys

The Agricultural Marketing Act of 1946 authorized the expenditure of Federal funds for matching State funds in marketing service work, including the collection and dissemination of additional basic statistics. During the past fiscal year matched funds were used for several reports. The demand for basic data on a local basis continues to increase. The production pattern within the State is important in planning for product marketings. Groups which buy farm products or sell farm supplies and equipment also have a strong interest in these local data. To meet these needs, the Crop Reporting Service again prepared the report, New Jersey Agricultural Statistics. The first section, now in press, contains county estimates of poultry and livestock production. This report also includes, for ready reference, related data of value in marketing plans as well as an analysis of current trends in New Jersey agriculture. The publication, Circular No. 418, contains county estimates for the years 1959 and 1960, as well as county estimates for prior years back through 1955 which have been revised in light of 1959 Census of Agriculture data. The second section of the report, which will contain revised county estimates of crop acreages and production, will be published in the coming fiscal year.

Another important report issued under the matched funds project is the weekly release, Truck Crop News. This report contains up-to-date information on crop prospects, harvest dates, progress of harvest and other pertinent information on vegetable and fruit crops in the State during the season. Weekly weather data for about 15 stations in the State is included.

A survey of meat chicken production in New Jersey was again conducted in 1960. This survey provides State estimates on the number and pounds of meat chickens sold, average price and gross income from their sale.

A special survey to determine the number of equine animals in the State of New Jersey was carried on during the fiscal year. This survey was made to provide basic information on the number of New Jersey equines by types and areas. Such data is expected to be very helpful to the Department's newly organized horse promotion program. Preliminary steps in the enumeration were the compiling of lists of names of horse owners in the State, and a mail questionnaire of these owners to determine total numbers. Subsequently, statistically designed sample enumerations were made to accurately appraise the completeness of the survey. The results of this study will be available early in fiscal 1961-62.

In the last fiscal period, preliminary work to test the ability of blueberry growers in the State to forecast their crop was started. This study, it is hoped, will lead to the initiation of a regular program of blueberry crop forecasts in the coming years.

STATE SOIL CONSERVATION COMMITTEE

The soil conservation program, in order to meet the demands of the rapidly changing land-use patterns in the State, must be flexible, broad in scope and tremendously varied in the kinds of services which it renders. The technical assistance which it offers must range from helping a single farmer alleviate a drainage problem on one field -- to a complete watershed management project, involving many communities and covering thousands of acres.

Because of the differences in the physical conditions and land uses in the various sections of the State, the program is first developed at the local level. This is accomplished by the 14 Soil Conservation Districts. Each district holds an annual "plan of operation" meeting to form a comprehensive soil and water management program suited to its own area. Later these plans are incorporated into a statewide program by the State Soil Conservation Committee. The objectives of the 1960-61 program were:

- (1) To insure the protection of our soil resources from erosion, flood waters and sedimentation.
- (2) To conserve water for agricultural purposes.
- (3) To insure that every landowner received the technical assistance necessary to utilize and protect his land to the fullest.

Putting the program into operation requires the assistance of many agencies; some supply technical services, others provide funds and four contribute personnel. The Agricultural Extension Service, through its county agents and extension specialists, effects the districts' education programs; the Forest Management Section of the Department of Conservation and Economic Development furnishes district foresters; the United States Soil Conservation Service provides soil technicians; and the State Soil Conservation Committee supplies administrative and clerical assistance.

Funds for financing the districts' operations come from two sources - voluntary donations to the district by local landowners and State appropriated funds. The State Committee and the New Jersey Department of Agriculture's Division of Administration are jointly responsible for obtaining and administering the State appropriations, while the districts are responsible for managing the local contributions.

The New Jersey Department of Agriculture also provides the annual operating expenses for the State Committee, including the salaries for the executive secretary and the clerical personnel, office space and supplies.

Information Activities

Mere decision upon a plan of action does not insure its success. Conservation, in addition to being a social philosophy, is a consumer product; and like farming, industry and business, is affected by many factors: consumer interest, market conditions, land values, taxes and competitive uses of capital.

Because most land is in private ownership, it is necessary to sell the landowner on the need for conserving his land. To accomplish this, an active information program was undertaken. During the year, 281 press releases outlining their conservation accomplishments were issued by the districts and the Soil Conservation Service to the local newspapers. Three districts prepared newsletters for distribution to their cooperators. Seven radio and several television programs were presented.

In addition, 19 tours were conducted for farmers so they could view conservation at first-hand. Seventy-six slide-illustrated talks were given to service clubs, farm organizations, youth groups and school classes, and 16,000 conservation booklets were distributed to students. On the Sundays of May 7

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and 14, special Soil Stewardship programs were conducted in churches throughout the State; in Hunterdon County alone 40 churches participated.

How effective these activities were is difficult to measure, but sufficient interest was generated in Salem and Hunterdon counties to see two evening adult conservation education courses started by local watershed associations.

Even more important, 545 landowners became new cooperators with the 14 Soil Conservation Districts this year. The total number of landowners now participating in the program is 8,945.

Conservation on the Land

Basic conservation plans were prepared for 373 of the new cooperators and major revisions were made on 59 old plans. The basic plan is the cooperators' conservation land-use guide and is based on the intended use of the land, the soil conditions, slope, erosion hazard and vegetative cover. It is designed to "utilize every acre within the limits of its capabilities and to protect every acre in keeping with its needs." Included in the plan is a list of recommended conservation practices and a suggested schedule for establishing the land-use changes. The cooperator and the soils technician develop the plan together, but the landowner alone decides when the recommendations will be carried out.

During the 1960-61 fiscal year, 4,352 cooperators were aided in applying conservation practices to their land. Of these, 768 received financial assistance under the Federal Agricultural Conservation Program to off-set part of the costs of establishing the practices. The total expenditure for this aid was \$141,953.

Application of new practices included:

Practice	Unit	Amount
Ponds constructed (livestock and irrigation)	number	148
Terracing	miles	26.4
Windbreak plantings	miles	4.3
Dikes	miles	1.1
Grassed waterways	acres	29
Strip cropping	acres	2,370
Contour planting	acres	2,287
Outlets	miles	10.3
Land smoothing	acres	329
Acres drained	acres	2,549

Practice	Unit	Amount
Open drains	miles	52.6
Tile	miles	33.5
Tree planting	acres	284
Wildlife area improvement	acres	1,575
Ponds stocked with fish	number	150

Watershed Projects

Major floods, such as the disastrous one of 1955, occur periodically in New Jersey; while in some areas of the State minor floods recur annually. Damages from both types adversely affect all segments of the population -- farmer, suburbanite and city dweller.

After a flood, damage is usually quickly repaired, often at considerable expense, but until recently action was seldom taken to prevent new damage. The reason: a lack of data, money and skill to cope with the problem. In 1954 the 83rd Congress passed the Small Watershed Protection and Flood Prevention Act, which created a powerful tool for correcting these deficiencies on small rivers and streams.

Public Law 566, as it is popularly called, is unique in several respects: it recognizes that the solution to flooding rests in a partnership of farmer, urbanite and government; spells out the responsibility of each; and specifies that all projects must be initiated at the local level.

New Jersey was one of the first states to apply for assistance under Public Law 566. Today there are 11 district-sponsored watershed projects in the State, more per square mile than in any other state. The Pequest Project in Warren and Sussex Counties is completed, while the Silver Lake-Locust Island and the Town Bank Projects in the Salem-Cumberland District are essentially complete and are operating as planned. On the Stony Brook Watershed in the Hunterdon and Mercer Districts, three of the nine proposed reservoirs are already in use and two more under construction. Similarly, the Paulins Kill Project has two of three reservoirs in the Sussex District completed and the channel improvement work in the Warren District ready for construction.

Two more projects, the Pine Mount-Mill Creek and the Tributaries of Maurice River Cove in Cumberland County have been surveyed and are now in the design stage. Another, the Assunpink in Mercer County is being planned. Three others, the Salem River and Parkers Creek in Salem County and the Navesink in Monmouth County are scheduled for planning in 1962.

When completed, the projects will be maintained and operated by the local people. The benefits will be many: flood protection for agricultural lands, urban areas and transportation facilities; drainage; wildlife habitat improvement; and recreational opportunities.

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Conserving Soil and Water in Rural-Urban Areas

Last year the State Committee, in cooperation with the Northeast Jersey Soil Conservation District and the Soil Conservation Service, initiated a pilot program designed to combat the detrimental effects of urban development on soil and water resources. Soon after the program was announced, many of the other districts joined the project. The immediate goal was to inform county and municipal officials of the technical services which are available through the districts and encourage their use of them.

A 400 per cent increase in requests for assistance demonstrates the value and timeliness of the plan. Applications came from freeholders, township committees, park boards, planning commissions, recreation commissions, hospital boards and numerous school districts. Occasionally, requests were turned down because the problems were not primarily of a soil and water conservation nature and could be handled by private engineers or contractors.

Some of the services rendered were confined to consultation, while others resulted in the establishment of conservation practices. The work performed was quite varied, and included: interpretation of soil survey data, watershed hydrology, road drainage, drainage of mosquito breeding areas, beach erosion control, water management programs, and development of conservation study areas. One request for laying out a cemetery on the contour was also serviced.

By aiding these public agencies to manage their lands properly, thousands of tax dollars were saved and a liaison was established with the second largest group of landowners in the State.

Research

The status of our technical knowledge was not sufficient to meet all the problems that were encountered this year -- particularly in the rural-urban and watershed programs.

The State Committee noted that one such problem -- the impact of the urbanization process on soil and water resources -- was recognized by Congress, in Senate Document Number 56, as having a national significance. Therefore, a meeting was arranged with congressmen and agriculturalists to discuss the need for some immediate action. Specifically, the Committee proposed that a new Agricultural Research Service facility be built in New Jersey to develop a technology to cope with the situation. It was supported in its proposal by Rutgers University, Princeton University and several private research organizations. As yet, no decision has been reached and negotiations continue.

This year a cooperative research project with the United States Geological Survey was initiated to evaluate the capability of conservation land treatment to reduce the sedimentation and storm run-off in small watersheds. It will also measure the effects of several silt retention reservoirs on the decreasing sediment yields from the upper 44.5 square miles of the Stony Brook Watershed. Data to be collected include the daily measurement of suspended sediment at the existing stream gauging station at Princeton, collection of climatological information comprising a continuous record of precipitation at one station, daily precipitation measurements at eight additional locations and a continuous record of air temperature and relative humidity at a central location. The data collection will start July 1, 1961,

and continue through February 1, 1965. The analysis and an interpretive report will be completed during the remainder of the 1965 fiscal year.

A third project undertaken in 1961 was the acceleration of the soil survey. The soil survey is conducted in cooperation with the Soil Conservation Service and the New Jersey Agricultural Experiment Station. It consists of four phases: collection of data, laboratory studies, interpretation and correlation of data, and publication of soil maps. Surveys of Monmouth, Warren and Gloucester counties are completed and several others are near completion, but at the present rate of progress it will take 17 years to finish the State. The State Committee, recognizing that each year there is an increasing demand for soils information by planners, tax boards, contractors and other non-agricultural interests, is actively seeking means for speeding the work to completion.

An example of how important soils information is to non-agricultural interests is illustrated by the agreement which was reached with the Philadelphia and Newark Regional Offices of the Federal Housing Authority this year. As the result of several meetings, the Federal Housing Authority engineers and administrators, the State Committee and the Soil Conservation Service agreed on the following procedures for preventing or controlling erosion on housing developments during the construction period.

- (1) Where available, soils data would be supplied to the Federal Housing Authority.
- (2) In areas where soil erosion, flooding or poor drainage are known hazards, the Federal Housing Authority and the local planning commission will be alerted to the danger by the local soil conservation district supervisors.
- (3) The districts, through the Soil Conservation Service and the county agricultural extension service, will provide the Federal Housing Authority with information on plant materials, seeding recommendations and erosion control measures suited to the various soils of New Jersey.
- (4) The Federal Housing Authority will incorporate such information in its development plans, where applicable, and will encourage the contractors to follow the recommendations.

The Committee is also planning follow-up meetings with the professional civil engineers' organizations and the American Home Builders' Association to enlist their support in combating erosion in development projects.

In-Service Training Program for Supervisors

The second annual supervisors' training meeting, jointly sponsored by the State Committee and the New Jersey Association of Soil Conservation Districts, was held in November. The discussion groups considered financing district programs, preparation of budgets, district activities and administering the district program. The recommendations arising from the meeting were taken back to the 14 districts for incorporation into their annual plans.

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National Awards

Four of New Jersey's 14 soil conservation districts were recognized by national organizations for their outstanding conservation activities. The Mercer District's monthly newsletter received the 1960 National Association of Soil Conservation Districts' Area I Newsletter Award. Thirteen other states entered district newsletters in the competition.

The Goodyear Tire and Rubber Company announced in June that the Gloucester District was the winner of the 1960 Achievement Award as the best soil conservation district in the New Jersey-Delaware Area. The Burlington and Southeast Jersey districts won second and third places, respectively. The districts were judged on the efficiency of their operations, using about 90 categories as the basis for the determination. This is the fourth time in five years that a New Jersey district has won this award.

Publications

The State Committee has a new publication entitled, "Conservation Plantings Make Homes for Birds." The author, Phillip Allen, regional biologist for the Soil Conservation Service, wrote the leaflet with the non-farm landowner in mind. It outlines "... a natural method of attracting the feathered clan." Twenty-five thousand copies were printed and will be distributed to interested landowners through the local districts.

The Committee also published seven district annual reports for distribution to district cooperators.

Appointment of Supervisors

The State Committee, acting on recommendations of the county boards of agriculture, reappointed 12 supervisors and selected two new replacements. Their terms of office commence July 1, 1961 and continue through June 30, 1964.

Re-election of Supervisor Members of State Committee

At the annual district supervisors' meeting, Alfred F. Baylor and Leslie Richards were re-elected to serve three-year terms on the State Soil Conservation Committee. Mr. Baylor represents the northern and Mr. Richards the southern region of the State. Their terms commenced on July 1, 1960 and extend to June 30, 1963.

Other members of the State Committee are:

Phillip Alampi, Chairman
Dr. Leland G. Merrill, Jr.
Dr. Firman E. Bear
H. Earl Propst
H. Mat Adams
James B. Fawcett

Jacob A. Blakeslee
Selden L. Tinsley
John Traino
Fred H. Totten
Frank S. Coles

RURAL ADVISORY COUNCIL

Early in the present year, the Rural Advisory Council decided to orient most of its activities and resources to problems of agriculture. On the basis of that decision, several study projects were initiated. In addition, several studies initiated last year were brought to a conclusion.

Competitive Position of New Jersey's Egg Industry

New Jersey's egg industry, the largest segment of the State's agriculture, recently passed through one of its most adverse periods.

Prices of New Jersey eggs dropped 18 per cent from 1958 to 1959, the lowest level since 1941. With such a drastic break in egg prices, reflected further in low farm incomes and even farm failures, the position of the egg industry in New Jersey required immediate assessment.

The Rural Advisory Council jointly sponsored a study with the Department of Agricultural Economics at Rutgers University to determine, through comprehensive analysis, the economic position of New Jersey's egg industry. It was felt by the Council that a clear and well documented study was needed to provide the industry with facts necessary to form the basis for future decisions related to egg production in New Jersey. Since the egg industry faces a basically national market situation, a study of the competitive position of New Jersey's egg industry was the key area for exploration.

The study was developed in two parts. The first dealt with "Economic Trends in Egg Production, Cost and Returns" and the second with "Economic Trends in Egg Marketing." The results of the study were published by the Department of Agricultural Economics as A.E. 265 and A.E. 266.

Economic Trends in Egg Production Cost and Returns - A.E. 265

Increased United States production, coupled with declining per capita egg consumption, has led to reduced prices to New Jersey egg producers over the past decade. The most severe setback came in 1959 when national egg production increased 3 per cent, and resulted in an egg price decline of 19 per cent.

Concurrent with the general price decline has come a shift in regional egg production. Of greatest importance is the decline in total production in the North Atlantic States, and an increase in egg production in the southeastern states.

A survey of New Jersey's major competing egg producing areas was accomplished as part of the study. The survey revealed the following:

- (1) Competing states, on the average, had a higher rate of production per hen, and a lower cost of production per dozen eggs. However, the cost of production figures varied considerably within areas.
- (2) In respect to the Southeast, egg production has expanded because of fewer farm alternatives and the presence of underemployed farm resources.

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- (3) The trend in competing areas is toward fewer and larger flocks leading to continued strong competition in the future for New Jersey egg producers.

A study of a sample of New Jersey egg producers revealed several important facts.

- (1) In 1959, because of the price break, there was no return to poultry operators for their labor or interest on investments. This is in sharp contrast to 1958, and estimated returns for 1960.
- (2) Low rate of lay is one of the major problems confronting New Jersey egg producers. This must be dealt with if producers are to receive reasonable returns from egg production.
- (3) Efficient New Jersey producers can meet out-of-state competition as illustrated by farm income of efficient producers.
- (4) In general, for successful operation, producers must improve the following efficiency factors:
 - (a) Rate of lay per bird
 - (b) Pounds of feed per dozen eggs
 - (c) Dozen eggs per worker
 - (d) Lower production costs

Average results in these factors are not sufficient; producers must rate high on all efficiency factors for profitable operations.

Insofar as future egg prices are concerned, prospects are not overly optimistic. Average prices for the last five years were 43 cents per dozen. Prices for the next five years will be somewhat comparable.

Economic Trends in Egg Marketing

Gradually, the production and marketing of eggs are coming into closer relationship through horizontal integration, marketing agreements of various types, and custom candling by dealers and cooperatives. In New Jersey, major opportunities for improving and simplifying the institutional marketing channels do not exist.

The major area for improvement in egg marketing lies within the realm of central plant cleaning, grading and packaging of eggs. Related to this is grade-yield pricing and closer coordination of marketing efforts.

With respect to regional competition of egg marketing, the following items are important to New Jersey producers:

- (1) Greater production of eggs in the Southeast closes that area as a market for midwestern eggs. Midwestern eggs must, therefore, find a market in the Northeast, which increases competition in this area.
- (2) Farm price differentials between competing production areas are gradually declining. Movement in this direction is a disadvantage to New Jersey producers.

- (3) Nearness to market, and ease of serving accounts with a quality product are favorable aspects of New Jersey egg marketing.
- (4) Marketing efficiency, lower cost of marketing operations, increasing product quality and product uniformity must be stressed continually. Marketing fundamentals cannot be overlooked.
- (5) In New Jersey, complicating factors, such as zoning and building restrictions, taxes and public health ordinances concerning odors, sanitation and insects, are of great concern to both the producers and marketers of New Jersey eggs. These factors cannot be neglected, but must be considered along with production and marketing aspects of the poultry industry.

Integration and New Jersey Agriculture

Two years ago, the Rural Advisory Council joined with the Rutgers Department of Agricultural Economics to accomplish a three-year study of integration in New Jersey agriculture. This past year a research bulletin (No. 798) entitled "Integration and New Jersey Agriculture-The Poultry Industry" was published. Here are some brief highlights of that report.

The results of the poultry study reveal that vertical integration (two or more of the production to marketing steps coordinated under central management) has not progressed to any significant degree in the table egg industry.

Of more importance is the fact that horizontal integration (gaining control over more units accomplishing the same economic activity) is occurring more rapidly.

Over the long run, it is expected that greater coordination between quality production and marketing must be accomplished. Indications of this process are the marketing quality control programs being established. Far from being unique, this movement parallels that being initiated for many other agricultural products. Closer coordination of production, distribution and marketing will continue to advance. But in what form, and for the economic benefit of whom - will be major questions for the future.

A number of factors have led to the existing integration found in New Jersey. Such factors, on the part of feed dealers, were as follows: a desire for more control of production decision-making and risk-bearing, and a desire to maintain or increase feed sales. Poultrymen joined into integrating agreements in hopes of increasing farm income, reducing risks, or acquiring resources for expanding farm operations.

Considerable importance is attached to the legal instruments of integration. Contracts should be analyzed in great detail by poultrymen prior to signing such documents. In fact, a producer should budget his alternative farm opportunities in order to determine precisely the more profitable method of operation.

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In progress, and nearing completion, is the second part of the three-year integration study. This phase is devoted to an analysis of integrating agreements between processors and growers of asparagus and tomatoes, the two largest vegetable processing crops in New Jersey. A survey of a selected group of processors and producers of these commodities has been completed. The data obtained are presently being analyzed and will be developed into a publication by the College of Agriculture in the near future.

Study of New Jersey Farm Organizations to Better Serve New Jersey Agriculture

In an initial exploration of New Jersey's agricultural needs and problems, a study of farm organizations and agriculture was developed. Some of the considerations that formed the basis for the study are outlined here.

New Jersey agriculture and its various private and public interests have been undergoing serious re-examination. Decreasing numbers of farmers, agricultural specialization, diversification of production and marketing, agricultural prices and incomes, all pointed out a changing agriculture in New Jersey.

Many organizations have met the changes and problems stemming from this adjusting agriculture. But many were organized and developed at a period when New Jersey agriculture was very different. The question is advanced "Have all our organizations a timely active program to meet the needs and problems of various segments of New Jersey agriculture?"

Since many of the current needs and problems must be met by group action, organizations have a significant role and responsibility in the status, development and economic well-being of our agriculture. Unless each and every organization effectively fulfills its objectives through active programs, a great deficiency will exist in our agriculture.

It should be understood at the outset that only a study was contemplated. There was no desire or belief that the study process would dominate any existing organization. Rather, the study developed was more basic in concept as is revealed by the following study objectives:

- (1) To examine, within a broad framework, New Jersey agriculture, its needs, problems and prospects.
- (2) To examine the historical background, current situation and future prospects of the county boards of agriculture as they relate to existing organizations and agricultural needs.
- (3) To make a comprehensive survey of existing agricultural organizations to provide an overall view of the organizational activity in New Jersey agriculture.

It is believed that such a study will be meaningful to a continuing strong agriculture in New Jersey.

The rural planning study was initiated and sponsored by the Rural Advisory Council several years ago, and was edited and published this past year.

Rural Planning - A Concept Study for Planning in Rural
New Jersey

The basic premise for the study is that a major proportion of the problems in rural New Jersey stem directly from the rapid and unguided development of such areas. This is based on both past and future considerations. Little in the way of research and study has been directed to this particular problem area.

Initially many problems are created by the unwise and indiscriminate subdivision and premature development of rural areas. After haphazard developments have occurred, the problems and characteristics of future land use have become fixed. Changes in patterns of land use cannot be corrected after disorganized developments have occurred. The only method, at present, to obtain the most valid use of land and the integration of new developments with the least conflict with established land use, is through planning and its implementation; zoning and subdivision control.

Unfortunately, rural residents often believe such controls are alien to rural conditions. And, even in some cases where municipalities have tried to develop such control, non-professional persons have directed programs that lack study and understanding of both existing and potential development. Such cases only harden the resistance of rural and agricultural people to sound planning programs.

The problem, as it exists today, is twofold. One is to adopt planning and zoning practices to meet the conditions found in rural areas, particularly planning based on natural land resources. The second is to convince the rural people to avail themselves of the protective and promotional powers associated with planning and zoning.

The first problem is met in part by this study publication which develops a procedure for planning in rural areas. By using basic information on soil capability, drainage, topography, slope and geologic ground water resources, and superimposing each of these characteristics on the other, a planning basis for rural conditions is established. The report has been distributed to those in a position to affect rural planning. Rural townships, planning officials and planning consultants have received copies of the publication.

The second problem, education for planning and zoning, must be continually emphasized and promoted. Some progress to date has been made in conjunction with the State Planning Bureau, and through the staff of the Rural Advisory Council. But, if the needed response from the rural areas is to be obtained, a continuing and perhaps greater educational effort must be developed. This is true not only of the governmental units which are presently active in this area. The effort should be assisted by more organizations which support and service agriculture and rural New Jersey.

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Local Governmental Services and Taxation

A study of local governmental services and taxation was initiated last year. The objectives of the study were to determine general types of growth predominant in rural areas, and relate such growth to the service requirements and costs generated by this growth. After an initial exploration, it was deemed essential that the last available agricultural data were needed in order to select sample municipalities for study. Because the 1959 agricultural census data from townships were not immediately available, the study was held in reserve. Progress will be re-established as soon as the Bureau of Census releases the needed information.

Other Activities

Concurrent with the formal study activities outlined above, the staff of the Rural Advisory Council continued work on related activities.

In the area of planning and zoning, many presentations and discussions were held with planning and zoning organizations, community service, and agricultural groups to promote interest and activity in planning and zoning. Such meetings were held at both the local and State levels.

Continuing problems and conflicts related to rural zoning, health and nuisance controls, and agricultural restrictions were dealt with during the year.

Problems related to roadside marketing, farmland assessment, agricultural labor and land use were also resolved. Many such problems are a result of population expansion into rural areas, and the changing structure of New Jersey agriculture.

The Council has completed its second year of activity as an established unit of the New Jersey Department of Agriculture.

During the year, the following persons ably served as Council members under the guidance of Chairman Dwight M. Babbitt:

Mrs. Robert B. Crane	Franklin C. Nixon
Clayton S. Cronkright	Frank C. Pettit
William Flemer III	William B. Duryee
David J. Goldberg	Dr. Leland G. Merrill, Jr.
William A. Haffert, Jr.	

Ex-Officio

Phillip Alampi, Secretary of Agriculture
Dr. Ordway Starnes, Designee, N. J. College of Agriculture

All members of the Council serve without compensation. The Department of Agriculture provides an annual appropriation for the programs and activities of the Council.

D I V I S I O N O F M A R K E T S

Vinton N. Thompson, Director

The summer of 1960 started out warm and dry. However, abundant rains and cooler temperatures prevailed after the middle of July. Crop development was excellent for summer fruits and vegetables. Record yields of blueberries, sweet corn, tomatoes and potatoes resulted from the favorable weather. Fall crops were severely damaged by Hurricane Donna on September 12. Much damage occurred to snap beans, lettuce, apples and cranberries. Sweet potatoes and broccoli were the major fall crops that yielded well. The fall growing season was unusually long due to the absence of freezing weather until early December.

The winter of 1960-61 was unusually severe with temperatures dropping to 20 degrees below zero in many sections of the State. These cold temperatures severely damaged peach and apple trees, as well as blueberry plantings. Estimates of killing and severe damage ran as high as 30 per cent on some farms. Crop prospects for the 1961 season were considerably reduced as a result.

The spring of 1961 was generally cold and wet with most crops being 10 days to two weeks later than normal. Plantings of potatoes, tomatoes, lettuce, snap beans, onions, cucumbers and other spring and summer vegetables were somewhat delayed. Conditions were not entirely favorable for pollination of apples, peaches, strawberries and blueberries. Asparagus yields were reduced by the late season plus the cool wet weather which persisted until the middle of June.

As the fiscal year ended, the strawberry harvest had been virtually completed while the harvest of blueberries, beets, snap beans, onions, tomatoes, peaches and sweet corn was getting underway. Vegetable crop prospects were very good while the fruit yield outlook was below normal.

Dairy Products

The trend to lower average milk prices continued. Production in the Federal Milk Order 27 marketing area climbed upward on a per cow, herd and farm basis along with total production. Fluid use percentage moved downward with the result being less gross income per hundredweight for producers. Each year there are less dairy farms in New Jersey, although the cows per herd increase and total production shows no significant change. Unless present trends toward increased production are controlled, New Jersey and New York dairy farmers face severe marketing problems in the immediate future.

Poultry and Eggs

Prices for eggs and poultry meat were significantly higher in 1960 than the previous year. Despite some extremely low prices in the late spring and early summer months, the yearly average returns for egg producers enabled most to show a modest operating profit. The egg industry caught its breath after the severe economic losses of 1959. The rapid decline in layers on farms was arrested as total layers decreased very modestly. The number of poultry farms continued to decrease while the average size of the laying flocks increased. It is evident that the number of laying hens on New Jersey farms is stabilizing at about 9.5 million.

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Livestock

Livestock markets were generally very good and farmers continued to increase their patronage of cooperative and private livestock auctions. Volume of sales and returns to producers were substantially higher than in the previous year. These markets are closely regulated by the United States Department of Agriculture under the Packers and Stockyard Act.

Marketing Developments and Trends

Efforts were continued during the year to improve the marketing of New Jersey farm products. Outstanding among these were: (1) the establishment of central grading and consumer packaging of sweet potatoes in three-pound polyethylene mesh bags by a growers' cooperative; (2) a quality control program including the grading of blueberries for the fresh market by an independent buyer-shipper; (3) a significant increase in grower-owned storage capacity for white potatoes for the fresh market which made possible a longer and more orderly marketing season; (4) increased controlled atmosphere storage capacity for apples which lengthened the marketing season; (5) greatly expanded fruit and vegetable market news services; and (6) adoption of yield programs for egg producers that, in several instances, resulted in a better package of eggs for consumers and improved returns to egg producers.

Public Market Commission

The Commission was created by law in May 1960. During the fiscal year it initiated studies to determine the feasibility of constructing a complete food distribution center in the vicinity of the Croxton railroad yards, adjacent to Jersey City. In December the report of the Commission's engineers Barnett and Herenchak, Newark, indicated that such a food distribution center was economically feasible. As the fiscal year ended, final engineering plans were being prepared to construct a multi-million dollar "market center" in Hudson County. The market site consists of three tracts of land totaling more than 960 acres. The Commission proposes to develop this total area in stages with Tract 1 (360 acres) as the first stage. The initial development will provide suitable facilities for a wholesale fruit and vegetable market, a wholesale fruit auction, a wholesale meat center and cold storage warehouses. Initial occupancy is planned for the spring of 1963. The Secretary of Agriculture serves as an ex officio member of the Commission. The Division director serves as a technical advisor on marketing plans.

Marketing Order Legislation

At the request of various farm commodity groups, marketing order enabling legislation was prepared by the Division of Markets and introduced in the State Legislature. This enabling act is permissive in that it permits farm commodity groups to vote marketing orders into effect for individual farm commodities. These grower controlled self-help programs permit quality control, promotion, advertising and research in production and marketing. Marketing orders can become effective only after approval has been secured in writing from a substantial majority of the producers of the commodity. At the close of the fiscal year, this legislation had been favorably considered by the Senate and sent to the General Assembly.

Western Lettuce Tariffs

At the request of New Jersey lettuce growers, the Division of Markets conducted an investigation into transportation charges for lettuce shipped from California and Arizona into eastern terminal markets. Present freight tariffs now approved by the Interstate Commerce Commission permit western shippers to ship carlots of lettuce to eastern receivers without being responsible for the freight and other incidental charges thereon. This unfair privilege has resulted in "roller" (unsold) cars of lettuce being shipped east in hopes of finding a market; if no market can be found, these cars are dumped on the market at extremely low prices. The lettuce market price structure is very much weakened by this practice with returns to eastern and western growers often below cost of production. This matter is to be presented to the Interstate Commerce Commission by New York State and New Jersey with the request that these unfair tariff provisions be modified or eliminated.

Relations with Other Agencies

The Division of Markets wishes to acknowledge the cooperation it has received from other agencies, particularly the Division of Weights and Measures, the Department of Conservation and Economic Development and the Department of Health. Relations with these agencies have been most cordial.

It is also gratifying to enjoy excellent relations with the College of Agriculture at Rutgers University. We have received assistance in our marketing work from the Department of Agricultural Economics, the Agricultural Extension Service and the Agricultural Experiment Station. The New Jersey State Marketing Council is made up of staff members of the Department of Agriculture and the College of Agriculture, who are concerned with marketing farm products. The Division director was elected chairman of this Council as the fiscal year closed.

DAIRY SERVICE

The number of dairy herds in New Jersey continued to decrease during the past year. However, increases in size and productivity of the remaining herds resulted in a larger total quantity of milk produced in the State. This upward trend has been apparent for several years.

New Jersey Official Grades Milk Program

At their monthly meeting in March 1961 the State Board of Agriculture moved to abolish the New Jersey Official Grades Milk program, effective June 30, 1961. Changes in milk marketing have made the program obsolete for most milk dealers, since the Official Grades can be used only by dealers whose entire milk supply is produced in New Jersey.

At the termination of the program, there were nine participating dealers and 152 producers.

In May 1961 a milk dealer requested the services of the Official Grades program because milk supplied by his producers was below standard. As a result of the services rendered this dealer during the last six weeks of the program, a marked improvement was shown in the quality of milk received by him.

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In October 1960 a penicillin testing program was initiated under the Official Grades Milk program. Each producer's milk was tested for the presence of penicillin. When penicillin was detected in a milk sample, the producer was notified by this Division and contacted personally by the Division's milk inspector. The producer was instructed that all milk from treated animals must be withheld for the length of time specified on the penicillin container or by the veterinarian who treated the animal. With this procedure followed, no producer was found to have penicillin in his milk sample a second time.

New Jersey Dairy Laboratories, New Brunswick, has made microscopic analysis of all milk samples taken in the quality control work.

During the year 2,160 samples were collected and analyzed. Reports of the results were sent from this office to cooperating producers, dealers and health officers.

During the year 23 warning letters were sent to producers having two consecutive high bacteria counts. It was not necessary to suspend any producer from his market due to a third consecutive high count.

The supervisor and fieldmen have aided several dairymen and milk dealers other than those under the Official Grades Milk program with quality control problems.

The supervisor represented this Division at the New Jersey Dairymen's Council meetings throughout the year and attended various other meetings of interest to the dairy industry.

Farm Visits

Richard L. Washer, assistant Burlington County agricultural agent and the supervisor aided James Miller, writer for Readers Digest, in gathering information for an article on dairy farms. Mr. Miller was particularly interested in labor saving devices, efficiency in management, artificial insemination, methods of record keeping, and methods of proving the production abilities of cow families and sires used in artificial insemination units.

Two Burlington County dairy farms were visited. One had loose housing, herringbone milking parlor and bulk milk tank. The second farm had pipeline milking, bulk tank, stable cleaners and silo unloaders.

The information gathered by Mr. Miller was published in the June 1961 issue of Readers Digest.

Livestock Auction Markets

Following a request by the supervisor, Tallman Bros. Auction, Inc., Columbus, and Community Livestock Auction, Woodstown, agreed to send a weekly report of their livestock sale to the Department.

This makes a total of eight New Jersey livestock auctions which co-operate with the Department by supplying weekly reports of all sales, giving class of animals sold and prices obtained. During the past year the number of animals sold was higher than during 1959-1960. Total money returns were also

higher. The following chart shows the sales at the cooperating markets for 1960-1961.

SUMMARY OF SALES AT LIVESTOCK AUCTION MARKETS

Market	No. Head	Value
Flemington	15,378	\$ 582,100.22
Hackettstown	52,225	3,710,296.39
Mount Holly	4,153	114,681.26
Freehold	3,918	213,158.06
Sussex	44,251	2,761,525.48
Woodstown	35,230	2,019,622.10
Columbus 1	11,597	703,469.00
Community 1	6,369	441,465.08
Totals	173,121	\$10,546,317.59

1 These two auction markets have reported since September 1960.

BUREAU OF LICENSING AND BONDING

This Bureau issues licenses to, and in some categories, obtains bonds from the various dealers who purchase agricultural commodities from New Jersey farmers. These include dealers who purchase milk, cattle, fruits, vegetables, eggs and live poultry from New Jersey producers. Garbage-feeding hog farms and disposal plants which process the bodies of dead animals or packing house refuse are also licensed by this Bureau.

During recent years legislation has been enacted providing for "promotion taxes" on poultry and eggs, white potatoes, asparagus and apples. Under this legislation a tax is imposed on the grower of the commodity and the proceeds of the tax are used to promote the sale of that product. The collection of these taxes has been assigned to this Bureau.

Milk Dealers' Licensing and Bonding Act

Licenses to purchase milk and cream from New Jersey producers during the fiscal year were issued to 121 milk dealers. Before such a license is granted, the applicant is required to file a bond, the amount being based on the value of anticipated purchases. A total of \$5,380,500, consisting of \$4,991,000 in surety bonds and \$389,500 in United States Government securities, was provided in support of these licenses.

Early in the licensing year it became evident that one of the licensed dealers was in financial difficulty. A series of conferences and a hearing were held. New Jersey producers subsequently filed claims against the bond deposit of the licensee, which consisted of \$15,000 in United States Government Bonds. On September 27, 1960, a statutory receiver was appointed and on November 4, 1960, Judge W. Orvyl Schalick of the Superior Court of New Jersey entered an order directing the Secretary of Agriculture to turn over to the receiver the bonds which had been deposited by the licensee. The bonds were to be administered as a separate fund and used for payment of obligations to New Jersey producers.

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Because the farmers had extended credit to the dealer over a longer period than that covered by the bond and had failed to report they were not being paid on schedule, the amount of the claims exceeded the amount of the bond and the producers were paid on a pro-rated basis.

Produce Dealers' Licensing and Bonding Act

Dealers who purchase fruits, vegetables, eggs and live poultry from New Jersey producers are licensed under this act. Licenses were issued to 586 dealers this year. Each dealer is required to provide a bond in support of his license, the size of the bond depending on the dollar value of commodities purchased and the promptness with which payment is made. This year, bonds totaling \$2,578,000 were deposited in support of the licenses, \$2,517,500 being in the form of surety bonds and \$60,500 in United States Government securities.

Complaints were received from 42 producers against 31 dealers during the year. Most of these complaints were settled after one of the field investigators called on the complaining farmer and the dealer, so that the filing of claims against the bond was unnecessary. Eleven producers filed claims against the bonds of five licensed dealers. The claims ranged from \$326.31 to \$3,159.79 and totaled \$15,267.64. The number of hearings and conferences held this year was larger than in previous years. On several occasions, licensees were required to appear to provide information concerning their financial condition or their failure to pay producers as promptly as indicated on their application for license.

Four formal hearings were scheduled during the year. One was cancelled when the complaint on which it was based was settled. Three hearings were held. All three resulted in findings which were critical of the manner of operation of the dealers involved and which became part of the permanent records of the Department. One of the dealers is now in bankruptcy. Reports that hearings are being held by the Department circulate quickly among the trade and act as a deterrent to the practices which lead to such hearings.

Poultry Products Promotion Council and Tax Act

This act which imposes a tax of one cent per hundred pounds on all poultry feed used in New Jersey, the proceeds to be used in promoting the sale of poultry and eggs, was passed in 1957. The following table shows the collections for seven complete taxing periods.

Taxing Period	Amount Collected	Sources
July 1 - Dec. 31, 1957	\$86,769.67	317
Jan. 1 - June 30, 1958	87,973.09	300
July 1 - Dec. 31, 1958	91,213.11	297
Jan. 1 - June 30, 1959	83,544.41	289
July 1 - Dec. 31, 1959	78,911.10	273
Jan. 1 - June 30, 1960	69,948.34	261
July 1 - Dec. 31, 1960	72,238.75	253

The last period listed is the first showing an increase over the previous period since July 1 - December 31, 1958. Apparently, the decrease in the number of poultry raised in the State has been halted. Several poultrymen have expressed the opinion that the more inefficient operators have been

eliminated and that poultry feed use will level off at approximately the current level.

White Potato Industry Promotion and Tax Act

This law imposes a tax of five cents per hundredweight on all seed potatoes planted in New Jersey, the proceeds from this tax to be used for marketing, promotion and research for the benefit of the White Potato Industry. Seven taxing periods have been completed. The collections are summarized below:

Taxing Period	Amount Collected	Sources
Oct. 1 - Dec. 31, 1957	\$ 646.85	8
Jan. 1 - June 30, 1958	15,061.73	67
July 1 - Dec. 31, 1958	281.96	10
Jan. 1 - June 30, 1959	15,376.58	65
July 1 - Dec. 31, 1959	123.95	5
Jan. 1 - June 30, 1960	15,406.65	69
July 1 - Dec. 31, 1960	74.90	5

Asparagus Industry Promotion and Tax Act

Two complete collection periods have elapsed since this tax was imposed on asparagus produced in New Jersey. The actual collection for the first year was \$89,420.06, of which \$74,240.42 was collected on asparagus sold for processing and \$15,179.64 was collected on asparagus sold for fresh market. The second year's collection totaled \$88,090.66, of which \$71,987.42 was collected on processed asparagus and \$16,103.24 on asparagus sold for fresh market use. It appears likely from available figures that the 1961 return will be slightly smaller than previous collections.

Apple Industry Promotion and Tax Act

This act imposes a tax of three cents on each bushel of apples sold for marketing as fresh apples and three cents per hundredweight on apples sold for processing other than for cider or apple juice. Collections for one complete year and part of the second year are shown below:

Taxing Period	Amount Collected		Total
	Fresh Market	Processed	
July 1 - Sept. 30, 1959	\$16,032.53	\$1,340.96	\$17,373.49
Oct. 1 - Dec. 31, 1959	14,392.14	5,638.44	20,030.58
Jan. 1 - Mar. 31, 1960	11,149.67	2,730.65	13,880.32
Apr. 1 - June 30, 1960	5,645.24	1,613.33	7,258.57
Total 1959 season	\$47,219.58	\$11,323.38	\$58,542.96
July 1 - Sept. 30, 1960	\$11,897.39	\$1,529.00	\$13,426.39
Oct. 1 - Dec. 31, 1960	9,151.00	4,035.13	13,186.13
Jan. 1 - Mar. 31, 1961	7,307.37	2,563.09	9,870.46
Partial total 1960 season	\$28,355.76	\$8,127.22	\$36,482.98

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The tax is collected four times a year, on the 15th of July, September, January and April.

BUREAU OF FRUIT AND VEGETABLE SERVICE

The principal activity of this Bureau is the supervision of inspection and certification of fresh fruits and vegetables for domestic and foreign shipment, and grading of raw products for processing. The work is performed on the basis of established standards, jointly supervised and conducted under a written agreement between the Federal and State Departments of Agriculture and the New Jersey Agricultural Society.

The number of fresh market inspections is affected by such factors as production, quality, demand, prices and marketing regulations. The number of inspections this fiscal year was only 77 per cent of last year's total, and the total volume inspected was down about 32 per cent. These decreases were due to the reduction in requests for inspection of white potatoes and apples.

The volume of products for processing varies annually in proportion to production and contracted acreage. Most processors purchase their raw products on the basis of established standards or contract specifications closely allied with the standards. The volume of tomatoes graded for processing this year was 72,730 tons more than last, an increase of about 56 per cent. An increase of 23 per cent in acreage of tomatoes for processing and an average yield of 15.8 tons per acre, a new record for New Jersey, accounts for the high volume. About 7 per cent less asparagus was graded this year than last, primarily due to subnormal temperatures and excessive moisture throughout most of the growing season. The total volume of all products graded for processing this fiscal year was 238,154 tons, compared with 162,826 tons last year, an increase of about 46 per cent. This increase more than offsets the decrease of 32 per cent in the volume of products inspected for fresh market.

Inspection is available to applicants throughout the State on carlots, trucklots, warehouse and storage lots. The service is permissive and provides unbiased certification at reasonable cost. In addition to the activities connected with the administration of the inspection service, personnel of this Bureau work with the local fruit and vegetable auctions and city farmers' markets. The Bureau also cooperates and assists in the operation of the program of Jersey Certified Farm Markets, Inc. Last year an inspector from this Bureau was assigned on a full-time basis to work in an advisory capacity with this organization, other roadside market operators and the Trenton Farmers' Market. The assignment covered the four most active months, June through September. This cooperation is being continued this year.

Personnel of this Bureau continued to provide technical assistance to councils and committees representing the asparagus, apple, potato and cultivated blueberry industries. Some use was made this year of the New Jersey standards for cultivated blueberries, both fresh market and processing. One blueberry shipper requested inspection of 31 shipments totaling 24,374 12-pint flats for fresh market. In addition, 760,000 pounds of blueberries for processing were certified on the basis of the New Jersey standards.

During the fiscal year, 91 Federal-State fruit and vegetable inspectors licensed by the United States Department of Agriculture were required to handle the inspection and grading of commodities for fresh market and processing in New Jersey.

Certifying Fresh Products

Apples

Apple inspections this fiscal year numbered only about 57 per cent of last year's, and volume was down 59 per cent. The apple crop in the eastern states was about 15 per cent below the 1959 production and this was further reduced in New Jersey by Hurricane Donna. A shorter crop resulted in better prices in domestic markets. A large crop in western Europe curtailed demands for New Jersey apples for export.

Inspection of apples for export is mandatory under the U. S. Export Apple and Pear Act. This year the Bureau inspected a total of 138 lots for fresh market, consisting of 47,195 bushels. Of the total volume inspected, only 16,344 bushels or 35 per cent were certified for export. Inspection on domestic shipments is voluntary and few requests for certification were received.

The 1960 apple crop in New Jersey was estimated to be the smallest since 1953. However, the quality was excellent and the fruit kept well in storage. Apples in controlled atmosphere storages, including those held until late April and May, were in exceptionally fine condition. Shortage of crop and demand for processing helped growers obtain favorable prices throughout the marketing season.

White Potatoes

The 1960 growing season for potatoes was excellent. Shipments from New Jersey began early in July, when markets were still being abundantly supplied from southern producing areas. New Jersey potatoes were immature and badly skinned. This, coupled with heavy supplies from other areas, depressed prices below the cost of production and harvesting. Low prices and heavy rains brought harvesting to a halt until favorable weather occurred in early August. Harvesting moved ahead throughout August, but again was hampered by periodic rains and wet fields in September. Following this the weather remained generally good for the rest of the harvesting season.

Following periods of heavy rains, potatoes were water-logged and growers experienced difficulty in getting shipments to terminal markets without excessive soft rot. However, this problem was not as serious this year as last. Most of the soft rot reported from terminal markets this year was in initial stages of development and generally followed abrasions. This condition gradually declined as the season progressed and was of little consequence during October and the end of the shipping season.

Average yield per acre of the 1960 crop was 240 hundredweight, a new record for New Jersey. The 1959 yield was 215 hundredweight per acre. The estimated commercial acreage, as reported by the Crop Reporting Service for 1960, was 18,500 acres. This was 1,000 acres less than reported for 1959.

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The number of lots inspected this fiscal year totaled 2,251, comprised of 621,813 hundredweight equivalents. Last year's totals were 3,079 lots and 912,937 hundredweight equivalents. Inspection was requested on only 14 per cent of the total production this year as compared with about 22 per cent last year.

Prior to the 1960 season the State Board of Agriculture approved a revision of the requirements for white potatoes to be identified by the "State Seal of Quality," as recommended by the New Jersey White Potato Industry Council. The revision affected only the maturity of potatoes for State seal certification. All other requirements remained as they were in 1959.

The 1960 requirements for potatoes packed under State seal were U. S. No. 1 - Size A, two inch minimum, four inch maximum, fairly clean and fairly well matured, unless specified as moderately skinned. Inspection and certification are mandatory under the regulations providing for quality control of State seal potatoes. Inclusion of "moderately skinned" potatoes enabled growers and shippers to begin movement of the State seal brand much earlier than they could when the requirements specified "fairly well matured" potatoes.

This fiscal year 115 lots containing 36,215 hundredweight equivalents were certified as meeting State seal requirements. Shipments included 43 lots containing 187,350 10-pound bags; 59 lots containing 34,320 50-pound bags and one lot of 320 100-pound bags. Last year 28 lots containing 101,510 10-pound bags were certified under State seal.

Although the above figures indicate that volume packed under State seal increased this year, it is evident that much more advantage could have been taken of the program. Ninety-seven per cent of the total volume of potatoes inspected graded U. S. No. 1 - Size A, or better, including 50 per cent two inches, or larger, minimum diameter. State seal volume was about 12 per cent of the total volume certified as two inches, or larger, minimums.

Green Corn

As in previous years, most green corn inspections were made in Burlington County. A few inspections were made in Atlantic County. A Bureau inspector was assigned to the Cooperative Growers' Association, Inc., of Beverly on a full-time basis for a period of three and one-half weeks in July. All corn shipped by this organization was hydro-cooled and shipped under refrigeration.

Eighty lots containing 25,491 crates were certified as U. S. Fancy and 107 lots containing 16,829 crates graded U. S. No. 1. The latter contained ranges of 75 to 89 per cent U. S. Fancy quality.

Last year a total of 36 lots containing 17,290 crates was inspected.

Cranberries

Indemnity payments to cranberry growers by the United States Department of Agriculture were begun in May 1960 and continued through October.

The shipping point inspection service was given the responsibility of checking the volume and supervising the disposal of lots of cranberries upon which indemnity payments were to be made. The total volume certified for indemnity payments by our Federal-State inspectors in New Jersey was 59,927.44 barrel equivalents.

An inspection was made in April 1961 to determine the condition of 3,821 barrel equivalents of fresh cranberries that were in a common storage and had undergone successive freezing and thawing during the winter. They were badly deteriorated and were certified as having no commercial value.

Cannery Crops

More than half of the vegetable acreage of New Jersey is planted to crops for processing. White potato acreage is not included, but a considerable volume of this crop is also marketed to processors. Through the processing industry a market is provided for small sizes that otherwise would be left in the fields.

Asparagus and tomatoes are the two most important crops grown for processing. Other crops for which the Department's grading service is requested are blueberries, carrots, snap beans, red and green sweet peppers, and green tomatoes. Occasional requests are received for inspection of trucklot shipments of apples, sweet potatoes and other products for processing.

The grading service is made available to growers and processors for the purpose of establishing the value of each load delivered. Contacts between processors and growers specify prices to be paid according to quality, based on standards or contract specifications. The inspectors determine the quality by analyzing samples from each load, according to specifications, and applying the percentages to the entire load. The value of each load is directly proportionate to the quality delivered as established by inspection. This system encourages delivery of higher quality which means greater returns to growers, and provides an opportunity for processors to produce a high quality finished product at minimum cost.

Asparagus

Grading of green asparagus for processing is the largest single activity of this Bureau. In the spring of 1961, four processors and eight brokers established and operated 20 receiving stations in the producing areas. Thirty inspectors and two supervisors were required to handle the grading work.

Only the State of California outranks New Jersey in the production of asparagus. The estimated acreage for harvest in New Jersey in 1961 was approximately 29,800 acres, a decrease of some 1,400 acres from 1960.

Contracted acreage for processing this year was estimated to be about the same or slightly above last year, which was about 66 per cent of the total acreage.

The contract price this season for N. J. No. 1 spears, 7 inches in length, 4 1/2 inches minimum green color, 3/8 inch minimum diameter measured

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at the butt of the spear, was 11 3/4 cents per pound. The price last season for the same specifications was 11 cents per pound. The majority of the volume was purchased on the basis of these specifications, known as the "regular contract."

Five other contracts were used this season, two of which were canner-grower agreements with no particular reference to standards but specifying maximum length and minimum diameter of spears.

Subnormal temperatures throughout this season resulted in lower yield but aided in the production of slightly better quality than last year. The cooler temperatures retarded growth and prevented tips from spreading. Spears were cut shorter in the field, resulting in less butts, for which growers receive no payment. The low temperatures also helped control insects. The actual difference in grades for the two seasons was due to 1 per cent less butts this season than last. Culls were the same both seasons and the pay-weight increased by 1 per cent this year.

Volume graded this season was about 7 per cent below the volume graded in 1960. Total 1961 volume was 53,634,352 pounds, compared with 57,455,512 pounds graded in 1960. The decrease of 3,821,160 pounds was directly due to the season's lower average temperatures.

Volume graded under the "regular contract" specifications this season was 35,304,170 pounds, about 66 per cent of the season's total. Average grades were 74 per cent N. J. No. 1, 6 per cent culls and 20 per cent butts. Corresponding figures for the same contract in 1960 were 37,715,146 pounds graded, with averages of 73 per cent N. J. No. 1, 6 per cent culls and 21 per cent butts.

Volume graded on the basis of a 7 inch spear, 5 inches green color, was 13,332,692 pounds with averages of 66 per cent N. J. No. 1, 6 per cent culls and 28 per cent butts.

Volume graded on the basis of a 7 inch spear, 5 1/4 inches green, was 6,018 pounds with averages of 73 per cent N. J. No. 1, 3 per cent culls and 24 per cent butts.

Volume graded on the basis of the canner-grower contract calling for a 10 inch spear was 3,146,938 pounds, with 82 per cent meeting contract specifications for pay-weight and 18 per cent butts. On the one calling for a 9 inch spear, volume was 142,460 pounds with 81 per cent pay-weight and 19 per cent butts.

One contract specified a 7 1/2 inch spear with 5 1/2 inches minimum green. Payment was also made for N. J. No. 1 spears with 4 1/2 to 5 1/2 inches of green and spears grading N. J. No. 2. Nothing was paid for culls or butts. Volume graded was 1,702,074 pounds with grade averages of 52 per cent N. J. No. 1, 5 1/2 inches green, 9 per cent N. J. No. 1, 4 1/2 to 5 1/2 inches green, 7 per cent N. J. No. 2, 5 per cent culls and 27 per cent butts.

Tomatoes

New Jersey kept its place among the leading states in the production of tomatoes for processing in 1960. In yield per acre the State ranked fifth

behind Ohio 17.7, California 16.6, Iowa 16.5 and Delaware 16. In total production New Jersey was fourth in the nation, preceded by California, Ohio and Indiana.

With ideal weather prevailing during the growing season, the fruit set was heavy. The harvesting season was marred only by Hurricane Donna on September 12. Approximately 90 per cent of the crop had been harvested by that date. Cool and dry weather followed the heavy rains brought by the hurricane and reduced the development of molds and decays which normally follow excessive rains.

Early indications in 1960 pointed to a new record yield per acre. Acreage was about 23 per cent above the 14,000 harvested in 1959, or 17,200 acres. Yield per acre this season was 15.8 tons and topped the old record of 12.6 tons by 3.2 tons per acre.

Volume graded this season was 202,154 tons with grade averages of 63 per cent U. S. No. 1, 34 per cent U. S. No. 2 and 3 per cent culls. In 1959 the volume was 129,424 tons with averages of 60 per cent U. S. No. 1, 37 per cent U. S. No. 2 and 3 per cent culls.

At the peak of the season 27 Federal-State inspectors were required to handle the tomato grading work.

SUMMARY 1960 CANNERY TOMATO SEASON AND COMPARISON WITH PREVIOUS 10 YEARS

Seasons	Total Tons Graded	U. S. No. 1 (Per Cent)	U. S. No. 2 (Per Cent)	Culls (Per Cent)
1950	195,697	69	29	2
1951	215,875	70	28	2
1952	127,418	57	39	4
1953	192,623	66	32	2
1954	130,462	62	36	2
1955	36,705	47	49	4
1956	157,464	64	33	3
1957	144,196	69	29	2
1958	150,659	64	34	2
1959	129,424	60	37	3
1960	202,154	63	34	3

Other Cannery Crops

The grading service is also requested annually on several other important New Jersey crops for processing. Each raw product is graded on the basis of the U. S. Standards for Processing for that commodity. Following is the quantity in pounds of each graded product for the past two seasons.

1960-1961		1959-1960	
Carrots	11,053,200	Carrots	5,636,100
Sweet peppers	4,225,560	Sweet peppers	1,222,980
Snap beans	2,057,400	Snap beans	2,379,000
Blueberries	760,000	Blueberries	...
Green tomatoes	269,650	Green tomatoes	...

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Shipping Point and Miscellaneous Inspections

In addition to the products covered in detail in this report, others, such as asparagus, beets, cabbage, carrots, chicory, cucumbers, eggplant, escarole, lettuce, onions, peaches, peppers, squash, sweet potatoes, tomatoes and turnips, were inspected and certified for fresh market shipment. Inspections were made this year of 172 shipments containing 75,624 packages of miscellaneous products.

Again this year one inspector from this Bureau was assigned to the P. J. Ritter Co., Bridgeton, to inspect and certify processed asparagus packed in accordance with the New Jersey "State Seal of Quality" specifications. The volume of canned asparagus certified under State seal this season was 133,961 cases of 12 13-ounce glass jars and 17,232 cases of 24 13-ounce jars, or a total of 151,193 cases containing 2,021,100 13-ounce jars. Last year's pack totaled 158,120 cases containing 1,914,864 13-ounce jars.

One inspector from this Bureau was assigned to assist in the asparagus cutting study begun last year at the request of asparagus growers and processors and sponsored by the New Jersey Asparagus Industry Council. The Department of Economics of the College of Agriculture was requested to make the study to determine the relative value of asparagus cut for various lengths of green color in excess of 4 1/2 inches, based on a price fixed for asparagus with 4 1/2 inches of green.

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

This Bureau cooperated with Campbell Soup Company of Camden and the United States Department of Agriculture in obtaining data on an improved method for grading raw tomatoes to be used in the manufacture of strained tomato products. The method was developed by the United States Department of Agriculture.

It includes the use of a Tomato Colorimeter to measure the color of juice extracted from samples of tomatoes from growers' loads. This is a more objective method than the present system of determining red color.

One of our Federal-State inspectors was assigned to this work for the 1960 season. He sampled and graded 501 loads of tomatoes under the new procedure. Data obtained was submitted to the United States Department of Agriculture for analysis.

TEN-YEAR RECORD OF SHIPPING POINT INSPECTIONS BY PRODUCTS

	51-52	52-53	53-54	54-55	55-56	56-57	57-58	58-59	59-60	60-61
Apples	796	157	228	369	150	191	336	107	241	138
Asparagus	10	45	36	24	14	32	6	1	1	1
Beans	..	1	2	..	..	..	..	1	..	..
Beets	..	..	1	..	..	..	1	4	2	3
Blueberries	..	..	..	..	..	..	..	..	..	31
Cabbage	4	7	2	1	6	6	8	10	21	22
Carrots	..	1	1	1	..	10	..	..	1	..
Celery	..	..	..	..	..	..	..	1	..	..
Chicory	..	..	..	..	..	..	..	..	2	..
Collards	..	..	..	..	..	..	2	..	..	..
Corn	92	113	135	91	33	35	17	26	36	187
Cucumbers	1	4	49	1	5	..	7	2	14	6
Eggplant	..	..	..	..	..	..	..	..	1	..
Escarole	..	..	..	..	..	..	..	..	1	..
Lettuce	..	5	1	5	1	36	14	48	49	79
Onions	42	14	27	28	15	9	6	14	10	..
Onions, green	..	2	1	..	..	..	..	..	5	..
Peaches	5	3	3	8	1	2	..	4	13	31
Peppers	5	5	2	..	..	..	3	..	10	3
Potatoes	9,989	1,748	782	632	493	1,858	3,007	3,109	3,079	2,251
Rutabagas	..	3	..	..	1	..	..	..	..	..
Spinach	..	1	..	..	..	..	..	..	..	..
Squash	..	..	..	..	..	..	..	..	..	1
Sweet potatoes	12	7	24	9	33	2	1	1	108	18
Tomatoes	..	..	4	..	..	12	10	..	..	7
Turnips	..	1	..	..	..	..	..	..	..	1
Mixed vegetables	..	2	1	3	2	2	..	..	16	..
Totals	10,956	2,119	1,299	1,172	754	2,195	3,418	3,328	3,610	2,779

Terminal Inspections

This Bureau also inspects and certifies products shipped to New Jersey terminals in interstate commerce, at the request of receivers of shipments. Most requests are for potato inspections. Inspection of fresh supplies for State hospitals and institutions also comes under terminal work. Most of this work is on supplies purchased by the New Jersey State Hospitals at Trenton and Marlboro.

Terminal inspections are certified on straight Federal certificates rather than the Federal-State type used for reporting shipping point inspections. Inspections may be made only by personnel appointed by the United States Department of Agriculture as collaborators. Authorized for this work in New Jersey are the chief of the Bureau, three State supervisors and four Agricultural Society inspectors.

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The following list shows commodities and volume certified at various terminals in New Jersey during the fiscal year.

Product	Volume
Cranberries (processing)	38,500 pounds
Grapefruit (processing)	149,530 pounds
Lettuce	74 crates
Onions	5,040 50-pound sacks
Oranges	3,166 cartons
Peaches	23 crates
Potatoes	139,085 hundredweight
Watermelons	1,536 melons

Inspections of fresh fruits and vegetables delivered to institutions, including those on items for replacements of rejections on original deliveries, totaled 161 inspections consisting of 1,021,242 pounds.

PRINCIPAL COMMODITIES SOLD AT FRUIT AND VEGETABLE AUCTION MARKETS
VOLUME IN 1960 WITH 1959 COMPARISONS

Commodity	Unit	1960	1959
Peaches	Bushels	100,595	93,925
Blueberries and huckleberries	Trays, 12 pints	49,906	106,462
Raspberries	Crates, 12 pints	6,033	7,466
Strawberries	Crates, 16 quarts	223,459	204,576
Asparagus	Crates, doz. bunches	491,669	487,224
Beans, lima	Bushels	20,006	14,853
Beans, snap	Bushels	168,358	182,640
Beets	Bushels	28,960	17,944
Cabbage	Crates, 50 lb.	112,523	86,756
Cantaloups	Bushels	71,897	89,886
Cauliflower	Crates	9,760	... 4
Corn, sweet	Crates and sacks	102,643	136,327
Cucumbers and pickles	Bushels	195,327	207,973
Eggplant	Bushels	158,660	145,165
Lettuce	Cartons, 24 heads	259,710	229,531
Onions	Sacks, 50 lbs.	74,547	33,019
Peppers	Bushels	503,366	512,920
Potatoes, sweet	Bushels	170,091 1	... 4
Potatoes, white	Sacks, 100 lbs.	20,113	23,448
Squash	Bushels	...	67,881
Tomatoes	Climax baskets	207,423 2,3	193,536 5

1 Includes sales to processors.

2 Equivalent bushels 53 pounds.

3 Includes plum type tomatoes.

4 Quantity too small to report.

5 Equivalent bushels 63 pounds.

SUMMARY OF SALES AT FRUIT AND VEGETABLE AUCTION MARKETS

SEASON OF 1960

SEASON OF 1959

Market	AUCTION SALES		SPECIAL SALES ¹		AUCTION SALES		SPECIAL SALES ¹	
	No. of Pkgs. Sold	Sales Value	No. of Pkgs. Sold	Sales Value	No. of Pkgs. Sold	Sales Value	No. of Pkgs. Sold	Sales Value
Beverly	93,941	\$ 83,022.61	..	..	238,890	\$375,739.80	..	..
" Corn	..	..	165,386	\$412,586.19	..	..	101,575 crts.	\$180,094.80
" Peaches	..	..	..	..	..	..	27,481 3/4 bu.	76,414.75
Cedarville	542,818	1,247,391.55	32,485	64,092.28	461,829	959,215.27	67,205	106,759.06
Glassboro	282,440	464,232.61	217,759	542,533.36	338,928	540,305.87	140,589	387,878.57
Hammonton	156,326	709,954.90	..	..	184,434	779,757.70	..	..
" Blues-fresh	..	..	135,488	387,080.82	..	..	79,969	273,286.65
" Blues-proc.	..	..	805,820	lbs.185,066.30	..	..	555,860 lbs.	..
Hightstown	482,816	477,618.94	36,438	85,827.31	463,513	504,910.51	38,857	75,434.30
Landisville	527,301	841,237.06	36,667	52,758.35	448,948	685,761.78	42,831	51,216.00
Pedricktown	122,752	432,736.05	..	..	160,858	479,636.30	..	..
Swedesboro	622,240	1,699,228.75	..	..	677,136	1,695,712.19	..	..
" Asp.-proc. ²	..	..	1,014,394	lbs.119,191.30	..	..	1,459,662 lbs.	..
Vineland	1,202,968	2,172,645.19	..	..	1,006,085	1,732,858.32	..	..
Totals	4,033,602	\$8,128,067.66	624,223	\$1,849,135.91	3,980,621	\$7,753,897.74	498,507	\$1,151,084.13
Total - pounds for processing ³			1,820,214				2,015,522	
Total value - auction and special sales				\$9,977,203.57				\$8,904,981.87
Average price per package (by auction), 1960		\$2.015						
Average price per package (by auction), 1959		\$1.947						

¹All types of contract or negotiated sales - other than auction.²Pay weight.³Total pounds not included in total number of packages.

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BUREAU OF MARKET NEWS AND COOPERATIVES

Service in market reporting, service to cooperatives and regulation of the cooperatives as required by State law are the combined functions of this Bureau.

Cooperatives

Generally, the Bureau's work with cooperatives is composed of three activities: (1) regulatory, (2) general assistance through publications and group meetings, and (3) service to cooperatives on specific problems at their request.

Regulatory work is confined to accepting, filing and analyzing annual financial statements required by law to be filed with the Secretary of Agriculture. In addition, the law requires the filing of a copy of the Certificate of Incorporation, the by-laws and any amendments.

Recent amendment to the Corporation Business Tax Act exempts agricultural cooperative associations incorporated under Chapter 13 of Title 4 from the payment of a business tax if they are also exempt from the payment of Federal income tax. Because the Department was involved in this amendment and its enactment into law, it becomes a responsibility of the Department to require and encourage compliance with all statutes so that cooperatives may enjoy the benefits of the exemption.

The Department filed papers with the Bureau of Internal Revenue, United States Department of the Treasury, requesting blanket exemption for cooperatives incorporated under Chapter 13, Title 4. This was refused. Another request has been filed for the names of New Jersey cooperatives presently holding Letters of Exemption. Those that have not applied for and received Letters of Exemption will be encouraged to do so.

Publications and General Services

The Cooperative News is a publication of the Department with a mailing list composed of directors, managers and others interested in cooperative business. Items included are those that might be helpful in strengthening cooperative business activity, either in the structure of the organization or services to be developed. Laws that apply to cooperatives are reviewed in various issues for the guidance of directors, managers, attorneys and accountants.

Close contact is maintained with associations of cooperatives to further the cooperative service work. These include The Cooperative Marketing Associations in New Jersey, Inc., with 15 member associations; the United Milk Producers Cooperative Association of New Jersey with 12 county member associations; and the Farm Bureau Committee on Cooperatives with approximately 35 members. An exchange of information with cooperatives outside of New Jersey is maintained with Farmer Cooperative Service, United States Department of Agriculture; Springfield Bank for Cooperatives; American Institute of Cooperation; National Council of Farmer Cooperatives; and the National Society of Accountants for Cooperatives, of which the Bureau chief is a past president and a director.

Special Services

Special services performed for cooperatives at their request take many forms.

Five separate groups of farmers with such diverse objectives as marketing eggs, maintaining a farmers market, organizing a wool pool, purchasing nurserymen's supplies, and bargaining for prices and delivery contracts for pickles were assisted in becoming incorporated as cooperatives and in developing by-laws.

Approximately one year was spent in preliminary work to develop an agreement of merger acceptable to the boards of directors and members of six egg bargaining cooperatives. The merger into one organization has now been accomplished.

One fruit and vegetable marketing cooperative with a structural problem was assisted. To protect the cooperative members, exclusive marketing contracts were executed. To encourage sales with large buyers, a separate selling corporation was developed. This is wholly owned by the cooperative and is authorized to purchase from any source those fruit and vegetable commodities that a buyer needs. It is obligated to sell first all of the commodities of members of the cooperative who are under exclusive contracts.

The Sweet Potato Industry Committee has requested assistance in setting up a bargaining cooperative for the sale of sweet potatoes to processors and in coordinating the activities of similar statewide groups in Virginia, Maryland and New Jersey. Due to the interstate nature of the program, Farmer Cooperative Service, United States Department of Agriculture, has been asked to develop the necessary contract forms, Certificate of Incorporation and by-laws for the tri-state bargaining cooperative. As there is a possibility that this cooperative will be incorporated in New Jersey, all contracts, incorporation forms and by-laws were reviewed as to compliance with New Jersey statutes.

Bargaining cooperatives for the sale of processing vegetables have had only limited success in New Jersey. This is partly due to the fact that only a portion of the supply of some commodities used by processors is grown in New Jersey. Successful bargaining cooperatives, such as the Sour Cherry Cooperative Association, control the major proportion of the supply. The sour cherry cooperative covers the industry in all of the states adjacent to the Great Lakes. The Tri-State Sweet Potato Bargaining Cooperative recognizes this factor and will specify that no contracts can be in force until at least 70 per cent of the acreage in Virginia, Maryland and New Jersey are signed up.

The American Agricultural Marketing Association, a bargaining cooperative subsidiary of the American Farm Bureau Federation, is attempting to set up State cooperative bargaining associations that could, with the American Agricultural Marketing Association, develop unilateral contracts in contiguous production and processing marketing areas.

The New Jersey Farm Bureau is attempting to participate in this program, either through a realignment of its objectives and activities or through a subsidiary cooperative incorporated for this purpose under the control of the New Jersey Farm Bureau.

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A thorough analysis of their objectives and the degree of control they seek suggests that they could not incorporate under the New Jersey Cooperative Law, because it does not afford the degree of flexibility required for their operation.

Coordinated egg marketing under a central sales agency operating for the benefit of egg marketing cooperatives has been thoroughly discussed during the past year and a half. Although the premise of fewer and larger sales agencies to match effectively the fewer and larger buyers is accepted, it appears that an insufficient number of local cooperatives are willing to be a part of such a program at this time.

Final stages of discussion were reached and by-laws were accepted in principle by the steering committee of the organization to develop a central sales program. At that point, the steering committee approved a motion that the central sales agency could not be effective unless it controlled the "State Seal of Quality" for identification of high quality eggs produced in New Jersey. A ruling by the Attorney General's office indicated that this could not be exclusive control, because the "State Seal of Quality" is owned by the Department and the rules and regulations for its use are to be promulgated by the State Board of Agriculture.

Copies of minutes of the many meetings, the by-laws developed by the steering committee, the committee reports on financing, divisions of responsibilities for the central agency and the local cooperatives, representation on the central sales board and other pertinent information are being retained for future use if the idea is again revived.

Market News

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

Weekly summaries include the Weekly Market Review, and the New Jersey Truck Crop News. The Weekly Market Review is a digest of the prices of grains, feed ingredients, hay, straw, eggs, fruits and vegetables, poultry and livestock at the terminal markets, as well as prices of egg, poultry and livestock at the country farmer-owned auction markets. The review includes a statistical summary which compares present prices with those of the previous week and those of the same date a year ago.

New Jersey Truck Crop News contains spot news on seasonal vegetables and fruits. The Trenton Weather Station of the Department of Commerce, the Crop Reporting Service of the United States Department of Agriculture and this Department prepare the material cooperatively.

The Auction News is an informative advertising and reporting publication distributed mainly to buyers and large receivers and is prepared by personnel of the Bureau. The member associations of The Cooperative Marketing Associations in New Jersey, Inc., pay the cost of the paper used and the mailing expense.

Three years ago as large buying interests accelerated the shift to country shipping points for their supplies, an f.o.b. country shipping point reporting service for fruits and vegetables was inaugurated to report the generally higher prices and the better marketing conditions in the country.

This service is now maintained by the Department but was financed partly by the Federal government under the matched funds program during the first year as a research project to determine its value. A similar service has been requested for poultry and eggs.

New Programs

During the past year, the Division of Markets, New Jersey Department of Agriculture, and the Federal-State Fruit and Vegetable Market News Service, Philadelphia, Pa. cooperated on two new programs.

The first was the issuing of 1960 New Jersey and Pennsylvania crop summaries. Four booklets (approximately 150 pages) were developed in which the following commodities were summarized for New Jersey: Asparagus, cabbage, corn, tomatoes, blueberries, peaches, strawberries, snap beans, beets, cucumbers, eggplant, lettuce, onions and peppers. For Pennsylvania, cabbage, corn and tomatoes were summarized. These reports present a past history of marketing conditions and prices, thus providing growers and shippers with a foundation on which current season sales and shipments can be based. Variables such as weather conditions and crop volume must, of course, be taken into consideration.

Included in these summaries are tables on distribution of each crop into 38 of the large terminal markets or supply centers throughout the country; daily national supply situations in these 38 cities; terminal market prices and New Jersey and Pennsylvania f.o.b. country point prices plus other useful statistics. Some commodities that are sold primarily over the auction blocks in New Jersey are so reported.

Beginning with the New Jersey asparagus season, a new report entitled Special New Jersey and Pennsylvania Fruit and Vegetable Report has been issued daily. The expanded two-page report contains selling prices on New Jersey auctions and market conditions and prices for sales made on an f.o.b. basis for New Jersey and Pennsylvania. Also included are f.o.b. information from competing areas, daily terminal market prices and weather conditions, and total supplies from each state unloaded daily in 41 cities. This later item is of particular interest to growers and shippers in New Jersey and Pennsylvania as it indicates the source of supply and extent of competition from each state. This report is designed to provide farmers, brokers and buyers with current market information so they are kept informed as to present and changing market conditions.

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In the near future, a telephone answering service will be installed in Southern New Jersey, enabling buyers and sellers to obtain the latest f.o.b. prices, terminal market quotations and other information important to intelligent marketing of their produce.

Promotion and Advertising

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

This program is carried out in cooperation with the Division of Information and through the use of the Farm Products Publicity Fund. The Cooperative Marketing Associations in New Jersey, Inc. has borne about half of the cost of this advertising through payment into the Farm Products Publicity Fund. The Division of Information has contributed to the balance of the cost through the use of certain funds made available to them from the Department of Conservation and Economic Development. The goal is to keep information on New Jersey farm products continually before the buying public.

BUREAU OF POULTRY SERVICE

The activities of the Bureau include the administration of the National Poultry and Turkey Improvement Plans which entail the selection and blood testing of breeding stock, the inspection of hatcheries to maintain specific sanitary practices, and supervision of the movement of eggs, baby chicks and poults under the regulations governing the two plans.

Official standards for eggs are applied under the Department's "State Seal of Quality." Firms which use the State seal identification on egg cartons or cases must be licensed to do so. The product must conform to the official standards for quality and the weight designated on the container. Bureau personnel make periodic visits to these licensees to supervise the packaging of eggs under this program.

The New Jersey Fresh Egg Law and the Source Identification Law are assigned to the Department for enforcement. The Bureau of Poultry Service conducts all inspections and investigations in the enforcement procedure.

The Bureau of Poultry Service is called upon to assist wherever necessary with marketing problems affecting the poultry industry. Services can no longer be limited for the sole benefit of the producer. The assignment of laws to be enforced requires that attention and consideration be given to all aspects of marketing. Thus, service is rendered to the consumer, retailer, dealer or distributor, and the producer.

The economic reverses experienced by New Jersey egg producers during the past five years have depleted the number of poultrymen in this State. This reduction has occurred in relation to the individual's ability to weather financial reverses.

According to the Crop Reporting Service there were 9,593,000 layers on New Jersey farms in June 1961, compared with 9,952,000 in June 1960. This

is a 4 per cent decrease and almost one-sixth below June 1959. Laying flocks throughout the nation averaged 278,991,000 layers during June 1961, compared with 282,057,000 in June 1960, a decrease of 1 per cent.

A recurrence of adverse economic conditions in the egg market late in the year was met with considerable soberness. There appeared among the producer groups a noticeable awareness that New Jersey eggs cannot be sold by name alone but that fine quality is the first requirement in securing a market outlet.

Poultry Standardization

This program originated as a service to the poultry industry of New Jersey in 1923 and was administered entirely under rules and regulations established by this Department. In 1935 there came into existence, as the result of united effort by a majority of the states, a National Poultry Improvement Program which was quite similar to the State program. The objective was uniformity of such standardization work. Later, in 1943, a program applicable to turkeys was added; these services are now referred to as the National Poultry and Turkey Improvement Plans. This is, therefore, the 38th year of Department service to the poultry industry of New Jersey in poultry standardization work and the 26th year of such service under the identity of the National Program.

During the past year the Bureau certified 454,540 birds from 154 flocks in 17 counties with 52 hatcheries cooperating. The number of birds in participating flocks was 14.9 per cent less than the 1959-60 total of 534,094 birds in 177 flocks. Production of chicks and poults in the State-supervised hatcheries was approximately 16,450,000. About 125,000 turkey poults were produced under State supervision.

Seventy-two privately-employed workers were certified as flock selectors and 76 as pullorum-typhoid testing agents working in various phases of the N.J.-U.S. National Poultry and Turkey Improvement Plans. The State inspector and the one seasonally employed assistant are supported by fees paid by participants.

Department personnel selected and blood-tested 273,357 birds (59.5 per cent of the total) and 186,329 birds were handled by field agents. The agents were assisted and their work closely supervised and found satisfactory by the Bureau of Poultry Service inspector and a member of the Division of Animal Industry staff. Selecting agents operated in two breeding stages, Approved and Certified. Testing agents operated in the Pullorum-Typhoid Clean stage.

The average participating flock numbered about 3,000 birds last year compared with the 1,250-bird flock average of 10 years ago. The participating hatcheries' total capacity in New Jersey is 8,050,890 eggs per setting. This is about 83 per cent of the total hatchery capacity for New Jersey. The average participating hatchery capacity is 154,800 eggs per setting.

The trend since 1953 toward fewer hatching egg flocks, hatcheries and breeders in New Jersey continued in 1960-61. There are 22 (one less than last year) New Jersey hatcheries that have franchise breeding contracts with 17 (two more than last year) out-of-state breeders.

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The breeding and health classifications used were:

Breeding Stages

Pullorum-Typhoid Classes

N.J.-U.S. Certified

N.J.-U.S. Pullorum-Typhoid Clean

N.J.-U.S. Approved

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

POULTRY TABLE 1

N.J.-U.S. Improvement Plans	Number in 1960-61	Number in 1959-60	Per Cent Change
Number of flocks cooperating	154	177	-13.0
Total number of breeders	454,540	534,094	-14.9
Number of hatcheries cooperating	52	57	- 8.8
Hatchery capacity cooperating	8,050,890	9,188,990	-12.3
Hatchery capacity in New Jersey	9,705,000	10,688,900	- 9.2
Number of birds in pullorum-typhoid classes only	168	154	+ 9.1
Number of birds in Approved stages	372,115	475,446	-21.7
Number of birds in Certified stages	82,257	58,494	+40.6
Percentage of birds reacting to the pullorum-typhoid test	0.0057	0.0033	+72.7
Number of flock inspections	129	168	-23.2
Number of hatchery inspections	49	54	- 9.3

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

White Leghorns accounted for 67.4 per cent of the total of all varieties enrolled in the State program. Incross mated numbered 12,054. New Hampshires numbered 1,652; Rhode Island Reds, 4,398; Barred Rocks, 1,043; and White Rocks, 5,156. White and buff Cornish continued to grow in popularity to supply males for crossing on other varieties to produce modern meat type chicks.

Participation in the Turkey Improvement Program totaled 9,206 birds in 1960-1961, which is a 36.7 per cent increase from 1959-1960.

Three new agents qualified at the 20th annual school for flock selectors and pullorum-typhoid testers. Instructors from the College of Agriculture cooperated with the Division of Markets and the Division of Animal Industry.

The North Atlantic Regional Conference of National Poultry and Turkey Improvement Plans Supervisors and Inspectors held in Boston, Massachusetts, in June 1961, was attended by two employees of each division, Markets and Animal Industry. Lists of participating breeding flocks and hatcheries, with their official rating, were published in circular form.

POULTRY TABLE 2
CLASSIFICATION AND DISTRIBUTION OF BIRDS UNDER SUPERVISION IN THE
POULTRY STANDARDIZATION PROGRAM

Number of Birds

County	N.J.-U.S. Certified		N.J.-U.S. Approved		Totals
	Number of Flocks	Pullorum- Typhoid Clean	Pullorum- Typhoid Clean	Pullorum- Typhoid Clean	
Atlantic	4	2,545	19,327	...	21,872
Bergen	...	...	...	...	...
Burlington	5	...	6,465	...	6,465
Camden	2	...	376	...	376
Cape May	1	5,762	4,369	...	10,131
Cumberland	42	20,790	93,406	...	114,196
Gloucester	1	3,303	12,402	...	15,705
Hunterdon	27	14,275	44,125	...	58,400
Mercer	8	2,962	39,640	...	42,602
Middlesex	2	...	17,418	...	17,418
Monmouth	20	21,258	37,682	123	59,063
Morris	1	...	697	...	697
Ocean	18	11,362	38,878	...	50,240
Passaic	2	...	266	...	266
Salem	13	...	30,691	...	30,691
Somerset	1	...	16,139	...	16,139
Sussex	6	...	6,126	45	6,171
Warren	1	...	4,108	...	4,108
Totals	154	82,257	372,115	168	454,540

POULTRY TABLE 3
NUMBER OF BREEDERS, BY COUNTIES, BREEDS OR VARIETIES

County	Single Comb White Leghorns	New Hamp- shires	Rhode Island Reds	Barred Rocks	White Rocks	Crosses	In- cross	Others	Turkeys			Totals
									Broad Breasted Bronze	Broad Breasted White	Others	
Atlantic	10,108	...	...	...	...	11,764	...	...	...	...	...	21,872
Bergen	...	...	...	...	...	...	...	...	...	...	...	...
Burlington	5,525	...	685	...	255	...	...	...	...	...	...	6,465
Camden	...	...	...	...	...	...	...	...	167	65	144	376
Cape May	10,131	...	...	...	...	...	...	...	...	...	...	10,131
Cumberland	67,532	...	2,480	...	2,131	37,159	3,479	1,415	...	...	...	114,196
Gloucester	12,024	...	...	...	949	2,732	...	...	...	...	...	15,705
Hunterdon	48,124	658	...	...	...	9,618	...	...	...	...	...	58,400
Mercer	26,657	...	1,141	1,043	...	9,577	...	...	4,184	...	...	42,602
Middlesex	17,418	...	...	...	...	...	...	...	...	...	...	17,418
Monmouth	43,708	...	...	...	416	11,946	2,146	...	...	724	123	59,063
Morris	697	...	...	...	...	...	...	...	...	...	...	697
Ocean	39,746	...	...	...	...	2,706	6,429	...	1,359	...	...	50,240
Passaic	174	...	92	...	...	...	...	...	...	...	...	266
Salem	1,288	332	...	...	1,405	27,666	...	...	...	...	...	30,691
Somerset	16,139	...	...	...	...	...	...	...	...	...	...	16,139
Sussex	2,901	662	...	...	...	...	...	...	...	2,101	507	6,171
Warren	4,108	...	...	...	...	...	...	...	...	...	...	4,108
Totals	306,280	1,652	4,398	1,043	5,156	113,168	12,054	1,415	5,710	2,890	774	454,540
1959-60	370,876	1,167	4,310	2,785	22,364	71,705	53,053	1,098	4,054	1,302	1,380	534,094

Cooperative Marketing

Egg marketing cooperatives which physically handle the eggs of their members, generally referred to as "auctions," are located at Paterson, Hackettstown, Flemington, Mount Holly and Vineland. Each reports to the Department the volume and gross value of its sales. Other cooperatives "bargain" or negotiate contracts with receivers in behalf of their members. These "bargaining" cooperatives are located in the Lakewood-Toms River area, as well as in the Vineland area. Except for one such cooperative, which employs the services of a licensed egg inspector, no reports of the volume handled is made to the Department.

Live poultry sales are conducted by the cooperatives located at Paterson, Hackettstown, Flemington and Mount Holly.

Poultry table 4 shows the total volume and value of sales for the year, as well as a comparison of the price per unit for both egg and poultry.

POULTRY TABLE 4

SUMMARY OF EGG AND POULTRY AUCTION MARKETS

July 1, 1960 to June 30, 1961

Market	Cases of Eggs	Value of Eggs	Crates of Poultry	Pounds of Poultry	Value of Poultry	Total Value
Flemington	164,621	\$2,158,061.01	10,022	445,767	\$84,006.73	\$2,242,067.74
Hackettstown	22,695	303,507.57	4,234	255,358	40,589.69	344,097.26
Mount Holly	34,624	449,493.90	4,780	280,453	38,065.91	487,559.81
Paterson	30,255	396,880.89	2,120	129,335	14,945.52	411,826.41
Vineland	276,668	3,659,109.69	...	...	...	3,659,109.69
Totals	528,863	\$6,967,053.06	21,156	1,110,913	\$177,607.85	\$7,144,660.91

Average price per case, 1960-61 \$13.20

Average price per case, 1959-60 \$11.03

Average price per pound of live poultry, 1960-61 \$0.160

Average price per pound of live poultry, 1959-60 \$0.138

Poultry table 5 provides a comparison of seasonal values on a monthly basis.

POULTRY TABLE 5

AVERAGE PRICE PER DOZEN EGGS ON SIX NEW JERSEY AUCTION MARKETS

Month	1960	For Comparison	
		1959	1939
July	\$0.3913	\$0.3734	\$0.2647
August	.4484	.3561	.2678
September	.5041	.4037	.2948
October	.5176	.3425	.3029
November	.5479	.3617	.3118
December	.5158	.3554	.2453
	1961	1960	1939
January	.4462	.3244	.2372
February	.4662	.3214	.2260
March	.4121	.4197	.2305
April	.3690	.4362	.2218
May	.3512	.3645	.2146
June	.3618	.3574	.2384

The development of the marketing program is traced in Poultry table 6.

POULTRY TABLE 6

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

Year	Number Cases of Eggs	Number Crates of Poultry	Poultry of Pounds	Total Combined Value Eggs and Poultry
1960-61	528,863	21,156	1,110,913	\$7,144,660.91
1959-60	756,047	42,071	1,542,364	8,551,099.31
1958-59	990,802	49,724	2,546,418	12,198,175.14
1957-58	1,036,495	61,634	3,110,486	14,958,559.86
1956-57	1,201,770	83,501	4,237,116	15,143,821.58
1955-56	1,181,742	99,084	4,954,517	18,245,286.84
1954-55	1,348,732	112,629	5,718,722	18,148,548.35
1953-54	1,334,554	116,074	5,869,994	22,068,208.60
1952-53	1,291,951	114,313	5,869,308	23,083,519.57
1951-52	1,180,320	130,754	6,882,213	20,302,196.16
Totals	10,851,276	830,940	41,842,051	\$159,844,076.32

Auction Markets' Egg-Feed Ratio

The egg-feed ratio is the relation between one major cost item and the price received for eggs. It is generally accepted that an egg-feed ratio of 8 dozen = 100 pounds of feed is an indication of egg producer prosperity. On this basis, the months of September, October, November and December were favorable and the months of January and February were marginal in this respect. The lowest monthly average price per dozen, as reported by the Crop Reporting Service, was 35.12 cents and occurred in May. This was 2.97 cents higher than the low for last year.

POULTRY TABLE - 7
NEW JERSEY EGG AUCTIONS - EGG-FEED RATIO

	JULY			AUGUST			SEPTEMBER		
EGGS	1960	1959	1939	1960	1959	1939	1960	1959	1939
Total dozens sold	1,454,310	2,296,440	891,300	1,409,070	2,072,550	900,540	1,373,550	2,088,030	855,660
Total price paid	\$569,145.95	857,462.83	235,920	631,817.38	738,113.17	241,138	692,367.00	842,910.34	252,290
Av. price per doz.	\$ 0.3913	.3734	.2647	.4484	.3561	.2678	.5041	.4037	.2948

FEED										
Av. 100 lbs. scratch	\$	3.65	3.80	1.60	3.55	3.80	1.50	3.50	3.75	1.86
Av. 100 lbs. mash	\$	3.95	4.40	2.18	3.85	4.35	2.16	3.85	4.35	2.02
Av. laying ration	\$	3.80	4.10	1.89	3.70	4.08	1.83	3.68	4.05	1.94

RATIOS									
Doz. eggs required to buy 100 lbs. feed	9.7	10.9	7.1	8.3	11.5	6.8	7.3	10.0	6.6
No. lbs. feed one doz. eggs will buy	10.3	9.1	14.0	12.1	8.7	14.6	13.7	9.96	15.2

	OCTOBER			NOVEMBER			DECEMBER		
EGGS	1960	1959	1939	1960	1959	1939	1960	1959	1939
Total dozens sold	1,270,110	2,341,980	995,430	1,202,730	1,991,550	969,330	1,142,220	1,841,490	1,135,350
Total price paid	\$657,441.47	802,162.50	301,571	658,958.01	720,269.21	302,285	589,137.03	654,498.36	278,465
Av. price per doz.	\$ 0.5176	.3425	.30296	.5479	.3617	.3118	.5158	.3554	.2453

FEED										
Av. 100 lbs. scratch	\$	3.50	3.70	1.78	3.45	3.75	1.77	3.40	3.75	1.83
Av. 100 lbs. mash	\$	3.85	4.25	2.54	3.80	4.30	2.25	3.70	4.30	2.58
Av. laying ration	\$	3.68	3.98	2.16	3.63	4.03	2.14	3.55	4.03	2.20

RATIOS									
Doz. eggs required to buy 100 lbs. feed	7.1	11.6	7.1	6.6	11.1	6.9	6.9	11.3	9.0
No. lbs. feed one doz. eggs will buy	14.1	8.6	14.0	15.1	8.97	14.6	14.5	8.8	11.2

POULTRY TABLE 7 - Continued
NEW JERSEY EGG AUCTIONS - EGG-FEED RATIO

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Poultry feed cost during 1960-1961 averaged \$3.73 per hundredweight, compared with \$4.02 in the 1959-1960 fiscal year.

Based on actual reports and estimates, the average New Jersey hen in 1960-1961 produced 15.99 dozen eggs which earned a gross income of \$7.10. With a feed cost of \$3.73, there is a balance of \$3.37 per bird for all other costs. In 1959-1960 the average hen produced 16.37 dozen eggs, earning a gross income of \$6.02. The feed cost was \$4.02, leaving a balance of \$2.00 per bird for all other costs.

Grading and Inspection Service

The use of official Wholesale Grades for Eggs as a grading service was discontinued shortly after January 1, 1961. The cooperatives at Flemington, Mount Holly and Vineland, which were using these grades, were also converting the same eggs into consumer grades. The consumer grading of eggs requires an adequate yield of desirable quality. For this reason, determining the official wholesale grade of a lot is a duplication of the process performed in the consumer grading of the eggs. In view of this, only that volume handled by these cooperatives during the first half of the fiscal year is counted as having received the benefit of the grading service. This amounted to 236,262 30-dozen cases.

One bargaining cooperative in the Monmouth-Ocean County area continued using the official standards through the services of a licensed egg inspector as part of their program to insure conformity to contract specifications. The volume of eggs so serviced was 162,659 30-dozen cases.

The specifications for eggs purchased for use by New Jersey institutions require that the cases bear the "State Seal of Quality." Under the State seal regulations, the eggs in a container bearing the State seal must conform to the grade designated. Grade inspections are made by sampling the lot at the time of packaging. Spot inspections made at random at the institutions are a means of observing the original lot as it is sub-divided in the process of delivery. The volume of eggs prepared for delivery to the institutions under the State seal was 22,493 30-dozen cases.

As the fiscal year closed, 44 firms were licensed to use the "State Seal of Quality" for the purpose of packaging eggs in one-dozen cartons or in 30-dozen cases for use by hotels, restaurants and institutions. Among these are three firms which employ the full-time services of a Federal employee. This employee is authorized under license issued by the Department to perform official grading for the Department. The total volume of eggs packaged under the "State Seal of Quality" during the year was 633,743 30-dozen cases or 19,012,290 dozens.

Some of our egg inspectors are licensed by the United States Department of Agriculture so that in the case of sickness, vacation or other reasons, they can replace the Federal employee as described above and perform a service for both official agencies. It is a compatible arrangement between the two official departments with neither being committed to the other's regulations except when performing a service for the other.

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Fresh Egg Law Enforcement

The field staff of the Bureau of Poultry Service made 12,471 inspections at retail outlets in carrying out enforcement of the Fresh Egg Law. There were 1,724 violations found, many of which were of a technical nature. Violations amounted to 13.82 per cent, compared with 15.78 per cent last year. Four hundred eleven letters of warning were issued to effect compliance.

Source Identification Law

The enforcement procedure in carrying out the provisions of this law has been to effect compliance through cooperation wherever possible. It has been demonstrated that the courts' schedules are too crowded to enable quick action to be taken on violations. Of the many cases referred to the Attorney General's Office, only one or two lesser cases have been concluded.

The Bureau of Poultry Service staff made 1,064 inspections, of which 357 revealed violations. One hundred eleven letters of warning were issued to effect compliance.

The first registration of egg brands, labels and trade names with the Secretary of Agriculture began in 1960-1961. The owners of 89 brands or trade names have been given permission to use the name, in whole or in part, of the State of New Jersey, or of any county or municipality thereof. Egg carton and egg case brands are being registered. Most of the 89 registrations have covered egg cartons.

A renewed effort to revise the Source Identification Law and the Fresh Egg Law was made and as the year closes a bill to effect a revision has reached second reading in the General Assembly.

Additional Services

Ten egg inspectors were supplied with new egg scales. These are precision instruments that enable the weighing of the individual egg or the dozen. Heretofore, the egg scales used by enforcement personnel were sufficient for approximating egg weight but lacked the necessary accuracy to be acceptable in court.

In addition to using these scales in official grading work, numerous requests have been received from producers and packers to check the performance of the scales they use so that adjustment can be made toward greater accuracy.

DIVISION OF PLANT INDUSTRY

F. A. Soraci, Director

BUREAU OF ENTOMOLOGY

Nursery Inspection

During the fiscal year 1,178 nurseries were inspected for issuance of the nursery certificate of this Department. This represents an increase of 86 nurseries over last year. Infestations requiring control measures to qualify for certification were found in 307 nurseries. The infestations most commonly found were as follows:

Insect	No. of finds
Bagworm, <u>Thyridopteryx ephemeraeformis</u>	65
Holly leaf miner, <u>Phytomyza ilicis</u> ,	
<u>P. ilicicola</u> , <u>P. weidhaussii</u>	64
Oyster shell scale, <u>Lepidosaphes ulmi</u>	58
Andromeda lace bug, <u>Stephanitis globulifera</u>	52
Euonymus scale, <u>Unaspis euonymi</u>	52
Mimosa webworm, <u>Homadaula albizziae</u>	51
Azalea lace bug, <u>Stephanitis pyrioides</u>	37
Pine bark aphid, <u>Pineus strobi</u>	34
Spider mites, <u>Tetranychus telarius</u>	
and <u>Metatetranychus ulmi</u>	31
Scales (misc.)	30
Juniper scale, <u>Diaspis carueli</u>	29
Aphids (misc.)	27
Lace bugs (misc.)	22
Birch leaf miner, <u>Fenusa pusilla</u>	21
Sycamore lace bug, <u>Corythucha ciliata</u>	20
Eastern tent-caterpillar, <u>Malacosoma americanum</u>	18
Azalea leaf roller, <u>Gracilaria azaliella</u>	18
Pine leaf scale, <u>Phenacaspis pinifoliae</u>	15
Spruce gall aphid, <u>Chermes abietis</u>	
and <u>C. cooleyi</u>	14
White pine weevil, <u>Pissodes strobi</u>	14
Mealybug (Taxus), <u>Pseudococcus cuspidatae</u>	14
Pod gall, <u>Dasyneura gleditschae</u>	14
European pine-shoot moth and pine-tip moth,	
<u>Rhyacionia buoliana</u> and <u>R. frustrana</u>	11
Woolly apple aphid, <u>Eriosoma lanigerum</u>	10
Rhododendron lace bug, <u>Stephanitis rhododendri</u>	9
Borers (misc.)	9
Galls (misc.)	8
San Jose scale, <u>Aspidiotus perniciosus</u>	8
Tulip scale, <u>Toumeyella liriodendri</u>	5
Oriental fruit moth, <u>Grapholitha molesta</u>	5

Dealers Certificates

Dealers certificates were issued to 412 dealers in nursery stock, an increase of nine over last year. Before issuance of this type of certificate,

this Department must approve the sources of stock listed on the dealer's application. A certificate is issued only when the Department is assured that nursery stock from these sources is certified.

During the fiscal year, 383 inspections were made of dealer establishments to ascertain the cleanliness of held-over stock.

Special Certificates

Special certificates were issued to 461 residents of New Jersey, shipping plants out of the State, in accordance with special regulations of the receiving states and foreign countries.

Canadian Certificates

A total of 170 special certificates was issued for the movement of plant material to Canada, in accordance with the regulations of that Dominion.

Special Corn Borer Certificates

Fifty-six special corn borer certificates were issued for the shipment of herbaceous plants to states having regulations on account of the European corn borer.

Native Plant Inspections

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

Special Request Inspections

Ninety-one special inspections were made for residents of New Jersey requesting identification and information about the control of insects and diseases affecting their premises.

Domestic Inspections

Nine inspections were made of plant material shipped into New Jersey from other states. These inspections were made as a check on the efficiency of the various state inspection services. No infested material was found.

Gypsy Moth Inspections

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

Winter Nursery Inspection

During the winter months 241 nurseries were inspected for over-wintering insects. When found, infestations were controlled.

Vegetable Plant Inspections

The plantings of two growers of vegetable plants were inspected during April, to facilitate movement to other states requiring such certification.

Post-Entry Quarantine Inspection

During the fiscal year 166 inspections were made of plant materials imported under permit from foreign countries and growing under the supervision of this Department, in accordance with the cooperative program of this Department and the United States Department of Agriculture.

PLANT MATERIAL IMPORTED DURING 1960-61, BY GENUS

Genus of Plants	Number Imported
<u>Acer</u>	1,740
<u>Aesculus</u>	400
<u>Anthurium</u>	250
<u>Azalea</u>	15
<u>Berberis</u>	1
<u>Crataegus</u>	15
<u>Cytisus</u>	300
<u>Daphne</u>	10
<u>Dianthus</u>	10
<u>Euonymus</u>	10
<u>Hibiscus</u>	16
<u>Ilex</u>	10
<u>Juniperus</u>	948
<u>Laburnum</u>	38
<u>Ligustrum</u>	6
<u>Quercus</u>	3
<u>Rhododendron</u>	7
<u>Rosa</u>	76
<u>Sorbus</u>	265
<u>Wisteria</u>	200
Total	4,320

PLANT MATERIAL RELEASED DURING THE YEAR, BY GENUS

Genus of Plants	Number of Plants Originally Imported	Number of Plants Released
<u>Acer</u>	1,826	1,553
<u>Anthurium</u>	4	4
<u>Azalea</u>	15	15
<u>Castanea</u>	3	3
<u>Cytisus</u>	40	31
<u>Daphne</u>	110	110
<u>Euonymus</u>	250	238
<u>Fraxinus</u>	10	9
<u>Hydrangea</u>	100	45
<u>Ilex</u>	1	1
<u>Juniperus</u>	206	93
<u>Laburnum</u>	203	126

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Genus of Plants	Number of Plants Originally Imported	Number of Plants Released
<u>Rhododendron</u>	240	207
<u>Rosa</u>	60	52
<u>Sorbus</u>	<u>33</u>	<u>33</u>
Totals	3,101	2,520

Blueberry Plant Certification

This program calls for the certification of blueberry plants and cutting wood based on spring and fall inspections of cutting beds, nursery plants and a sufficient number of mother plants to supply healthy cutting wood.

During the calendar year of 1960, 20 growers entered plantings for certification. After completion of the fall inspection, 52,062 mother plants, 1,397,502 nursery plants and 2,465,425 rooted cuttings were certifiable. Only 35 plants were found to be infected; 13 with stunt disease, 20 with mosaic and two with shoestring fungus.

Red Stele Disease of Strawberries

During March and April, 1961, 110 acres of strawberry plants were inspected for 32 growers as follows:

County	No. Growers	Acreage
Atlantic	10*	32.25
Burlington	1*	10.00
Cape May	2	2.50
Cumberland	7	27.25
Gloucester	2	4.00
Hunterdon	1	1.00
Mercer	4	17.50
Middlesex	1	10.00
Monmouth	<u>4*</u>	<u>5.50</u>
Totals	32	110.00

* Four growers with 5.75 acres rejected.

At the completion of this project, the plantings of 30 growers, totaling 104.25 acres, were certifiable.

Virus-free Strawberry Plant Certification

The spring of 1961 was the third year that these superior plants were made available to strawberry growers in New Jersey and in other states.

A total of 1,389,000 "Registered" plants was certified and sold as follows:

Jerseybelle	-	1,138,000
#157	-	121,000
Midland	-	65,000
Sparkle	-	65,000

A total of 1,870 "Foundation" plants was released by the New Jersey Experiment Station for increase during the summer of 1961, as follows:

Jerseybelle	-	650
#157	-	650
Midland	-	420
Sparkle	-	150

In addition, the following "Registered" plants were planted for increase:

#157	-	10,000
Jerseybelle	-	9,000
Midland	-	4,000
Sparkle	-	1,200

Bee Culture

During the fiscal year frame by frame inspections were made throughout the warm months in 20 of the 21 counties of New Jersey. In order to locate and eradicate American foulbrood, scouting for new and abandoned apiaries was conducted during the winter months. Where dead colonies were found, the equipment was inspected for signs of contagious bee diseases.

A total of 584 apiaries was visited and 6,489 colonies were inspected. This is an increase of 1,400 colonies inspected over last year. The incidence of American foulbrood was less than half that of last year.

Four hundred forty-eight apiaries were owned by registered beekeepers and 136 by new beekeepers. The registered beekeepers maintained 5,684 colonies of bees and the new beekeepers operated 805 colonies. A total of 326 nuclei was inspected, most of which were found in queen-rearing apiaries.

Seventy-three apiaries containing 181 colonies were found to be infected with American foulbrood. Of the infected colonies, 16 were found in seven new apiaries. A total of 65 colonies was burned by the inspectors in comparison with 176 colonies last year.

Thus, 2.9 per cent of all the colonies of bees inspected were infected with American foulbrood. In fiscal 1959-1960, 7 per cent of the colonies inspected were infected with American foulbrood. This reduction in the incidence of American foulbrood resulted from previous work done in commercial apiaries in the southern part of the State.

European foulbrood is a common disease found in the southern section of New Jersey. The causal organism is Bacillus pluton. During this fiscal year 32 apiaries contained 76 infected colonies.

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Cool and dry weather conditions during July, August and early September resulted in reduced nectar secretion in the northern part of the State. The nectar flows in the southern areas were excellent. Prevailing cool temperatures for several days during October forced the discontinuation of brood nest inspection. Apiaries previously inspected and found infected with American foulbrood were rechecked to ascertain whether owners had disposed of them as recommended by this Department. Fifteen colonies were burned as a result of these reinspections. Warm temperatures in November permitted the opening of colonies to inspect the brood nest. The warmer weather also gave colonies a chance to adjust their stores of honey and pollen for the long cold winter ahead.

December, January and February were very cold months. Because of heavy snowfalls, top entrances played an important part in successfully wintering colonies of bees. This winter many colonies were restricted too long inside the hive and there was high mortality. In some cases, the cold weather prevented the clusters of bees from moving to areas of food and pollen.

Adverse weather conditions during March and April retarded brood rearing. Many colonies died from starvation due to the lack of a new supply of honey and pollen.

In May and June, when new sources of nectar and pollen were available, colony build-up was very rapid. Many colonies swarmed because of lack of room. Nectar secretion was below average because of the previous adverse weather conditions.

Gypsy Moth Control

The various operations of the gypsy moth control program coincide with the life history of the insect. A trapping survey is conducted from mid-June to early September when the adult male moths are in flight. A scouting survey is performed from late September to mid-April when the pest is in the egg stage. Control operations are carried on from early April to late May when the moth is in the larval stage of development. Quarantine operations are conducted throughout the year during the four life stages of the moth.

The cooperative State-Federal trapping survey started on June 15. Thirty-five hundred sex-attractant traps were placed throughout Sussex, Warren, Morris and Bergen counties and the northern portions of Hunterdon, Somerset and Passaic counties. A ring of traps was also placed in the vicinity of Bordentown in Mercer and Burlington counties. In addition, 10 traps were placed around Pomona Air Field in Atlantic County.

The traps were placed on a seven-eighths mile grid throughout the area, except that locations with a past history of infestation or moth catches were trapped on a seven-sixteenths mile grid. Trap placement was completed on July 15 and the trap patrol on a 10-day interval was immediately begun. No male moths were captured throughout the survey. Trap removal was begun on September 7 and extended into the last week in October.

The scouting survey for gypsy moth egg masses was begun on December 27. Visual examination of all standing vegetation was conducted within the surveyed areas. The survey was completed on March 17. A total of 2,275 acres was scouted in the vicinity of the two 1959 attracting trap sites near Montague, Sussex County. Scouting was also conducted on 1,610 acres in Bergen County near Montvale, in an area adjacent to a 1960 attracting trap site in Pearl River, New York. No gypsy moth egg masses were found in the 3,885 acres scouted.

SUMMARY OF BEE INSPECTIONS

1960 - 1961

County	Apiaries		Colonies		Nu- clei	Crossed Comb	American foulbrood				European foulbrood				Colonies Burned	Microscopic Determination		
	Regis- tered	New	Regis- tered	New			Apiaries		Colonies		Apiaries		Colonies					
							Regis- tered	New	Regis- tered	New	Regis- tered	New	Regis- tered	New				
Atlantic	20	2	576	8	...	...	8	...	13	...	9	...	19	...	4	...	...	...
Bergen	27	6	234	53	...	...	4	1	7	3	...	...	...	...	5	...	...	1
Burlington	20	16	381	132	...	...	8	...	14	...	2	...	5	...	...	7	...	1
Camden	22	2	287	5	...	...	3	1	19	2	1	...	1	...	10	11	...	1
Cape May	40	2	422	10	103	1	4	...	5	...	4	...	18	...	2	1	...	...
Cumberland	15	11	258	55	...	41	1	...	1	...	1	...	2	...	...	...	1	...
Essex	8	3	54	14	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Gloucester	25	18	224	115	...	16	2	...	2	...	3	1	3	1	...	1	1	2
Hunterdon	58	9	741	43	223	...	5	...	10	...	...	...	...	...	7	...	...	...
Mercer	24	5	335	25	...	6	2	...	9	...	2	...	6	...	...	...	...	4
Middlesex	15	3	186	6	...	...	3	...	8	...	1	...	3	...	1	...	...	...
Monmouth	30	8	366	69	...	...	3	...	4	...	6	...	16	...	...	4	3	1
Morris	35	17	282	63	...	7	7	2	17	6	...	...	...	...	9	3	...	1
Ocean	1	2	17	10	...	8	...	...	...	...	...	...	...	...	...	...	1	...
Passaic	3	3	17	12	...	...	2	1	5	1	...	...	...	...	5	...	...	...
Salem	30	...	329	...	...	16	5	...	12	...	2	...	2	...	4	1	...	...
Somerset	11	2	164	10	...	...	2	...	12	...	...	...	...	...	...	...	...	...
Sussex	14	7	228	93	...	...	1	...	1	...	...	...	...	...	...	3	...	...
Union	8	8	51	34	...	...	...	1	...	1	...	...	...	...	...	...	...	4
Warren	42	12	532	48	...	61	6	1	26	3	...	...	...	...	18	...	...	...
Totals	448	136	5,684	805	326	156	66	7	165	16	31	1	75	1	65	31	6	16

Certificates of transfer issued: 14

Queen-rearing certificates issued: 7

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Quarantine enforcement was directed toward evergreen material moving from regulated areas into New Jersey during the Christmas season. Three hundred sixty-four retail and wholesale dealers in evergreen material were contacted in regard to proper certification of regulated materials. All of the dealers were well aware of the regulations and all materials were certified.

Two traffic checks were provided in cooperation with the New Jersey State Police on Route 17. The first check, held at night on December 1, failed to reveal any movement of evergreen material. The second check held during the day of December 7 met with considerable success with a total of 14 trucks being stopped. All materials originating within the regulated area were accompanied with proper certification.

European Chafer

The European chafer, Amphimallon majalis, an insect of economic importance was found on Governors Island, Bedloes Island and Brooklyn, New York in the spring of 1959. A survey was immediately conducted in Bergen, Hudson, Essex, Union and Middlesex counties during June and July but with negative results.

Again in 1960 a State-Federal detection survey was conducted, primarily in Hudson County. The 1960 survey was started during June. Visual observations and black-light traps were used.

On June 24, 1960, the first European chafer was collected in New Jersey. By the time the survey was terminated on July 13, chafers had been found at six locations, all in the Bayonne-Jersey City area of Hudson County. There were no light trap catches.

Based upon the catches in the 1960 survey, a cooperative State-Federal control program was initiated to include all known areas of infestation. The tentative program called for soil treatment of approximately 2,400 acres. Ten per cent granular dieldrin at the rate of 30 pounds to the acre was to be used. The method of treatment was divided into two types, hand and aerial.

The hand treatment portion of the program was begun on April 20. A crew of six men, equipped with four hand seeders, treated all residential land within the control area. This was completed on May 12. A total of 8,750 pounds of insecticide was applied by hand to approximately 473 acres of residential land.

Aerial treatment was started May 25 and completed on May 31. The insecticide was applied by helicopter to open and industrial land within the control area. A total of 57,150 pounds of insecticide was applied by helicopter to 1,960 acres of open and industrial land. Included in this acreage was a strip of New Jersey Turnpike right-of-way of approximately 80 acres, treated at Turnpike expense.

A survey, started in June, 1961, showed that chafers were present at locations immediately to the north and south of the residually treated area. These new sites were mist-blown to reduce hazard of spread and will receive residual soil treatment following completion of the survey.

White-Fringed Beetle Control

The summer of 1960 marked the sixth year since the finding of the white-fringed beetle near Vineland, the fifth since treatment was applied to 350 acres

of farm and woodland, and the third that concentrated surveys revealed no adults or larvae in the treated area.

During July, August, and early September, 1960, a thorough search was made for adult beetles in the 350-acre control area and other vital points. The work was conducted to give maximum coverage and efficiency. The form of the inspections was varied according to conditions, consisting of close and regular inspection and row-by-row inspection. Close and regular inspections were commonly used at nearby vegetable auction houses, packing plants, produce companies and railroad right-of-ways. Major survey efforts were conducted in Atlantic and Cumberland counties.

In view of continued negative survey results in January, 1961, the State of New Jersey removed quarantine restrictions involving formerly infested properties. Surveys will be continued for several years.

Japanese Beetle Quarantine Enforcement

The cooperative Federal-State Japanese beetle program has two major phases: certification services to plant shippers and summer regulatory activities. Certification is a year-round operation regulating the shipment of plant materials to points outside the area of Japanese beetle infestation. Summer regulatory measures are designed to control the spread of adult beetles by carriage on vehicles and hazardous materials.

A total of 2,207,333 plants was certified as a result of treatment or through inspection. In addition, 537 cubic yards of potting soil and 217 acres of surface soil were treated. The estimated value of all materials certified was \$1,573,638. In the performance of this work, 2,195 calls were made to commercial establishments and private individuals. Help was extended to growers interested in employing newer and less costly techniques to meet certification requirements.

The summer quarantine regulations become effective only when and where Japanese beetle activity makes hazardous the movement of commodities, vehicles or aircraft into beetle free areas. Under this arrangement no certificates are required for farm products. This modification, which was instituted in 1958, makes it possible for inspectors to give more attention to locating and appraising infestations and related hazards of pest spread. It also allows, generally, for produce grown in this area to move unrestricted to points outside the Federally regulated area.

All major shipping points throughout the State, such as airfields, auction produce markets, trucking and railroad centers, were scouted. One hundred five shipping points were scouted and observations were made at 15 airfields. Regulatory measures were required at three area airports. Wherever conditions warranted, mist blowing with DDT emulsion was utilized to reduce the hazard of spread. During the course of the program, 938 acres receive treatment.

The residual soil treating of area airports was stepped up during the past year with the completion of McGuire Air Force Base and Newark Airport. It is proposed to treat Teterboro Airport during the fall of 1961, as well as lands of Fort Dix which are adjacent to McGuire Air Force Base.

Golden Nematode

Since 1948 this Department has cooperated with the Plant Pest Control

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Division of the United States Department of Agriculture in yearly surveys of the potato growing areas of New Jersey for the golden nematode, Heterodera rostochiensis.

During the summer months of 1960, 1,356 soil samples, representative of 5,811 acres, were collected. No specimens of golden nematode of potato were recovered.

Red Pine Scale

During November, 1960, a request for inspection of some red pine stands on the North Jersey District Water Supply Commission lands resulted in the discovery of a new insect, red pine scale, Matsucoccus resinosae, in New Jersey. This insect, already infesting parts of New York and Connecticut, poses a serious threat to all red pines in the State.

An exhaustive survey, conducted throughout every red pine stand on the watershed, revealed that a total of 178 acres of red pine was infested.

The only known control measure for this insect is the removal of the trees. A tree removal program was initiated on the watershed during February, 1961. The Commission was granted permission to sell the wood with the stipulation that the wood would be sprayed with a 2 per cent oil emulsion before it left the watershed.

Steps were taken to establish a cooperative program between the State of New Jersey, the United States Forest Service and the North Jersey District Water Supply Commission. It was agreed that the three agencies would share equally in the cost of the project. Approximately 45 acres of red pine have been cut to date.

Continued survey on lands surrounding the watershed revealed additional infestations. Two of the infestations were found on lands adjoining the watershed to the north. Both property owners were notified of the situation and the removal of trees was immediately begun. One owner has removed all the pines; the other owner has cut down approximately one-third of the trees.

Additional survey to the east revealed an infested red pine in the backyard of a home in Demarest. The owner was notified and immediately cut the tree down.

Another infestation of red pine scale was discovered in the vicinity of Mahwah. The infested pines are in a two-acre stand and in a series of roadside plantings in the area. Approximately 24 property owners are involved. No control work had been initiated as of June 30.

BUREAU OF SEED CERTIFICATION

Grain Seed Certification

The American farmer is becoming more and more quality conscious in his seed-buying habits. Producing for a highly competitive market, he must start with high quality seed for maximum production of crops in greatest demand.

Seed certification recognizes that top quality of any crop depends to a large degree upon the genetic composition of the seed. Field inspections and

Carefully planned seed production under the New Jersey certification program assures the producer of the highest genetic quality seed possible. Besides genetic composition, other important factors are tolerances for diseases, insects and weed infestations.

Barley

In recent years the supply of New Jersey certified barley seed has been limited. This year, the total acreage entered for certification was increased by 375.75 acres or 44 per cent. This large increase, combined with excellent weather and no rejections during bin inspection, caused an oversupply of seed. A total of 28,411.5 bushels was sealed, of which approximately 12,000 bushels were sold for feed and malting purposes.

A total of 171 acres or 19 per cent was rejected during field inspection for disease and inseparable weeds. The Early Wong variety, not being officially released by the New Jersey Agricultural Experiment Station, was withdrawn from certification. To produce foundation seed, 12 acres of Early Wong were rogued to remove off-types and the harvested seed was hot water treated for smut control. The official release of this variety is expected in 1961.

Inspections conducted during the flowering period verified that the hot water treatment of the regular Wong seed had controlled the loose smut disease.

Dry weather in the early spring hastened maturity and seed harvest started on June 18. Ideal conditions prevailed and the entire crop was harvested by June 29. This early harvest resulted in high germinating seed. The rapid maturity caused light test weight, averaging 45 pounds per bushel.

New Jersey certified barley sales were increased by 8,442 bushels, primarily due to increased sales outside of the State. Two railroad cars of seed were sent to Michigan and seed was distributed in Pennsylvania, New York, Delaware and Maryland.

The following is a summary of the 1960 winter barley program:

Variety	Acres Entered	Acres Rejected Field	Bin	Acres Passed	Bushels Sealed
Wong					
Registered	46.50	8	...	38.50	2,600
Certified	757.50	101	...	656.50	25,226.50
Carry-over	...	...	...	...	510
Early Wong					
Registered	8	8	...	...	...
Certified	54	54	...	...	...
Hudson	3.75	...	...	3.75	75
Totals	869.75	171	...	698.75	28,411.50

Wheat

The certified wheat program suffered a setback when 67 per cent of the acreage was rejected. A total of 986 acres was entered for certification, an increase of 124 acres. The Pennoll variety which had been relatively resistant to loose smut disease, showed large increases of infection. Diseased plants

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increased in some lots from 200 to 1,600 per acre. To control this disease, all certified wheat will be produced under a limited generation program. Three classes of seed will be available: Foundation will be the progeny of hot water treated seed; registered, the progeny of foundation; and certified, the progeny of registered seed.

Varietal mixture in the Dual wheat resulted in the rejection of the entire 129 acres from certification. The planting stock was obtained from sources considered to be reliable. However, this seed contained varietal mixtures as high as 0.50 per cent. No Dual wheat will be certified in New Jersey until a pure source of seed is established.

Several lots infected with Gibberella fungus, a scab disease, were rejected for low germination. Observations indicated that seed produced on land previously cropped with corn had a greater scab infection.

The 11,069.5 bushels of wheat certified represent approximately 50 per cent of the normal demand.

The following is a summary of the 1960 certified wheat program:

Variety	Acres Entered	Acres Rejected Field	Bin	Acres Passed	Bushels Sealed
Pennoll					
Registered	8	...	...	8	333
Certified	736	385	81	270	9,291
Seneca					
Registered	1	...	...	1	211.50
Certified	112	32	38	42	1,234
Dual					
Registered	17	17	...	...	...
Certified	<u>112</u>	<u>112</u>	<u>...</u>	<u>...</u>	<u>...</u>
Totals	986	546	119	321	11,069.50

Oats

Two varieties (Norline, a winter oat, and Beedee, a spring oat) were entered for certification.

The winter oat program is being built around the recently released variety Norline which is more winter-hardy than other varieties previously in use. A total of 48 acres was entered for certification, of which 38 acres were finally accepted. This new variety has been widely received and orders have been confirmed for next year. This was the first release of a winter oat variety in New Jersey since the inception of a small grain breeding program. The acceptance by the farmers of this superior variety is encouraging.

It has been several years since a spring oat has been entered for certification. Beedee oat has shown promise of being a superior variety in Experiment Station trials. It was evident during the growing season that Beedee is just as susceptible to yellow dwarf disease as other varieties. Therefore, the production of spring oats in New Jersey will probably remain small.

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The following is a summary of the 1960 oats program:

Variety	Acres Entered	Acres Rejected	Acres Passed	Bushels Sealed
Norline (Winter)	48	10	38	2,320
Beedee (Spring)	<u>10</u>	<u>...</u>	<u>10</u>	<u>660</u>
Totals	58	10	48	2,980

Field Corn

The demand for New Jersey hybrids continued to increase. A total of 531 acres was entered, compared with 437 acres the previous year.

New Jersey No. 8 was produced using a male sterile ear parent and a restoring pollinator. This hybrid did not have to be detasseled, thereby eliminating much labor and the possibility of rejection because of improper detasseling. A pilot planting of five acres of New Jersey No. 9 was also produced in this manner. Producing New Jersey No. 9 using a restorer factor is more difficult than producing New Jersey No. 8 in that manner, because a split planting is necessary. The ear parent silks approximately four days before the pollen is shed; therefore, the pollinator must be planted four days before the ear parent.

This year was one of the few when no rejections were necessary during field inspection. Weather conditions were favorable and the tassels emerged uniformly.

The following is a summary of the 1960 field corn program by acreage:

Hybrid	Acres Entered	Acres Rejected	Acres Passed
New Jersey No. 8	187	...	187
New Jersey No. 9	265	...	265
New Jersey No. 10	39	...	39
New Jersey No. 11	15	...	15
Connecticut No. 554	<u>25</u>	<u>...</u>	<u>25</u>
Totals	531	...	531

During mid-September Hurricane Donna caused heavy damage to corn fields. Much of the corn was blown down which made harvest slow and difficult. Heavy rains caused many ears to mold and sprout.

Damage to the crop by blackbirds is increasing each year. Their feeding on the ear tips allows water to penetrate the ear which causes moldy kernels. New Jersey No. 8 and New Jersey No. 9 seem to be very susceptible to this type of damage because the husk is not tight to the ear. New Jersey No. 10 shows little molding even though the percentage of bird damage seems to be the same as in the other hybrids.

The following is a summary of the field corn seed certified in 1960:

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Hybrid	New Crop		Carry-over		Bushels Sealed
	Flats	Rounds	Flats	Rounds	
New Jersey No. 8	4,595	121	579	...	5,295
New Jersey No. 9	6,302	303	165	1	6,771
New Jersey No. 10	1,494	92	46	...	1,632
New Jersey No. 11	626	46	...	...	672
Connecticut No. 554	660	33	...	...	693
Totals	13,677	595	790	1	15,063

Large portions of some lots had to be discarded after drying. High percentages of moldy kernels and angoumois grain moth damage did not show up until this time. The seed from 50 to 75 acres was lost during the hand picking operation. The seed producers are being urged to do more spraying for insect control. However, complete control of insects is difficult because of the long time the corn remains in the field.

High labor cost during the hand picking operation has caused some discouragement among the farmers. New machinery which may be used in place of hand labor is being investigated.

The pollinator of New Jersey No. 9 (J47 x C103) has consistently yielded more than the ear parent. At harvest inspectors collected 100 ears of New Jersey No. 9 pollinator. After drying and shelling, the kernels were graded over various size screens to determine the percentage of large and medium size kernels. This seed was too large when presently recommended screens (over 21 large; 18 to 21 medium) were used, having a grading percentage of 48 per cent large flat and 29 per cent medium flat. When the screens were changed so that over 24 was large and 20 to 24 was medium, the grading percentage was 15 per cent large and 67 per cent medium.

The following are the advantages of producing New Jersey No. 9 by using (J47 x C103) as the ear parent:

1. An increase yield of seed per acre.
2. Less damage and loss due to mold and sprouted kernels.
3. Shorter seed kernels which make a more uniform package.
4. More corn standing at harvest because of less stalk rot.

The following are the disadvantages of producing New Jersey No. 9 using (J47 x C103) as the ear parent:

1. The seed kernel is red in color instead of the present yellow color.
2. The seed ears retain more moisture at harvest, increasing drying time.
3. All ear parent seed will have to be produced locally. None can be purchased from the West.

The possibility of producing New Jersey No. 9 by this method was presented to the Board of Directors of the New Jersey Crop Improvement Association. They ordered that a small planting, up to 10 acres, be produced in this manner for observation.

Sweet Corn

During the period of this report the New Jersey sweet corn seed program

made two major advances. First, it was recognized that an improvement could be made in New Jersey hybrids for uniformity in maturity. Secondly, the sweet corn industry in New Jersey and the eastern seaboard discovered New Jersey certified seed as a source of quality.

The greatest problem that confronted the sweet corn program was to ascertain reasons why some of the commercial fields during the 1959 season were non-uniform in their maturity. Every aspect of seed production was scrutinized. Genetic factors, as well as seed handling and seed treatment, were considered as an area where damage to the seed was occurring or improved seed handling procedures could be applied.

The Farm Crops, Plant Pathology and Entomology Departments and Seed Laboratory of the New Jersey Agricultural Experiment Station cooperated in attempting to solve the reason behind the malfunction of the seed. From all sources came recommendations for methods to improve seed quality. Better selection of inbreds, improved seed treatment, modification of seed processing equipment to reduce mechanical damage, as well as improved laboratory test procedures, were the results of the intensive program to improve uniformity of maturity.

Very careful field observations were made of New Jersey hybrids in the important sweet corn growing areas. More than 90 per cent of the farmers who used New Jersey hybrids were satisfied and intend to increase their use of this seed. Many letters were received from Maryland, Pennsylvania, New York and Maine indicating the advantage of the New Jersey seed. It takes several years to establish a new variety in the farm area and fresh market trade. New Jersey hybrids will soon be in position for national recognition.

One new hybrid was introduced in 1960. New Jersey No. 316 was produced on a limited acreage. This hybrid is a medium late maturing line with exceptionally high table stock quality. The seed from this production was packaged in 10-pound bags and distributed to as many farmers as possible. Farmer and consumer acceptance of this new variety will be studied in 1961, to determine seed acreage for 1962.

A summary of the 1960 sweet corn seed production follows:

Variety	Acreage	Production (Pounds)
New Jersey No. 106	4	2,073
Carry-over	...	966
New Jersey No. 109	...	...
Carry-over	...	1,507
New Jersey No. 316	<u>1</u>	<u>202</u>
Totals	5	4,748

Soybeans

In 1960 New Jersey soybeans were again seriously affected by disease. Of the 23 lots of soybeans entered, only three met all the requirements for certification. A total of 2,067 bushels was sealed, compared with 4,330 bushels the previous year. The disease which is causing this inferior quality has been tentatively identified as Diaporthe. Beans from other states seemed to be affected just as much as those produced here. At the present time there is no control, but a two-year rotation seems to lessen the severity of the disease.

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The Agricultural Experiment Station has assigned Dr. Warren Battle to initiate a program of research to improve soybean quality.

The following is a summary of the 1960 soybean program:

Variety	Acres Entered	Acres Field	Rejected Bin	Acres Passed	Bushels Sealed
Hawkeye					
Registered	1	...	1	...	...
Certified	51	20	31	...	...
Lincoln	33	...	33	...	...
Lindarin	26	...	26	...	...
Shelby	19	...	19	...	...
Clark	<u>446</u>	<u>10</u>	<u>342</u>	<u>94</u>	<u>2,067</u>
Totals	576	30	452	94	2,067

A large acreage of soybeans for oil use is anticipated in 1961 because of Federal acreage controls on corn and wheat plus a high price for soybeans. It is expected that a large portion of this acreage will be planted with seed of questionable quality, thereby increasing the spread of disease.

Breeding of resistant varieties seems to be the only answer to this disease problem; therefore, there is little hope that this situation can be corrected in the near future.

Summary

The total of certified seed produced in 1960 was 3,312 bushels greater than during the previous year. The increase would have been larger had not production problems developed with the wheat and soybean programs.

A summary of the certified seed grain sealing from 1955 to 1960 follows:

Year	Total Sealed (bushels)	Corn (bushels)	Oats (bushels)	Wheat (bushels)	Barley (bushels)	Soybeans (bushels)	Sweet Corn (bushels)
1960	59,685	15,063	2,980	11,069	28,411	2,067	95
1959	56,373	14,921	257	16,309	19,969	4,330	587
1958	66,251	14,654	1,275	16,583	22,659	10,854	226
1957	67,518	15,005	2,568	16,803	23,171	9,421	550
1956	84,281	28,972	3,456	14,356	19,478	18,019	...
1955	56,955	8,309	5,289	17,324	22,033	4,000	...

Seed Potato Certification

White Potatoes

In cooperation with the New Jersey State Potato Association, a small acreage of white seed potatoes was entered for certification. The acreage entered, 44.75 is one of the smallest in many years. Several factors are contributing to this reduction, the main one being the inability of the seed producer to control aphids which spread virus diseases. Without good insect control, a small disease count can soon be distributed over an entire field.

This has occurred during the last two seasons causing a high rate of rejection and poor seed.

The weather during the planting season was very unfavorable for plant growth. Most fields had a plant population of only 60 or 75 per cent of normal.

The entire seed acreage planted in New Jersey was from foundation seed stock. All New Jersey seed was tested in Florida for virus content and only those lots showing relatively small amounts were allowed in the certification program. No bacterial ring rot was observed.

Sweet Potatoes

Although sweet potatoes reproduce vegetatively, it is very difficult to maintain a variety as it comes from the plant breeder. Without constant selection, a variety may lose some of its good characteristics. It has been generally recognized that the flesh color of Jersey Orange sweet potatoes has often been undesirable. The variety has a tendency to mutate or produce "sports" which are light yellow or even white in color.

To initiate an improvement of seed source and possibly establish a foundation and certified seed program, one man was assigned to make hill selections in the sweet potato area for color and yield. A total of 200 hills was collected and stored at the New Jersey Agricultural Experiment Station for further evaluation and elimination. After careful selection, 20 strains of Jersey Orange were planted for field trials during the summer of 1961. Any outstanding strains will be eligible for acceptance in a certification program.

Tomato Seed Certification

The growing season for tomatoes was slightly advanced, requiring field inspection for certification to start July 20. The field inspections were completed by August 3.

In preparation for field inspection, arrangements were made with the Plant Pathology and Horticulture Departments of the New Jersey Agricultural Experiment Station to review aspects connected with the standards for vegetable certification. A concentrated one-day training session is sufficient and extremely helpful in preparing the men for the tomato seed inspection. Varietal characteristics were reviewed and discussed during a field trip of the Horticulture Department's vegetable trials.

A total of 1,156 acres was entered, 644 acres less than the previous year. This decrease was predicted, because the major commercial acreage in New Jersey is now in the high yielding No. 135 and No. 146 varieties. The varieties certified in New Jersey closely parallel the varieties in demand by the local tomato processing plants.

Sixty-three acres were rejected for varietal mixture and improperly managed fields. Seed was saved from 1,093 acres which met the field requirements and standards for tomato seed. Very little disease was noted during the field inspection. With a reduced seed acreage, only the best farmers and fields were selected for seed.

A total of 167 fields averaging seven acres per field was found to qualify for certification. Seed saved from this acreage amounted to 30,600 pounds. This is a decrease of 10,937 pounds from 1959.

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The seed acreage for the Rutgers variety decreased from 318 to 168. It is practically impossible to get good tomato farmers to grow Rutgers in this State because of its susceptibility to wilt diseases. The Rutgers seed acreage that was certified produced a total of 5,574 pounds. Every pound of Rutgers seed was saved that was possible to collect. Out-of-state demand for this variety is still good and seed production is increasing in California.

All New Jersey certified seed was sampled by inspectors and tested for adequate chemical treatment. With one exception, all lots had had proper seed treatment. In one lot too much mercury compound had been applied and germination was affected.

Several fields of the new dwarf-type tomato designed for mechanical harvesting were observed. The varieties now developed do not completely meet the needs, but it is expected a variety will soon be developed that can be harvested mechanically. For commercial purposes, the dwarf tomato needs a plant population of 20,000 to 25,000 plants per acre, five times that of presently used varieties. It is very likely that transplanting southern grown plants will cease with the introduction of an acceptable dwarf tomato. Several New Jersey farmers demonstrated this past year that directly seeded fields are practical. If this becomes a practice in the near future, the seed needs for tomato fields would be increased tenfold. The development of an acceptable dwarf tomato could have a tremendous effect on the New Jersey seed program.

TOMATO SEED ACREAGE CERTIFIED IN 1960

Seedsman	Rutgers	Queens	No. 135	No. 146	Improved Garden State	Marglobe	Homestead	Valiant	Roma	Total
Campbell Soup Company	...	...	28	325	59	...	...	...	...	412
Ritter Seed Company	63	...	17	85	...	...	...	...	...	165
Francis C. Stokes Company	...	...	33	110	...	...	56	...	57	256
Swedesboro Seed Company	<u>105</u>	<u>10</u>	<u>...</u>	<u>98</u>	<u>...</u>	<u>22</u>	<u>...</u>	<u>10</u>	<u>15</u>	<u>260</u>
Totals	168	10	78	618	59	22	56	10	72	1,093

POUNDS OF TOMATO SEED CERTIFIED IN 1960

Seedsman	Rutgers	Queens	No. 135	No. 146	Improved Garden State	Marglobe	Homestead	Valiant	Roma	Total
Campbell Soup Company	...	...	...	4,635	1,350	...	...	...	...	5,985
Ritter Seed Company	1,944	...	167	699	...	...	...	...	...	2,810
Francis C. Stokes Company	...	...	1,110	3,920	...	...	3,630	...	2,800	11,460
Swedesboro Seed Company	<u>3,630</u>	<u>275</u>	<u>...</u>	<u>3,250</u>	<u>...</u>	<u>1,025</u>	<u>...</u>	<u>345</u>	<u>1,820</u>	<u>10,345</u>
Totals	5,574	275	1,277	12,504	1,350	1,025	3,630	345	4,620	30,600

VARIETAL DISTRIBUTION CERTIFIED TOMATO SEED ACREAGES, 1951-60

Year	Balti- more	Mar- globe	Valiant	Stokes- dale	Rutgers	Prit- chard	Improved Garden State	Ontario	Queens	Century	Brooks- ton	No. 135	No. 146	Home- stead	Roma	Total
1960	...	22	10	...	168	...	59	...	10	...	...	78	618	56	72	1,093
1959	...	48	43	...	318	...	120	...	13	...	...	505	618	72	...	1,737
1958	...	97	26	...	659	...	118	...	10	...	...	369	289	123	...	1,691
1957	...	179	...	...	1,208	...	436	...	26	...	...	...	...	...	...	1,849
1956	...	135	16	50	1,749	10	635	16	86	9	...	...	...	...	...	2,706
1955	...	312	29	69	2,012	10	518	...	73	17	22	...	...	...	...	3,062
1954	1	232	80	28	1,929	33	348	...	62	26	...	...	...	...	...	2,739
1953	...	243	52	30	2,035	15	320	...	38	9	...	...	...	...	...	2,742
1952	...	258	31	79	2,658	13	252	4	6	...	...	...	...	...	...	3,301
1951	3	190	10	30	3,058	10	173	2	...	...	...	...	...	...	...	3,476

POUNDS OF NEW JERSEY CERTIFIED TOMATO SEED VALIDATED FOR
EXPORT SHIPMENT

July 1, 1960 - June 30, 1961

	Mexico	Union of So.Africa	Mauritius	Haiti	Greece	Ceylon	Canada	Southern Rhodesia	Poland	Total
1960										
August	3	...	...	...	...	...	...	...	...	3
September	50	...	...	...	...	...	...	...	...	50
October	...	200	...	...	...	...	...	...	...	200
November	...	...	.25	1	...	...	...	...	...	1.25
December	...	10	...	...	...	...	...	...	...	10
1961										
January	50	60	...	...	8	20	...	...	...	138
February	...	25	...	...	...	...	15	...	.12	40.12
April	...	...	...	...	...	...	...	20	...	20
June	<u>100</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>100</u>
Totals	203	295	.25	1	8	20	15	20	.12	562.37

POUNDS OF NEW JERSEY VEGETABLE SEED EXPORTED FOR WHICH
PHYTOSANITARY CERTIFICATES WERE ISSUED

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	Israel	Mauritius	Puerto Rico	Italy	Greece	Argentina	For Export New York	Total
1960								
July	13	...	...	...	...	...	...	13
September	...	5	...	...	...	...	5	10
November	...	6.25	3	100	...	...	...	109.25
December	...	9	...	...	...	...	...	9
1961								
January	...	...	...	...	3	2,600	...	2,603
March	<u>...</u>	<u>1</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>...</u>	<u>1</u>
Totals	13	21.25	3	100	3	2,600	5	2,745.25

Soybean Cyst Nematode Field Survey

The fourth annual field survey was conducted throughout the State to determine the presence of soybean cyst nematode in New Jersey crop land. To date, the nematode has not been found.

Made during July and August, the survey covered the soybean producing areas of the State. In previous years the inspections have been based entirely on visual observations of soybean plants. This year, in addition to the visual observation, crop areas were sampled that were known to have a long history of soybean production. County agricultural agents were most helpful in directing the inspectors to farms that had been growing soybeans for many years.

A total of 10,391 acres, or approximately 25 per cent of the State's soybean acreage, was surveyed. One hundred seventy-nine soil samples were collected from suspicious appearing areas and submitted to the laboratory for analysis.

SOYBEAN CYST NEMATODE FIELD SURVEY

County	Samples Collected	Acreage Surveyed
Burlington	33	1,592
Cumberland	11	439
Hunterdon	7	67
Mercer	34	2,115
Middlesex	19	1,919
Monmouth	36	2,074
Salem	26	1,706
Somerset	13	479
Total	179	10,391

The results of the soil sample examinations will be found in the Bureau of Plant Laboratory report. (See page 25.)

Witchweed

Witchweed, Striga asiatica, a serious parasitic disease of corn and other members of the grass family, was first identified in the United States in 1956. To date, witchweed is confined to four counties in North Carolina and four counties in South Carolina.

Recognizing the serious effect this plant would have on New Jersey agriculture, all Division personnel have been fully instructed in the recognition of Striga. In addition, county agricultural agents were supplied with circulars giving plant description and recognizable features.

BUREAU OF PLANT LABORATORY

Sawflies in Native Pine

In the native pitch pine areas of New Jersey, three species of pine sawflies are now established in fair abundance. These are Neodiprion pratti paradoxicus, Neodiprion pini-rigidae and Neodiprion lecontei.

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The presently known Neodiprion pratti paradoxicus infested area, unchanged since 1959, covers approximately 2,340 square miles. The infested area embraces all or parts of the following counties: Middlesex, Monmouth, Ocean, Burlington, Camden, Gloucester, Atlantic, Cumberland and Cape May. Since 1958 the sawfly population has been steadily declining. This spring the population was found to be light with the exception of a moderate infestation in the Lakehurst and Pleasant Plains areas. A complex of insect parasites is responsible for this control.

Attempts were made to transfer the polyhedral virus disease of N. pratti pratti (inoculum obtained from the Beltsville Laboratory of the United States Department of Agriculture) to the larvae of N. pratti paradoxicus. The results were poor; however, enough diseased larvae were collected for further trials next year.

The sawfly Neodiprion pini-rigidae is a species of extremely destructive habits. The area of infestation remains unchanged since 1960 and covers 2,140 square miles. The area of infestation embraces the same counties as N. pratti paradoxicus, excluding Middlesex County. In the summer of 1960 extreme damage was noted along Route U. S. 322 from Penny Pot to just south of Williamstown; in the vicinity of Bamber Lakes, and along the Garden State Parkway near Pomona. Observation of the first generation of the sawfly this spring revealed that the population was light in these formerly heavily infested areas, with the exception of the Bamber Lakes area which was moderately infested. The heavily infested areas have now moved slightly north to Keswick Grove, along Route 530, and to Silverton, along Route 549.

Because of the differences in life cycle, it was felt that this sawfly was largely escaping parasitism by some of the species so well established on N. pratti paradoxicus. However, cocoon collections of N. pini-rigidae made during August 1960 reveal that the parasites are much the same as those found on N. pratti paradoxicus. They are as follows:

Dipterous insects - Villa sinuosa - abundant
 Unidentified Tachinid - moderately abundant
 Hymenopterous insects - Dahlbominus fuscipennis - abundant
 Exenterus sp. - moderately abundant
 Mastrus argeae - rather rare

Cocoon collections of both N. pratti paradoxicus and N. pini-rigidae are being continued for systematic parasite determination.

Another sawfly found in the same general area of attack by N. pini-rigidae and N. pratti paradoxicus is the red-headed sawfly, Neodiprion lecontei. This sawfly has two generations and is a pest of younger or reproductive pine stands. This sawfly has also shown a decline in population since last year. A few scattered colonies were found west of Lakehurst, along Route 571, and west of Cassville, along Route 528.

Biological Control of the European Pine Sawfly

In recent years a most promising development in control of the European pine sawfly, Neodiprion sertifer, has occurred with the use of a polyhedral virus disease specific to this insect. In the spring of 1960 two areas comprising 20 acres of red pine heavily infested with sawfly were airplane sprayed with a virus suspension. Control in both areas was spectacular. From these sprayed areas enough virus material was collected to spray the entire red and Scotch pine

acreage within the State. This spring virus was made available to all plantation owners. However, the sawfly population being light throughout the State, only one grower in Milford requested the virus.

In an effort to recover a fresh supply of virus material for next year, virus was applied to two acres of red pine in Mercer County. From this sprayed area a more than ample supply of diseased material was collected to meet all demands for the coming year.

In addition, a red pine planting in Delaware, New Jersey, virus sprayed in 1952, and a planting in Mount Airy, sprayed in 1960, were observed for virus carry-over. Virus was recovered in both plantings.

Strawberry Plant Examination for Nematodes

During the year strawberry plants grown under the virus free program were sampled for parasitic nematodes. Under the present virus free program, plants are required to be treated with a nematicide. This year, plantings were found to be adequately treated and no nematode problems were encountered.

Soybean Cyst Nematode Survey

For the fourth year a systematic survey of soybean fields has failed to disclose evidence of the presence of the soybean cyst nematode, Heterodera glycines. Of the 179 samples processed by this laboratory, 38 samples contained cysts, all of which were identified as either Heterodera weissi (the smartweed cyst nematode) or Heterodera trifolii (the clover cyst nematode). Neither of these forms is of agricultural significance in this State.

Certified Seed Examination

Ninety-four samples were tested to determine adequacy of chemical treatment of officially certified seed. Of the total number of samples tested, 10 were found to be not satisfactorily treated. Lots inadequately treated required retreatment as a condition for eligibility under the certified seed program.

Bee Disease Examination

Fifty-three specimens of suspected bee disease material were submitted for microscopical examination. This material was submitted by the regular inspectors or sent in by individual beekeepers. Of the total number of specimens examined, 16 were negative for disease, 31 positive for American foulbrood and six positive for European foulbrood. Results of these examinations were submitted to the supervisor of bee culture for appropriate action.

Asparagus Beetle Examination

During the past winter the economic insect survey personnel reported heavy mortality of the overwintering asparagus beetle population. Approximately 200 beetles were collected for laboratory examination to determine possible biological control agents. No control agents were found. The severe winter was apparently the controlling factor.

Nemic Insect Parasite Work

A nemic parasite of insects known as DDL36 was obtained from Dr. S. R. Dutky

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of the United States Department of Agriculture, Beltsville, Maryland. The supply of this nematode is now adequate for small-scale field trials. It is planned to use this nematode in trials for the control of alfalfa weevil, European corn borer and corn earworm.

Nursery Nematode Problems

During the year four nurserymen requested sampling of their plantings for parasitic nematodes. All four nurseries had important damage and were advised as to controls. Two nurserymen requested examination of plants shipped to their establishments from other states. Part of one shipment from Tennessee was found to be heavily infested with root-knot nematode and was destroyed. Also, four home owners requested examination of plants on their premises. Two had nematode problems and were advised.

Nursery Nematode Survey

The purpose of the 1960-61 survey was to determine the incidence of root-knot nematodes on known host plants and to identify the species of nematodes. This information is useful to the nurserymen not only from a regulatory standpoint, but as a valuable index for plant cultural practices.

A total of 336 samples was collected, processed and examined. Of the total number examined, 173 were found to be infested with root-knot nematodes. All infested plants contained northern root-knot nematode, Meloidogyne hapla, with the exception of 11 samples. Two samples of Hibiscus paeoniflorus and two samples of Deutzia plena were found to be infested with Meloidogyne incognita incognita, commonly known as the southern root-knot nematode. Seven samples of Lonicera Morrowi, collected from the same planting, were infested with Meloidogyne javanica, commonly referred to as the Javanese root-knot nematode. M. javanica and M. incognita incognita are first reports for this State. Both nematodes are agriculturally important pests.

BUREAU OF PLANT PATHOLOGY

Cooperative Economic Pest Surveys

Khapra Beetle

Since 1955, surveys have been made by State and Federal personnel to detect the khapra beetle, Trogoderma granarium. This serious pest of stored grain is present in the southwestern United States but has not been found in New Jersey. From February through May 1961, 231 grain storing establishments in all counties of the State were inspected. Specimens from 40 establishments were submitted for identification. All determinations were negative.

European Corn Borer

The regular fall survey to determine the overwintering population of the European corn borer, Pyrausta nubilalis, was conducted. Data from the survey are presented below in conjunction with data from the previous three surveys.

Average Number of Borers per 100 Plants

County	1957	1958	1959	1960
Sussex	3.6	10.8	9.2	...
Warren	7.6	8.0	56.8	89.6
Hunterdon	10.4	16.0	163.8	127.6
Somerset	150.6	292.8	174.8	127.8
Middlesex	63.0	298.8	568.4	146.3
Monmouth	407.8	368.8	333.4	150.2
Mercer	117.4	185.8	722.4	176.2
Burlington	81.2	188.4	255.8	232.4
Camden	94.0	128.0	372.4	318.0
Gloucester	52.8	162.8	344.1	264.6
Salem	40.6	168.4	95.4	189.8
Cumberland	36.0	199.6	155.2	187.6
Average	88.8	169.0	271.0	176.3

Previous to 1960, 10 fields were examined in each county except Camden and Cumberland where five fields were examined. In 1960, Sussex County was not surveyed and only eight fields were checked in Middlesex County. The population in 1960 was lower than in 1959. The reduction was most evident in the important white potato production area in the central part of the State.

In the spring of 1961, another survey was made to determine the winter mortality of the borer larvae. Eighty-five corn fields were inspected in the same counties examined the previous fall. Borer mortality was 63 per cent, compared with 55 per cent in the spring of 1960. Bird feeding was the major cause of death, accounting for 66 per cent of the mortality. Other causes of death included insect parasitization, 20.6 per cent; mechanical injury, 11.3 per cent; and fungi, 2 per cent.

The relatively high mortality of overwintering borer larvae, in conjunction with the lower borer population the previous fall, indicated that the borer population in 1961 would be somewhat lower than in 1960.

European Corn Borer Parasites

Each year, European corn borer larvae are collected and sent for parasite studies to the European Corn Borer Research Laboratory of the United States Department of Agriculture in Ankeny, Iowa. The results of the determinations of the 1959 and 1960 fall collections are given in the tabulations which follow.

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EUROPEAN CORN BORER PARASITE RECOVERIES IN NEW JERSEY*

County	Locality Township	Number of Borers Observed	<u>Lydella</u> <u>griseus</u>		<u>Macrocentrus</u> <u>gifuensis</u>	
			No.	Per Cent	No.	Per Cent
Sussex		46			7	15.2
Warren	Blairstown	42			9	21.4
Sussex		47			3	6.4
Bergen	Woodcliff Lake	45			1	2.2
Warren		49	5	10.2	4	8.2
Somerset	Gladstone	55			2	3.6
Essex	Bloomfield	46			10	21.7
Hunterdon		56			12	21.4
Somerset	Montgomery	42			4	9.5
Middlesex	Madison	50			3	6.0
Mercer		43			1	2.3
Ocean		50			14	28.0
Camden		32			7	21.9
Burlington		40				
Ocean		46			13	28.3
Salem		48				
Gloucester		29				
Atlantic		44			1	2.3
Cumberland		42				
Cape May		46				
Cape May		<u>38</u>	<u>—</u>	<u>—</u>	<u>2</u>	<u>5.3</u>
Total		936	5	0.5	93	9.9

*The borers were collected in the fall of 1959.

EUROPEAN CORN BORER PARASITE RECOVERIES IN NEW JERSEY*

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County	Township	Total Larvae Observed	Total Parasitism Per Cent	Larvae Parasitized by:							
				<u>Horogenes</u> <u>punctorius</u> No. Per Cent	<u>Lydella</u> <u>griseus</u> No. Per Cent	<u>Macrocentrus</u> <u>gifuensis</u> No. Per Cent	<u>Pyraustomyia</u> <u>penitalis</u> No. Per Cent				
Sussex	Mahwah	32	6.3					2	6.3		
Warren		46	4.3					2	4.3		
Sussex		45	0								
Bergen		52	13.5					7	13.5		
Hunterdon		49	4.1			1	2.0	1	2.0		
Somerset	Clifton	46	10.9					5	10.9		
Passaic		46	4.3					2	4.3		
Hunterdon		43	30.2					13	30.2		
Somerset		46	4.3					2	4.3		
Monmouth		45	22.2	1	2.2			9	20.0		
Burlington		48	10.4					5	10.4		
Ocean		38	34.2	1	2.6			12	31.6		
Camden		53	13.2	1	1.9			5	9.4	1	1.9
Burlington		50	14.0	2	4.0			5	10.0		
Ocean		5	0								
Salem		53	13.2					7	13.2		
Gloucester		48	18.8					8	16.7	1	2.1
Atlantic		43	2.3					1	2.3		
Cumberland		51	3.9			1	2.0			1	2.0
Cape May		47	2.1					1	2.1		
Cape May		34	11.8					4	11.8		
Total		920	11.0	5	0.5	2	0.2	91	9.9	3	0.3

*The larvae were collected in the fall of 1960.

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The 11 per cent total parasitism in New Jersey in 1960 was fourth highest among 15 eastern and midwestern states. Macrocentrus gifuensis continued to be responsible for the greatest and most widely distributed corn borer parasitization in New Jersey.

Light Trapping

The use of light traps of the near ultra violet, fluorescent "black light" type has proven valuable in following the population patterns of several important crop destroying insects. Two traps were in service in Burlington County in 1960. In 1961 an additional trap was placed in Gloucester County and one in Cumberland County. It is hoped that the new traps will enhance the value of this program by providing more thorough coverage of important crop areas and earlier indications of population increases. The information obtained is used by the Extension Service, Rutgers University, to advise growers of the timing of application of control measures.

In 1960, counts were made of the following species: corn earworm, Heliothis zea; European corn borer, Pyrausta nubilalis; armyworm, Pseudaletia unipuncta; fall armyworm, Laphygma frugiperda; tomato hornworm, Protoparce quinquemaculata; tobacco hornworm, Protoparce sexta; yellow striped armyworm, Prodenia ornithogalli; black cutworm, Agnotis ypsilon; spotted cutworm, Amathes c-nigrum; glassy cutworm, Crymodes devastator; and variegated cutworm, Peridroma margaritosa. Counts were limited in 1961 to the seven most important species which appear first in the above listing. Data were not taken on the species of cutworm.

There were fewer catches in 1960 than in 1959. Initial results in 1961 appear to be similar to those obtained during the same period in 1960. Again the reduction seems attributable to a relatively cool, wet spring.

Potato Aphid

Surveys designed to predict the spring threat of the potato aphid, Macrosiphum solanifolii, have been made since 1957. A count of the number of overwintering eggs occurring on swamp roses was made from February 23 to March 1. The number of viable eggs found was slightly higher than in 1960 but considerably below the 1959 figure. The early season threat from this pest was thus considered to be slightly higher than in the spring of 1960 but much less than in 1959.

Potato Leafhopper

Weekly counts of potato leafhopper, Empoasca fabae, populations were made from June 22 to September 7 to ascertain the need for control measures against this important forage and vegetable pest. The data obtained from weekly sweeping of 10 alfalfa fields in the central part of the State indicated that populations were considerably lower than in 1958 and 1959. The relatively low population, in conjunction with excellent alfalfa growing weather, precluded the necessity of control measures in most alfalfa and clover fields.

Meadow Spittlebug

The potential threat to alfalfa and clover crops by the meadow spittlebug, Philaenus leucophthalmus, was analysed by means of two surveys. From December 1 to December 9, 1960, spittlebug egg masses were counted in 28 alfalfa fields in seven of the major alfalfa producing counties. Spittlebug nymph counts were made in 31 fields in the same areas from April 24 to May 4, 1961.

Although fall egg mass counts were the highest since 1953, nymphal populations were only moderately high. The overall outlook for damage in 1961 was considered to be moderate with occasional fields sustaining much injury if not treated.

Asparagus Beetles

Determination of the abundance of overwintering common asparagus beetles, Crioceris asparagi, and spotted asparagus beetles, Crioceris duodecimpunctata, was made from January 3 to February 17. Sixty asparagus fields were visited in the following major asparagus producing counties: Cumberland, Salem, Gloucester, Atlantic, Camden and Burlington.

As in previous surveys, very few spotted asparagus beetles were found. Although the total number of common asparagus beetles detected was much higher than at any time since 1957, the number of live beetles was only slightly larger than in 1960 and much below the 1959 figure. The potential for damage to asparagus in the spring of 1961 was difficult to determine since the effects of the unusual winter on beetles in various other hibernating sites could not be ascertained. A moderate infestation of beetles did, however, seem to be a reasonable estimate of the situation.

European Apple Sawfly

During June, areas of Sussex, Warren, Morris, Hunterdon, Somerset, Middlesex, Mercer, Monmouth and Burlington counties were scouted to determine if the European apple sawfly had spread beyond the known infested areas in the northeastern part of the State. Apples in abandoned and uncared for trees were inspected at 176 locations. New areas of infestation were detected in : (1) the southern portion of Sussex County east of Andover, (2) the western part of Morris County west of Route 206 and (3) the western part of Monmouth County to Perrineville.

Mexican Bean Beetle

The survey to predict the severity of Mexican bean beetle, Epilachna varivestis, populations was limited this year by snow accumulation. An effort was made in the spring to locate standing bean fields in which beetle counts might be made. Cumberland and Salem counties were intensively scouted during March, but only three appropriate fields were found. No beetles were detected in two bean fields. A total of 163 beetles was found in 200 feet of row in a lima bean field in Cumberland County. This was the highest count recorded in the two years this procedure was used, and although the data were very limited, they may have indicated a larger hibernating population than the last two years.

Carrot Weevil

Two surveys were conducted to aid in establishing the potential for damage by the carrot weevil, Listronotus oregonensis. From July 11 to July 29, 13 carrot and parsley fields were examined in Cumberland, Salem, Camden and Monmouth counties. Carrot weevil egg punctures were found in only one field in Cumberland County. The results indicated a need for more timely and more adequate survey procedures and the survey was discontinued until these procedures might be developed.

On May 24, five parsley fields in the vicinity of Vineland were examined for carrot weevil egg punctures. The average number of egg punctures

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found in 100 plants in each field was 10.6, compared with 21.8 in 1960 and 20.1 in 1959. The results indicated a substantial reduction in the carrot weevil population.

Alfalfa Weevil and Pea Aphid

The alfalfa weevil, Hypera postica, and the pea aphid, Macrosiphum pisi, are major pests of alfalfa. Recently, changes in control materials and practices have occurred. These changes have increased the need for more complete information on populations of the pests so that the necessity for control measures and their proper timing may be more adequately assessed.

Once each week from April 28 to May 29, counts were made of alfalfa weevil and pea aphid populations in alfalfa fields in the major alfalfa producing counties. Weevil populations were determined on the basis of the number of weevils collected in 100 sweeps of an insect collecting net, while pea aphid numbers were established from 20 similar sweeps in each field.

Alfalfa weevil populations had increased sufficiently to warrant control measures in the southern counties between May 15 and May 22 and in the central and northern counties between May 22 and May 27.

Another phase of the survey compared weevil populations in fields that had received the new fall treatment of dieldrin insecticide with populations in fields that had not been so treated. The weevil population was found to be reduced 50 per cent by the treatment.

Inspection of Imported Centennial Sweet Potato Seed Stock

Certified sweet potato seed stock of the Centennial variety which was imported from Louisiana was inspected during April. Insect specimens found were submitted for identification to the Insect Identification Section of the United States Department of Agriculture at Beltsville, Maryland. The specimens were identified as the coffee bean weevil, Araecerus fasciculatus (DeG). This insect, which has previously been reported from New Jersey, is not considered to be a threat to the State's agriculture or economy.

Cooperative Economic Disease Surveys

Pepper Bacterial Spot

In June 1959, a survey to locate the sources of the bacterial spot disease on tomatoes and peppers in New Jersey was launched. The disease, caused by the bacterium Xanthomonas vesicatoria, reduced the 1958 New Jersey pepper crop, valued at about three million dollars, by about one-third.

Again in 1959, losses were about the same. Field surveys and a pepper grower interview survey had comprised our 1959 effort. In 1960, an intensive, four-phase program was developed.

As described in last year's report, the planting of Yolo Wonder pepper plants, carefully and separately grown in Georgia from two seed sources, was closely observed in more than 11 fields scattered among the main pepper-growing counties of the State.

Not until July 21 was any bacterial spot found in any of these plantings or in the pepper fields nearest adjacent to them. The only plant among those

from Georgia found infected before August 18 was at the edge of some planted in a field with a history of severe bacterial spot on peppers the previous year. Even by October 25, inspections indicated no bacterial spot in five of eight major plantings located on soil not in peppers or tomatoes for at least three years.

In the case of three of these "clean" fields, their freedom from bacterial spot was in spite of its appearance in adjacent New Jersey grown plants about 200 yards away. Furthermore, the disease did not appear among the plants on soil planted to peppers only two years previously, again in spite of its development in home grown plants only 50 yards distant. On the other hand, bacterial spot was found at each of three locations where the plants followed a crop of peppers in which the disease appeared last year.

Again the results indicated that New Jersey grown plants, and New Jersey soil infested the previous year, were important sources of bacterial spot; whereas, the Georgia grown plants, of either seed source, were not.

In addition to inspection of the special plots, a total of 204 inspections was made in 114 other pepper fields in southern New Jersey during the summer of 1960. The data obtained indicated that fields planted from New Jersey plant beds were more frequently infected (55.4 per cent versus 26.5 per cent) and more severely infected (36.1 per cent severe versus 15.4 per cent severe) than fields planted with southern plants.

As of the end of June, the 1961 survey had indicated no serious development of bacterial spot in New Jersey peppers. The disease was found in one small field.

Sweet Potato Yellow Dwarf and Other Sweet Potato Diseases

A survey to detect the possible presence of this ruinous disease of sweet potatoes was conducted between September 14 and October 5 in 1960. In 1961, it was continued, starting in mid-April.

This disease is caused by a virus that is now known to be transmissible by at least two species of white fly, Bemisia tabaci (synonym: B. inconspicua) and Trialeurodes abutilonea. The sweet potato varieties Georgia Red and Porto Rico are known to be very susceptible to yellow dwarf. Jersey Yellow is moderately susceptible, and Nemagold is susceptible. Other varieties are to be tested for susceptibility. It is feared that an efficient vector for this disease could appear in New Jersey, and that the disease might move to Jersey Yellow and other varieties of major commercial importance.

In the 1960 survey period, 19 fields on nine farms, totaling 107 acres, were inspected. No yellow dwarf was found, and the Georgia Red variety appeared to be practically out of production.

During an October 1960 examination of sweet potato fields for another purpose, virus symptoms, possibly of yellow dwarf, were found in one small field in southern New Jersey. Samples were submitted to Dr. E. M. Hildebrand, plant pathologist, United States Department of Agriculture, Beltsville, Maryland. The diagnosis was that the virus involved was the No. 2 strain of the internal cork virus which is not considered to be of significant economic importance.

During May 1961, 17 growers were found to have stock of the Georgia Red variety on hand. Each of these growers was visited and warned of the disease

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risk he would face if he continued to grow this variety. During the following month, the Georgia Red plant beds on nine of these farms were examined. On three farms, symptoms closely resembling those of yellow dwarf were found. Specimens were submitted to Dr. R. H. Daines for identification indexing. These determinations are in progress.

During April 1961, samples of seed potatoes representing a shipment of approximately 750 bushels of certified Centennial sweet potatoes from Louisiana were inspected. Although a small amount of Java black rot, a common storage disease, was found, no disease new to New Jersey was discovered.

Peach Canker

In recent years, peach canker, caused by the fungus Fusicoccum amygdali, has threatened the profitable culture of many varieties of peaches in the southern part of New Jersey. The disease destroys the crop by attacking one to two year growth. Cankers, many of which girdle twigs, develop, particularly on current season growth. This results in the flagging and death of the part above the canker.

In cooperation with Dr. R. H. Daines of the Department of Plant Pathology, Rutgers University, a survey was made and twig samples were taken to permit a study of the possible relation between calcium content of the twigs and disease susceptibility. This survey was started on July 18, 1960, and was completed on September 13, 1960.

Three varieties of differing susceptibility, Jerseyland (very susceptible), Elberta (intermediate), and Sunhigh (somewhat resistant), were surveyed and sampled, primarily in the Hammonton, Vineland and Bridgeton areas. Limited survey and sampling work was also conducted in Warren, Somerset and Hunterdon counties. A total of 88 blocks of peaches was represented in the survey.

In general, the disease was found to be light to moderate in severity in the southern areas, whereas no symptoms of the disease were encountered in the northern counties. Symptoms appeared to increase gradually from Hammonton south to the Bridgeton area.

Barley Yellow Dwarf of Oats

A relatively new virus disease of oats, caused by the barley yellow dwarf virus, has recently received increased attention in the eastern part of the United States. In New Jersey it has been estimated that 1960 spring oat losses to this disease were as high as 25 per cent of the crop.

In addition to its dwarfing and discoloring effects, the virus induces blasting of the florets at the lower part of the oat panicle. The virus is known to be transmissible by several aphids, the most important of which appears to be the English grain aphid, Macrosiphum granarium. Oats are more severely affected than barley or wheat in New Jersey and all New Jersey spring oat varieties appear to be relatively susceptible.

The 1961 spring oat crop was delayed by the cold spring. Between June 20 and June 27, 1961, an initial survey of 28 oat fields in five northwestern counties of the State was made. Emphasis was placed on Hunterdon and Warren counties. Records were kept of (1) stage of growth of the oats, (2) incidence and severity of yellow dwarf - both as a disease rating, and as the number of symptomatic (red) leaves in five square yards, and (3) the number of aphids collected

in ten 180°-sweeps of an insect net.

A preliminary analysis of the results of the survey indicates that about 22 per cent of the plants were infected.

Vegetable Plant Inspection

During May, vegetable plant imports were inspected for adherence to certification requirements, freedom from insects, diseases and nematodes, and adherence to quality standards. Inspections were made at import points maintained by canners and plant dealers. Random examinations were also made of plants as they were being transplanted by growers.

Five types of plants were examined from shipments in the following quantities:

Plant Type	No. of Lots Inspected	No. of Containers in Shipments	No. of Containers Inspected
Tomato	135	39,085	938
Pepper	26	4,838	168
Eggplant	4	592	13
Cabbage	1	25	3
Broccoli	<u>1</u>	<u>250</u>	<u>2</u>
Total	167	44,790	1,124

A total of 150 lots was imported from Georgia, 13 came from Florida and four from Alabama.

Tomatoes made up the bulk of plant shipments which were examined. The major varieties imported included: KC146, 71 lots; KC135, 20 lots; Roma, 13 lots; and Rutgers, 7 lots. Fourteen other varieties were represented in less than four lots each. Approximately 95 per cent of the tomato plants were from Georgia, 3 per cent were from Alabama and 2 per cent from Florida.

All lots of tomato plants were found to be certified. Few pest problems were evident. Only a few aphids were noted and a trace of early blight was present in one shipment.

Plant quality was generally high. Only five lots were recorded with average plant height below the minimum five-inch standard for Georgia certification. One lot was noted with poor roots and two lots were considered "soft". The results of hail and wind storms in Georgia were evident in 10 lots where crooked stems and other injuries were evident.

A check of the average bundle count showed that only seven lots of tomatoes fell below the 50 plants per bundle standard count. The average bundle count fell below 45 in two instances and in one case it was below 40 plants per bundle.

In contrast to the tomato plant imports, 35 per cent of the pepper shipments came from Florida. Twenty-two of the total 26 lots of peppers inspected were of the Yolo variety.

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All pepper plants had been certified. Samples from four of six lots suspected of having bacterial spot were submitted for laboratory diagnosis. Laboratory examination confirmed bacterial spot in two of the samples (one from Florida and one from Georgia). Two lots of pepper plants from Florida had traces of Cercospora leaf spot.

Shade and Forest Tree Pest Surveys

Dutch Elm Disease (Calendar Year 1960)

Although elms dying of the Dutch elm disease, caused by the fungus Ceratocystis ulmi, can be found each year in almost every county in New Jersey, the problem is much more serious in the northern half of the State where elms constitute a much larger proportion of the park and shade trees.

In recent years the program has included scouting work and control recommendations only, with the responsibility for tree removal, cut elm wood disposal and spray work left to county, municipal and private organizations, and to individual property owners. The disease has been greatly curtailed in localities where funds have been available and proper sprays have been applied. In other places, elm destruction has continued unabated.

In addition to scouting and inspecting elms for the presence of the disease, and making recommendations for control, inspectors supervise the disposition of elm wood encountered in clearing land for highway construction, in accordance with all State Highway contracts.

The results of the 1960 scouting work, listed by county, were as follows:

County and Property	No. of Elms Examined Diseased		1960 Incidence Compared with 1959
Essex			
County Parks	5,800	143	similar
Hudson			
County Parks	2,485	11	similar
Bayonne	600	1	similar
Jersey City	2,000	4	similar
Hunterdon			
Annandale State Reformatory	150	9	higher
Middlesex			
Perth Amboy	100	0	lower
Passaic			
Ringwood State Park	485	10	lower
Sussex			
Newton Park	150	5	...
Union			
County Parks	3,000	57	lower
Baltusrol Country Club	300	0	lower
Warren			
Phillipsburg	200	4	...
Totals	15,270	244	lower

Additionally, 325 elm trees of small property owners were inspected, and 101 were found to be affected by the disease.

Again this year Union County Parks and the Baltusrol Country Club had exceptionally good results following the control program recommended by the State. The organizations in Hudson and Union counties also continued to have very good results.

Encountered elm wood inspections were provided for the following highway construction: (1) Route U. S. 202 near Three Bridges, (2) Route Interstate 287 south of New Market, (3) Route U. S. 46 near Netcong, and (4) Route N. J. 28 north of Middlesex.

London Plane Canker Stain (Calendar Year 1960)

Canker stain, caused by the fungus Ceratocystis fimbriata f. platani, is an easily spread and deadly disease of the London plane, commonly used as a street tree in New Jersey. Although canker stain threatens to wipe out the London plane tree in the Camden area, in recent years only isolated outbreaks have occurred in the northern part of New Jersey. The causal fungus is readily transmissible from diseased to healthy trees through cuts or bruises. Common means are cuts from unsterilized tools and bruises by lawn mowers or vehicles.

Ten years of intensive survey effort in the Camden-Burlington area showed that control was almost completely unsatisfactory. Consequently the work there has been largely discontinued.

In the northern part of New Jersey, prompter tree removals, due to more adequate municipal appropriations, possibly combined with a climatic environment somehow less favorable to the disease, is a basis for hope for continued satisfactory control.

Canker Stain Scouting, 1960

County	Total Number of Trees Inspected in 1960	Number of Diseased Trees	
		Standing from 1959	Located in 1960
Bergen	7,401	0	0
Hudson	5,985	0	0
Mercer	5,373	0	6
Middlesex	25,462	0	0
Union	14,337	0	0
Warren	1,850	0	0
Totals	60,408	0	6

Oak Wilt (Calendar Year 1960)

Over the past eight years, surveys and general watchfulness for oak wilt in New Jersey have yielded negative results. Yet this disease, caused by the fungus Ceratocystis fagacearum, is active about 40 miles west of the Susquehanna River in Pennsylvania, a constant and deadly threat to New Jersey oaks. In 1960, oak wilt scouting was conducted during August and September. All counties were included. Two suspects were located, one near the Lebanon State Forest in Ocean County and one in Perth Amboy, but both cultured negative.

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European Pine Sawfly

The European pine sawfly, Neodiprion sertifer, has been surveyed as a pest destructive to red and Scotch pine in northern New Jersey for many years. On the basis of the results of these surveys, the plantation owners have had aerial DDT sprays applied. In late March and early April of 1961, a survey of the abundance of sawfly eggs in certain red and Scotch pine plantings was conducted. The results indicated a very low level of infestation generally. Although a newly developed virus material was available through the Division Laboratory for control spraying, none was needed. The marked decline in the population is attributed to the activity of natural predators and parasites.

EUROPEAN PINE SAWFLY SURVEY, 1961

County	Number Plantations Inspected	Number Plantations in Sawfly Infestation Severity Class			
		None	Trace	Light	Medium
Bergen	1	1	0	0	0
Essex	1	0	0	1	0
Hunterdon	7	1	2	4	0
Mercer	1	1	0	0	0
Morris	3	0	2	1	0
Passaic	2	0	2	0	0
Somerset	5	0	0	5	0
Sussex	4	0	4	0	0
Union	1	0	1	0	0
Warren	8	1	5	2	0
Total	33	4	16	13	0

A General Survey of Other Forest Pests

During August, September and October, a county-by-county forest pest survey for evidence of severe insect and disease problems (particularly those of deciduous trees) was made. In general, the trees were found to be in good condition. Several pests however, occurred in varying degrees below the level considered significantly damaging. These findings are briefly given below:

Pests	Section of New Jersey	Severity
Asiatic oak weevil, <u>Cyrtopistomus castaneus</u>	southern	light to medium
<u>Argyrotoxa semipurpurana</u> or <u>Argyrotaenia quercifoliana</u> (an oak leaf roller)	southernmost	light
Fall webworm, <u>Hyphantria cunea</u>	statewide	light to medium
Orange-striped oakworm, <u>Anisota senatoria</u>	Atlantic County	heavy in two small areas
Solitary oak leaf miner, <u>Cameraria hamadryadella</u>	Allaire State Park	light

Plant Pathological Diagnostic Services

Eighty laboratory diagnoses of plant diseases were made. Most involved the examination of pepper leaf samples for the bacterial spot disease. The next largest group was made up of tree specimens. Several London plane and elm samples were cultured for canker stain and Dutch elm disease, respectively. Two oak samples were cultured as possible oak wilt suspects. Both proved negative. One sample each of maple and Austrian pine were examined for the causes of diebacks. Verticillium wilt was diagnosed as the cause of the maple trouble, and Diplodia tip blight, caused by the fungus Diplodia pinea, was the diagnosis in the case of the Austrian pine. Finally, two tomato specimens yielded the Verticillium wilt fungus and the Fusarium wilt fungus, respectively.

OFFICE OF MILK INDUSTRY

Floyd R. Hoffman, Director

The Office of Milk Industry was created by an act of the State Legislature to control the production, distribution and sale of milk in New Jersey. To accomplish this, the Office is composed of five bureaus: Administration, Enforcement, Auditing, Licensing and Milk Economics.

BUREAU OF ADMINISTRATION

The primary function of the Bureau of Administration is the promulgation of orders and regulations necessary to fulfill the intention of the law. Public hearings and all formal legal proceedings are under the jurisdiction of this Bureau, as well as all matters pertaining to budget, collection of revenue and personnel.

The Office of Milk Industry operates on a budget separate from that which provides funds for the Department of Agriculture. The appropriation for 1960-61 was \$210,702.00. This agency was self-sustaining for this fiscal year. Total receipts amounted to \$211,690.46, while expenditures totaled \$202,299.43. The revenue was derived from four sources: license fees, \$194,306.75; fees for calibration of glassware, \$101.30; penalties imposed for violations of the orders and regulations, \$17,214.00; and other, \$68.41.

The budget provides for 39 full-time employees and one part-time employee. To assist with the licensing work, two temporary clerical positions were created for a period of four months.

The high rate of turnover in personnel continued through the year 1960-61. Thirteen employees discontinued their services during this period. Six of these transferred to other State positions, six resigned, and one retired. Twelve persons were added to the staff. At the close of the year, all positions were filled except two. Work programs were considerably impeded because of the time involved in recruiting and training new employees.

The management analysis group appointed by the Department of the Treasury completed the survey of the licensing procedure and auditing program of the Office. A summary of the findings was submitted to the Secretary of Agriculture and the director of the Office of Milk Industry. The report included suggested changes to improve and simplify the methods presently used. One of the recommendations was the purchase of a National Cash Register to be used in the processing of applications for licenses and the receipt of license fees. The new method will be put into effect for the year 1961-62.

Because many milk industry problems are nationwide, the Office of Milk Industry has been represented at meetings held throughout the country in an effort to find solutions. One of the foremost problems was created because milk price controls regulated by state agencies cannot be enforced on sales of milk to United States Government installations. Large quantities of milk are sold in New Jersey to the Armed Services, for which producers receive a lesser return than for other sales. A National Special Milk Committee, on which the deputy

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director served, was organized and developed proposed legislation to amend the Procurement Act of the Armed Services to rectify this condition. The amendment would provide that milk purchased through Federal government contract be paid for at the minimum prices charged in the area where the Defense Department unit is located.

Also at the national level, the "Quie Bill" was introduced. This bill would make permanent the Armed Forces and veterans' dairy programs and the school milk program. At the same time, it would amend the Agricultural Marketing Agreement Act to provide for the establishment of a national sanitation code for milk. This latter section, in effect, is much the same as the "Johnson Bill" of last year which would set minimum health standards for milk on a national basis and would permit unlimited shipment of the so-called approved milk in interstate commerce. The "Johnson Bill" was strongly opposed by the northeast dairy industry last year. While the sections of the "Quie Bill" pertaining to the Armed Forces and children's milk programs were favored by the northeast dairy interests, the balance of the bill pertaining to a national milk sanitation code was opposed.

Twenty-two out-of-state conferences and hearings were attended during the year by the director, deputy director or other representative. These included activities relative to the New York-New Jersey Milk Marketing Order 27 and milk price hearings in the Philadelphia area. Also attended were the meetings held by the International Association of Milk Control Agencies, and the Dairy Division and the Northeastern Section of this Division of the National Association of State Departments of Agriculture. At the meetings of these organizations, consideration was given to a study program for national standard labeling for milk and milk products in order to facilitate interstate shipments.

The northeastern group continued its efforts to establish a program for standards and policies regarding pesticides and antibiotics in milk and to develop standard methods for sampling and labeling milk throughout the northeast markets.

The Office of Milk Industry was represented at 74 other meetings and affairs held within the State. Among these were the monthly and annual meetings of dairy organizations, State and county producer groups, statewide dealer and subdealer associations, and the Governor's Milk Committee.

Over 60 meetings were scheduled by the director or deputy director concerning a wide variety of matters. Information was provided to the Federal Trade Commission relative to its investigation of certain licensees. Many industry representatives were provided with data pertaining to the orders, regulations, licensing classifications and statistics of this office.

Milk Industry Trends

Milk production in New Jersey has remained fairly stable as a result of the efficiency in methods used in dairy farming. While there were fewer dairy farmers this year, the production per cow and average deliveries of milk per dairy were greater. However, total milk production increased only 0.29 per cent.

While production in New Jersey showed a very slight increase over the previous year, a record high was reached in the area regulated by Federal-State Milk Marketing Order 27 which includes the 13 northern counties of New Jersey. This was caused by the great increase in the quantity of milk produced in other parts of the Order 27 area.

During the year sales of Class I or whole fluid milk dropped about 2 per cent below last year's figures. This decline in fluid milk sales follows a regional pattern and indications are that it will continue. Fluid milk sales have been affected by the increased rate of unemployment, promotion of health and weight-reducing diets, and skim and dry milk sales campaigns.

The supply-demand relationship which existed during this year caused the gross income for milk delivered to be approximately one million dollars less during 1960-61 than the previous year. The fact that more milk was available and less was needed for fluid use meant that producers received the surplus price for the balance, which is a much lesser price than that paid for Class I utilization.

A voluntary fluid milk sales promotion program, organized by the American Dairy Association and the Dairy Council of New York, was extended to New Jersey dairymen. The three cents per hundredweight paid by dairymen who participate is used for educational work and advertising in an effort to increase fluid milk consumption, thus providing better returns to the farmers.

At the end of the fiscal year, there were approximately 200 herds less than one year ago or a decrease of 6.5 per cent, and about 870 less than five years ago, a decline of 23 per cent. Many farmers have discontinued dairying because of the decrease in prices paid for raw milk, inability to install bulk tanks where required by handlers, and increasing costs for labor, taxes and feed.

Bulk milk cooling tanks

The trend from the use of milk cans to bulk tanks for handling raw milk has accelerated greatly. The number of bulk milk tank installations in use in New Jersey increased more than 72 per cent during the last five years. In June, 1957, 634 producers were using this method of handling bulk milk. This number gradually increased to 775 in 1958, 888 in 1959, 1,023 in 1960, and 1,096 as of June, 1961.

New York-New Jersey Milk Marketing Order 27

Federal Order 27, inaugurated August 1, 1957, regulates payments to producers in the 13 northern counties of New Jersey, the New York metropolitan area and 22 counties of upstate New York. In order to administer this order effectively, the director promulgated State Order 57-3 which is enforced in the northern New Jersey area jointly with the Federal order. The purpose of the joint Federal-State orders is to assure producers supplying this market a reasonable minimum price based on current supply and demand conditions. This in turn helps to provide a dependable supply of milk for consumers. Retail prices are not regulated by Federal marketing orders.

Interstate shipments of milk have increased rapidly, resulting in a need for reexamining all Federal milk marketing in effect in the Northeast in

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order to align payments to dairymen for Class I milk. A hearing was held in January, 1959, to consider adjusting the formula for Class I prices in New York-New Jersey Order 27, and a recommended decision was issued in May, 1959. However, the proposed amendment is still being held in abeyance until hearings can be held on all the Federal orders in the northeast area.

The first of a contemplated series of hearings on Class I milk pricing in the orders regulating New York-New Jersey, Philadelphia, Boston, Springfield, Worcester, Connecticut, Southeastern New England (Rhode Island and part of Massachusetts), and Wilmington was scheduled for August 15, 1960. It was postponed to October 3, and then to December 6, and finally postponed indefinitely. The hearing had not been re-scheduled at the end of the fiscal year. However, last March the United States Secretary of Agriculture appointed an 18-member special milk order study committee to analyze the 82 milk marketing orders in effect throughout the country. This committee is to report to the Secretary on Class I milk prices, supplies, consumption, production controls and manufacturing prices. Until this report is submitted, the question of Class I milk prices will not be considered at a hearing.

The increase in production and decrease in fluid milk sales caused the return to Order 27 producers to be considerably less during the summer and fall months of 1960 than the previous year. The United States Secretary of Agriculture, therefore, suspended the utilization factor in the fluid milk price formula for the months of October, November and December, 1960. The director issued a corresponding suspension to New Jersey Order 57-3. While this did not bring the price up to that received in 1959, it did add an average of 12 cents per hundredweight to the blend price for the three-month period. It was requested that the suspension be continued at least for January, 1961, but the request was denied.

Producers gained further price relief through an increase in the support price paid for manufacturing milk from \$3.22 to \$3.40 per hundredweight last March. This increased the blend price under Order 27 by about $7\frac{1}{2}$ cents per hundredweight, but still did not bring the price up to that received the previous year.

A joint public hearing on the manufacturing milk price in Order 27 and nine other northeastern Federally regulated markets began on June 19, 1961, in New York City. The purpose of this hearing was to relate the minimum prices for milk used for manufacturing in the 10 markets (1) to each other; and (2) to the value of milk in the Midwest for manufacturing use. The hearing continued from June 19 through June 30 and was then adjourned until July 10.

Following a meeting held in New York City in November, the Rules and Regulations adopted under Order 27 were amended, effective January, 1961. These amendments included changes in classification of certain milk by-products, methods of figuring butterfat value of by-products, inclusion of additional by-products, and procedure to be followed in accounting for plant losses of milk.

Based on a Federal hearing which began in February, 1960, the United States Secretary of Agriculture issued a recommended decision on September 1, 1960, regarding the identification and pricing of milk handled in bulk tanks.

Because of the number of exceptions filed, no final decision was rendered. Therefore, a revised recommended decision was written in April, 1961. A number of exceptions were again filed by the industry and it is expected that a further revised decision will be proposed before the order is changed. At least two-thirds of the producers supplying milk to the New York-New Jersey market must vote approval. In 1957, only 1 per cent of Order 27 producers, representing 2 per cent of total volume of milk, were delivering by bulk tank. Two years later the number had grown to about 8 per cent, representing 14 per cent of the total pool milk.

The legality of the compensatory payments provisions in Order 27, which were first protested in September, 1957, has not yet been definitely established. These provisions require that milk handlers must pay into a producers' settlement fund for milk purchased outside the marketing area but sold as Class I or fluid milk in the Order 27 area. This section of the order was instituted to protect milk producers in the order from unfair competition from non-pool milk, which if not regulated in some manner, would tend to lower the blend price paid to the producers regulated by Order 27.

Two Pennsylvania handlers, Lehigh Valley Cooperative Farmers, Inc., and Suncrest Farms, Inc., who sell milk retail in northern New Jersey, challenged this part of Order 27 in 1957. After a 15-A hearing, the case was taken to the United States District Court which rendered a decision declaring compensatory payments illegal. This decision was appealed by the United States Department of Agriculture and the appeal was joined by the New Jersey Office of Milk Industry and the New York State Milk Control agency. The United States Court of Appeals in February, 1961, upheld the compensatory payments provisions. Following this decision, the two Pennsylvania handlers further appealed the matter to the United States Supreme Court where it is scheduled to be heard during the fall term of 1961. The money involved from 1957 to date, which is being held in escrow by the courts, amounts to over one million dollars.

A series of meetings was held in New Jersey, New York City and Washington, D. C., in an effort to correlate the endeavors of dairy interests to overcome the dairy problems in the Northeast. As a result, a set of principles was developed upon which milk marketing programs for northeastern dairy farmers should be based. These principles, presented to Secretary Orville L. Freeman in Washington, D. C. last April, involve 10 marketing orders, 78,000 producers and 18 billion pounds or nearly 40 per cent of the nation's milk supplies under Federal marketing orders.

The Governor's Milk Committee was reorganized in July, 1960, at a meeting held in Princeton. The Committee met several times during the year to discuss action to be taken in the numerous milk marketing problems and the pending legal matters that affect New Jersey producers, especially the compensatory payments case.

Public Hearings and Decisions

As required by law, public hearings are held before price changes may be made by the Office of Milk Industry. These hearings are advertised and notice circulated throughout the industry to afford all interested parties an opportunity to present testimony. It is mandatory that the decision be based on the hearing record and be announced within 15 days following the conclusion of the hearing.

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Based on a petition received from four licensees, a hearing was held on December 6, 1960, to consider adjustment of price differentials for milk sold in gallon and half-gallon containers in all areas of New Jersey. The four petitioners were: Lampert Dairy Farms, Inc., Linden; McGuire Brothers, Inc., Toms River; Woolley's Dairy, Neptune; and Maplehurst Farms, Bound Brook. Three of these petitioners did not submit any testimony, and the two witnesses who appeared did not submit testimony on costs nor recommendations for differentials. Eleven consumers, all customers of one of the petitioners, testified that the price of milk in the larger size containers should not be higher than the current prices. The director issued Order 60-3 which stated that there was no justification in the testimony for any changes in the differentials.

Another hearing was held on December 14, following a request from two dealer organizations, Dairy Processors and Handlers of New Jersey, Inc., and the Milk Dealers' Association of Northern New Jersey. The purpose of the hearing was to consider a formula by which minimum resale prices in the 13 northern counties of New Jersey would be related to the Class I or fluid milk price paid to producers. Producer prices in this area, known as Area 1, are regulated by Federal Order 27 and fluctuate each month.

Order 60-4, effective April 1, 1961, in Area 1 only, was issued as a result of the hearing. It provided for an entirely new method for pricing milk for resale in New Jersey. Previously, the minimum resale prices continued in effect until changed by a subsequent order. In Order 60-4, resale prices were based on a bracket system whereby they would fluctuate with the fluid milk prices paid to producers in Area 1. The price for regular milk delivered to consumers would be 28 cents per quart when the price to producers was between \$4.65 and \$4.88 per hundredweight. From this point, brackets ranging 23 cents in the price per hundredweight were prepared. The resale price per quart would change one-half cent from one bracket to the next. On the 25th day of each month the minimum Class I price to be paid to producers for the following month is announced by the market administrator of Order 27, and this indicates the minimum resale price to be charged for the subsequent month.

Based on this order, the resale price on April 1, 1960, was 28 $\frac{1}{2}$ cents per quart for regular milk delivered to consumers. On May 1, it went down one-half cent per quart, and remained at 28 cents during June.

A notice of appeal was filed with the Appellate Division of the Superior Court of New Jersey by three licensees who were aggrieved by Order 60-4. The appellants were Lampert Dairy Farm, Inc.; Thomas Sudzin and Louis Sudzin, Maplehurst Farms; and Norman Halper and Herbert Halper, Cornell Dairy Farms. At a later date, Garden State Farms, Inc., joined the appeal. On March 30, a stay was granted against the enforcement of the order until April 10 upon the petition of Garden State Farms, Inc., of Midland Park. However, the restraining order was dissolved on April 3, and the new price order went into effect.

The appeal case was heard by the Supreme Court of New Jersey on June 5. The Court's decision, rendered on June 30, remanded the matter to the director, instructing him to hold a public hearing to compile a supplement to the existing hearing record upon which Order 60-4 was based. The additional record must include evidence of the cost factors in the milk processing operation for multiple quart packages and vending machines. The Court retained jurisdiction of the appeal, and the order was stayed as of July 1. The previous price order, 60-1, was reinstated by the Court.

Retail and Producer Prices

Order 60-1 specified the minimum prices in northern New Jersey (Area 1) and Order 60-2 provided both producer and retail prices for the balance of the State (Areas 2 and 3), effective July 1, 1960.

Below is a table showing retail price changes for bottled milk during the last five years.

Area No.	Order No.	Effective Date	Dealer-to-Consumer		Store-to-Consumer	
			Grade "A"	Regular	Grade "A"	Regular
1	57-1	4/1/57	\$.28	\$.26	\$.26 $\frac{1}{2}$	\$.24 $\frac{1}{2}$
	59-2	8/1/59	.29	.27	.27 $\frac{1}{2}$	.25 $\frac{1}{2}$
	59-3	1/1/60	.29	.27	.27 $\frac{1}{2}$	.25 $\frac{1}{2}$
	60-1	7/1/60	.30	.28	.28 $\frac{1}{2}$	.26 $\frac{1}{2}$
	60-4	4/1/61	.30 $\frac{1}{2}$	.28 $\frac{1}{2}$	.29	.27
		5/1/61	.30	.28	.28 $\frac{1}{2}$	.26 $\frac{1}{2}$
2	58-3	7/1/58	.31 $\frac{1}{2}$	.28 $\frac{1}{2}$	.30	.27
	59-1	5/1/59	.30 $\frac{1}{2}$	.27 $\frac{1}{2}$	.29	.26
	59-1	7/1/59	.31 $\frac{1}{2}$	.28 $\frac{1}{2}$	.30	.27
	60-2	7/1/60	.32 $\frac{1}{2}$	.29 $\frac{1}{2}$	.31	.28
3	58-3	7/1/58	.29 $\frac{1}{2}$	.26 $\frac{1}{2}$	.28	.25
	59-1	5/1/59	.28 $\frac{1}{2}$	.25 $\frac{1}{2}$	.27	.24
	59-1	7/1/59	.29 $\frac{1}{2}$	.26 $\frac{1}{2}$	.28	.25
	60-2	7/1/60	.30 $\frac{1}{2}$	.27 $\frac{1}{2}$	.29	.26

The orders provide that the price for milk sold in gallon jugs shall be one cent per quart less than the price listed in the orders. Half-gallon jugs shall be one-half cent per quart less than the prices listed. Also, milk may be purchased at the farm of a licensed producer-dealer at one cent per quart less than the store-to-consumer prices. Milk sold out of vending machines is priced the same as the store-to-consumer prices.

Order 60-2 stated that the price to producers in the area of New Jersey not regulated by Federal Order 27 would not be changed. Therefore, dairymen in the southern part of the State (Areas 2 and 3) continued to receive for Class I or fluid milk testing 3.5 per cent butterfat \$6.27 per hundredweight for Grade "A" and \$5.87 per hundredweight for regular grade milk. These prices remained the same throughout the fiscal year. The Class II price paid for that milk separated into cream and the Class II-A price paid for milk used for manufacturing purposes are figured on a formula basis and fluctuate each month.

Formal Hearings and Decisions

Where it is alleged that an applicant for license or a licensee has committed a violation of the milk control act, the director may order a formal hearing. If it is determined that the party involved is guilty, the director may decline to grant a license or may issue a license conditionally, or may suspend or revoke a license already granted.

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Three formal hearings were held by the director in August, 1960, all involving applications for subdealers' licenses. The three applicants, Philip M. McGovern, William A. McGovern, both of Bayonne, and James A. McGovern of Scotch Plains, applied for individual licenses following the revocation of the license of E. J. McGovern Dairy Products, Inc. Upon advice from the office of the Attorney General, the formal hearings were scheduled in order that a record could be made regarding the plans of the applicants for operating in the milk business.

Two of the applicants, Philip M. McGovern and William A. McGovern, had been officers in the corporation whose license was revoked. In these cases, decisions were issued denying licenses based on facts developed at the hearings.

In the case of James A. McGovern, a license was granted on the condition that he would not employ or become associated in business activities with any former licensee whose license had been revoked, suspended or denied. However, based on complaints received, a second hearing was held involving this licensee in November, 1960. Investigation proved that James A. McGovern violated the condition upon which his license was issued in that he did employ a person whose license had been revoked and who was restricted from operating in the milk business in New Jersey. Based on the hearing record, the conditional license was revoked, effective January 6, 1961.

The license issued to New Jersey Milk Products Co., Inc., of Penns Grove was revoked, effective October 11, 1960. It was disclosed at the formal hearing that this company had failed to pay producers and that the monthly reports filed with the Office of Milk Industry had been falsified.

Two formal hearings were held in October, 1960. Robert B. Harrison of Lincoln Park and Mrs. Anna Fico of Bayonne, both subdealers, were in violation for having entered into agreements with former licensees whose licenses had been revoked. Also, in Mrs. Fico's case, an additional charge of failure to keep proper and complete records was made. As a result of the hearing, the subdealer license applied for by Robert B. Harrison was denied. At the close of the fiscal year, the decision in the Fico case was pending.

A dealer, Belleville Dairy of Belleville, was ordered to show cause why his license should not be revoked for failure to comply with the regulation requiring that 60 days written notice be given to the Office of Milk Industry before serving milk to a wholesale customer, in this case a diner, who was being served by another dealer. The formal hearing was held in February, but was reverted to an informal hearing in May. A penalty of \$150 was assessed and Belleville Dairy agreed to surrender the account in question.

A lengthy hearing which began in March and concluded in April involved a subdealer licensee, Milk Supply Company, Inc., of Plainfield. The purpose of the hearing was to determine if the license was obtained as a subterfuge to circumvent price orders. Before the decision was rendered, the company ceased to operate and the license was cancelled.

At the close of the fiscal year 1959-60, decision was pending in the matter of Edward Gilmartin, Jersey City. This case was closed when the application for license was withdrawn by Mr. Gilmartin.

BUREAU OF INVESTIGATIONS AND ENFORCEMENT

The main function of this Bureau is to investigate alleged violations of the milk control law and the orders and regulations of this Office. To accomplish this purpose, calls were made on licensees; consumers; wholesale buyers of milk, such as hotels, restaurants and bakeries; and representatives of school boards, banks and institutions. In addition to the investigations, subpoenas were served to licensees and witnesses in connection with hearings held by the director. During the fiscal year, 6,500 calls were made by investigators.

Many of the reports on investigations were the basis for informal hearings held during the year. A total of 194 informal hearings was conducted and penalties amounting to \$23,244 were assessed. The balance of unpaid penalties at the beginning of the fiscal year was \$2,780, making a total due for the 1960-61 period of \$26,024. The total collected during the period was \$17,214, leaving a balance of \$8,810 at the close of the fiscal year.

The most common violations, stores selling milk for consumption off the premises without a license and dealers and subdealers selling to these unlicensed stores, were revealed during the program of checking stores who failed to file applications for license renewal. However, the most serious offense was the growing practice of serving milk without charge to acquire new customers. Because of competition, particularly in new housing developments, milk was offered for periods ranging from one week to as much as a month without charge.

Other infringements of the orders and regulations included free merchandise in promoting milk sales, free refrigeration, failure to keep proper and complete records and route books, failure to file monthly reports and forms, sales to wholesale accounts without proper compliance, and wholesale deliveries of milk on Sundays during the winter months when they are prohibited.

Creamery inspectors called on 430 creameries to check the composite samples of the milk shipped by New Jersey producers to ascertain if proper butterfat tests had been accredited to these producers. In addition, 248 farms were visited -- 124 for the purpose of checking the agitation of milk in new bulk tank installations and the balance to obtain fresh milk samples to be checked for butterfat content.

A total of 2,602 pieces of glassware used for testing milk was received and calibrated for use by the industry. The amount received for the calibration work was \$101.30.

Licensed stores which wish to change source of supply or to add an additional supplier must file a 60-day notice prior to the date of the contemplated change. Also, any dealer or subdealer, who wishes to supply a wholesale buyer of milk (not required to be licensed) who is already purchasing from another supplier, must file a 60-day notice of intent to take on this account. During this 60-day period, information is obtained by questionnaire or personal contact regarding balance of money due the present supplier and the possibility of illegal offers. Approximately 1,150 of these notices were received during the 1960-61 period. Of these, 822 were given approval, 223 were denied approval, 52 were withdrawn and 17 were cancelled.

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Approximately 25,000 H-1A forms were received and processed during the year. These forms contain data on accounts acquired or lost and price information and must be notarized. It is required that all licensees except stores file this form before the 10th of each month.

BUREAU OF AUDITING

Each licensed dealer and processor files monthly reports which show production, purchases, sales, and imports and exports of milk, cream and other dairy products. These reports also indicate all wholesale and retail prices for each item purchased and sold. Monthly and annual statistics are prepared from the data submitted on these reports. These statistical summaries indicate dairy industry trends in New Jersey and are supplied to other State agencies, the United States Department of Agriculture and to dairy industry organizations.

A total of 2,804 reports was audited during the fiscal year 1960-61, or an average of 233 each month. The number of reports audited was 134 less than during the previous year because of the decline in the number of milk dealers.

The license fee for each milk dealer is based on the sales figures shown on the monthly reports. The auditing staff computes the fees and makes the comparison with schedules submitted on applications for licenses to determine if the correct fee has been paid.

One of the main purposes of the monthly reports is to determine if producers have been paid the proper prices for milk shipped to handlers. It was disclosed that dairy farmers were underpaid \$2,884.02 during the 1960-61 period. This does not include incorrect payments made to those dairymen whose prices are regulated by Federal Orders 27 and 61. There was a balance due producers on July 1, 1960, amounting to \$506.74, making a total of \$3,390.76 due producers for the year. Of this, \$3,087.57 was paid, leaving a balance of \$303.19 at the close of June, 1961.

During the fiscal year 1960-61, 98 field audits were completed, an increase of 40 over last year. In addition, 77 producers were visited for verification of payments received, an increase of 51 over the previous year. Even though many more audits and outside contacts were made, it was not possible to make routine audits on a regular schedule as originally intended. Audits were made only where questionable conditions existed, most of which were reflected on the monthly reports. Records were audited because of discrepancies in prices shown, producer payments, sources of supply and amounts owed by sub-dealers to dealers and processors. In some cases, records were examined to determine proper licensing classification and to ascertain if complete and proper records were maintained in accordance with the orders and regulations. In those cases where alleged violations appeared or where complete information could not be obtained, conferences or hearings were held.

On the application for license, each subdealer must show the name of the dealer or processor from whom he purchases his milk and milk products. Records of the approved sources are maintained, and before any change may be made, notice must be filed by the licensee desirous of making the change 60 days in

advance on forms provided by this Office. This procedure must also be followed if a dealer or processor wishes to discontinue selling to a subdealer. Before the expiration of the 60-day period, a conference is held to determine the reason for making the change. It must be established that no illegal offer has been made and that any money owed will be paid before the request is granted. The conference is attended by the person requesting the change, the dairy losing the account and the dairy gaining the account.

During the 1960-61 fiscal year, 86 applications of this type were received, a decrease of 27 from the previous fiscal year. Of these, 42 were granted approval to make the requested change. One subdealer was denied permission to change his source of supply due to his failure to pay in full the amount owed his present supplier. Ten were cancelled for failure to file the necessary forms and 19 withdrew applications because they decided to continue with the companies who were supplying them. Two dealers who had filed notice of discontinuance of service to subdealers also withdrew these notices before the effective date of the change.

BUREAU OF LICENSING

The milk control law requires that any milk dealer, processor, subdealer or store buying milk for resale in New Jersey must be licensed. All licenses, regardless of the date of issuance, expire on June 30 and must be renewed annually. License fees paid by dealers are based on the average quantity of milk sold monthly. Subdealer fees are based on the number of routes operated at \$15 per route. The processor fee is \$325, the manufacturer fee is \$75, and the store fee is \$5 for each store selling milk for consumption off the premises.

The ruling by the Office of the Attorney General in March, 1960, that all vending machines dispensing milk for consumption off the premises must be licensed went into effect for the 1960-61 licensing year, and 1,441 such licenses were issued. Vending machines were classified as stores and the fee is \$5 for each machine.

Applications for renewal of licenses for the fiscal year 1961-62 were mailed in April, 1961. Temporary help was employed from April to September to assist with the processing of the applications and the issuance of licenses.

The following table shows the number of licenses issued for the year July 1, 1960 to June 30, 1961 as compared with the previous year and with the 1950-51 period.

Type of License	1960-61	1959-60	1950-51
Dealers, processors, producer-dealers, subdealers and manufacturers	2,188	2,234	2,130
Stores	14,673	14,286	13,416
Vending machines	1,441	...	...
Butterfat testers	392	399	411
Weighers and samplers	394	391	283
Permit to purchase	127	138	214

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The number of store licenses issued during 1960-61, exclusive of vending machines, was the greatest during any one year since the existence of milk control in New Jersey.

Permits to purchase must be obtained by all milk dealers and processors who buy milk from New Jersey producers on a butterfat basis. The decline from 214 in 1950-51 to 127 in 1960-61 is indicative of the decrease in the number of milk dealers and processors who purchase from New Jersey producers. Also contributing to the decline is the fact that many small companies have discontinued the milk business or have changed to the subdealer category.

The revenue received from license fees showed a significant increase, mostly due to the issuance of vending machine licenses and the increased number of store licenses.

	1960-61	1959-60	1960-61 Compared with 1959-60
Total license fees	\$198,827.75	\$188,226.00	+\$10,601.75
Refunds	\$ 1,521.50	\$ 1,530.50	-\$ 9.00
Net revenue from license fees	\$197,306.25	\$186,695.50	+\$10,610.75

The IBM section of the Department continued to maintain the records used to imprint the renewal licenses. This is the second year that the work has been handled within the Department, thus providing ready access to the records and a much quicker and more efficient method for making changes.

BUREAU OF MILK ECONOMICS

Production

New Jersey producers and producer-dealers produced 1,136,828,219 pounds of milk during the fiscal year. Total production during the period from July, 1960, to June, 1961, exceeded the total production reported for the same period one year earlier by 0.29 per cent.

North Jersey producers and producer-dealers produced 0.74 per cent more milk during the fiscal year 1960-61 than during the previous year. South Jersey producers and producer-dealers produced 1.56 per cent less milk last year than during the same period one year earlier.

A portion of the increase in milk production in North Jersey and some of the decrease in milk production in South Jersey can be attributed to the shifting of producers from South Jersey markets to markets in North Jersey. The movement of South Jersey producers into the North Jersey markets originated shortly after Official Order 57-3 became effective in August, 1957, and has continued up to the present time.

The monthly production totals as reported for producers and producer-dealers for the last two fiscal years and the average of the latest five-year period have been plotted in graph form. This comparison is shown in Chart 1

and indicates that total milk production in New Jersey during 1960-61 followed the same seasonal pattern established in recent years.

The peak in milk production in New Jersey usually occurs during May. The fiscal year 1960-61 proved to be no exception. However, during May, 1961, New Jersey dairy farmers produced less milk than in May, 1960.

Since the number of producers has steadily declined in recent years, the increase in milk production can be attributed to increased production per herd and to the increased efficiency of those producers remaining in business.

Producer Deliveries of Milk to Handlers

New Jersey producers, exclusive of producer-dealers, delivered a total of 1,086,123,959 pounds of milk to handlers reporting to the Office of Milk Industry during the fiscal year ending June 30, 1961. This was an increase of 0.52 per cent over the previous fiscal year.

The average milk delivery per producer per month to North Jersey handlers was 31,343 pounds during the fiscal year 1960-61. The average milk delivery per producer per month to South Jersey handlers was 3,031 pounds less than the average delivery to North Jersey handlers.

Prices

The average monthly prices received by New Jersey producers during 1960-61 were less than the average monthly prices received during the previous fiscal year, and also less than the average monthly prices received during the five-year period ending June 30, 1960. (See Chart 2)

Prices received by New Jersey producers generally increase during the June to November period and decline during the December to May period. The prices received during the fiscal year ending June 30, 1961, followed this established pattern.

Milk producers in North Jersey received an average price for their milk of \$5.22 during 1960-61. This was 16 cents less than the average price received during the previous fiscal year. South Jersey producers received the same average price for their milk during both years.

New Jersey producers selling milk to handlers regulated by the Office of Milk Industry continued to have a price advantage over producers delivering milk to handlers regulated by Federal Orders 61 and 27. In the 12-month period ending June 30, 1961, producers delivering milk to plants regulated by the Office of Milk Industry received an average monthly price of \$5.78 per hundredweight, while producers delivering milk to Federal Order 61 and 27 plants received a monthly average price of \$4.87 and \$4.45 per hundredweight, respectively. In the fiscal year 1959-60 the prices received by producers delivering to handlers regulated by this Office exceeded the prices received under Federal Orders 61 and 27 by \$0.90 and \$1.18 per hundredweight, respectively.

Gross Income

New Jersey milk producers, exclusive of producer-dealers, realized a gross income exceeding 57.5 million dollars for milk delivered to handlers during

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1960-61. This was approximately one million dollars less than the income received for milk delivered during the previous fiscal year. The decrease in gross income is attributed to the fact that production did not increase enough to offset the decrease in prices received by producers.

Producers delivering milk to North Jersey handlers realized a gross income of \$45,454,880.16 during 1960-61. During the 12-month period ending June 30, 1961, these producers realized a gross income per producer of \$19,550.48 or \$440.47 more than during the previous fiscal year.

During the past fiscal year producers delivering milk to South Jersey handlers realized a gross income of 1.25 per cent less than the previous year. However, since the decline in the number of producers delivering milk was greater than the decline in gross income, the average gross income per producer delivering to South Jersey handlers during 1960-61 was \$1,320.72 more than in the previous 12-month period.

Additional statistical information pertaining to the production of milk in New Jersey and to the price received for milk delivered to handlers may be found in Tables 1 through 5.

Sales of Fluid Milk and Cream

Fluid milk sales during the year exceeded 824 million quarts. Sales of fluid milk followed the same seasonal pattern as has been established in recent years. This is shown in Chart 3.

The peak of fluid milk sales during the fiscal year was attained during the month of October, 1960.

Total fluid milk sales for the year were 1.89 per cent less than during the previous year. The decrease in fluid milk sales was greater percentage-wise in South Jersey where sales decreased approximately 3.50 per cent as opposed to a decrease of 1.44 per cent in North Jersey.

Sales of the various milk products distributed by dealers and producer-dealers in North and South Jersey have been analyzed to determine the relative proportion of each product to total sales. This comparison is shown in Charts 4 and 5.

In North and South Jersey sales of regular milk with Vitamin D added were larger percentage-wise than those of the other products sold. The percentage of cream sales in North Jersey was larger than in South Jersey. Sales of premium milk were larger as a percentage of the total in North Jersey than they were in South Jersey.

Total cream sales in New Jersey during the fiscal year were slightly above the previous year. The increase in cream sales was centered in South Jersey where sales of cream rose 5.87 per cent. Sales of cream in North Jersey decreased slightly.

Additional statistical information pertaining to the sales of milk and cream in New Jersey may be found in Tables 6 and 7.

Exports and Imports of Milk and Cream

New Jersey producers exported over 266.3 million pounds of milk during 1960-61. Exports of New Jersey produced milk in this latest fiscal year exceeded exports during the previous fiscal year by 0.89 per cent.

Imports of milk into New Jersey during the past 12 months were 1.67 per cent less than the previous fiscal year. South Jersey dealers imported 1.76 per cent more milk, while imports in North Jersey decreased 2.52 per cent.

Imports of cream declined on a statewide basis. North Jersey handlers imported 7.19 per cent less cream in 1960-61 than during the previous year. The decrease in cream imports in North Jersey more than offset the 3.24 per cent increase in cream imports by South Jersey handlers.

Additional statistics pertaining to exports and imports of milk and cream may be found in Tables 8, 9 and 10.

TABLE 1. PRODUCTION OF MILK AS REPORTED BY DEALERS AND
PRODUCER-DEALERS IN NEW JERSEY (POUNDS)

	1960-61		
	North Jersey	South Jersey	New Jersey Total
1960			
July	72,873,262	17,510,967	90,384,229
August	73,850,383	18,567,094	92,417,477
September	72,318,286	17,746,954	90,065,240
October	74,287,805	18,039,772	92,327,577
November	70,843,433	17,232,590	88,076,023
December	74,417,378	17,655,838	92,073,216
1961			
January	76,552,984	18,083,772	94,636,756
February	71,292,947	16,741,616	88,034,563
March	82,453,208	18,850,421	101,303,629
April	80,386,208	18,546,415	98,932,623
May	89,554,616	20,725,083	110,279,699
June	79,831,650	18,465,537	98,297,187
Yearly total	918,662,160	218,166,059	1,136,828,219
Monthly average	76,555,180	18,180,505	94,735,685
Total 1959-60	911,944,671	221,618,302	1,133,562,973
Per cent change 1960-61 as compared to 1959-60	+0.74%	-1.56%	+0.29%

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TABLE 2. NUMBER OF PRODUCERS, TOTAL AMOUNT OF MILK DELIVERED, TOTAL AMOUNT OF MONEY PAID AND AVERAGE PRICE PER MONTH, NORTH JERSEY, YEAR 1960-61

1960	Number of Producers	Total Amount of Milk (pounds)	Total Amount of Money	Price Per Hundred- weight
July	2,414	69,096,834	\$3,463,449.02	\$5.01
August	2,374	70,119,219	3,746,593.95	5.34
September	2,368	68,656,618	3,817,391.26	5.56
October	2,365	70,580,231	4,039,600.66	5.72
November	2,342	67,198,063	3,930,549.51	5.85
December	2,301	70,637,791	3,963,374.69	5.61
1961				
January	2,330	72,799,344	3,886,090.62	5.34
February	2,318	67,901,803	3,532,487.57	5.20
March	2,309	78,658,504	3,925,095.18	4.99
April	2,283	76,738,620	3,700,774.81	4.82
May	2,277	85,810,236	3,966,809.28	4.62
June	2,222	76,261,023	3,482,663.61	4.57
Total		874,458,286	\$45,454,880.16	
Average	2,325	72,871,524	\$ 3,787,906.68	\$5.22
Total 1959-60	2,424	866,380,261	\$46,322,671.16	\$5.38
Per cent change 1960-61 as com- pared to 1959-60	-4.08	+0.932	-1.87	-2.97

TABLE 3. NUMBER OF PRODUCERS, TOTAL AMOUNT OF MILK DELIVERED, TOTAL AMOUNT OF MONEY PAID AND AVERAGE PRICE PER MONTH, SOUTH JERSEY, YEAR 1960-61

	Number of Producers	Total Amount of Milk (pounds)	Total Amount of Money	Price Per Hundred- weight
1960				
July	639	16,891,175	\$ 963,926.87	\$5.71
August	639	17,986,327	1,017,352.78	5.66
September	643	17,202,012	997,059.68	5.80
October	642	17,523,191	1,023,794.16	5.84
November	644	16,700,232	986,595.91	5.91
December	629	17,123,120	1,004,095.18	5.86
1961				
January	623	17,581,693	1,018,909.85	5.80
February	608	16,269,452	940,912.58	5.78
March	605	18,315,020	1,041,245.22	5.69
April	607	18,026,199	1,020,863.64	5.66
May	598	20,151,648	1,088,354.09	5.40
June	597	17,895,604	978,726.77	5.47
Total		211,665,673	\$12,081,836.73	
Average	623	17,638,806	\$ 1,006,819.73	\$5.72
Total 1959-60	677	214,100,739	\$12,234,933.00	\$5.72
Per cent change 1960-61 as com- pared to 1959-60	-7.98	-11.37	-1.25	

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TABLE 4. NUMBER OF PRODUCERS, TOTAL AMOUNT OF MILK DELIVERED, TOTAL AMOUNT OF MONEY PAID AND AVERAGE PRICE PER MONTH, NEW JERSEY, 1960-61

1960	Number of Producers	Total Amount of Milk (pounds)	Total Amount of Money	Price Per Hundred- weight
July	3,053	85,988,009	\$4,427,375.89	\$5.15
August	3,013	88,105,546	4,763,946.73	5.41
September	3,011	85,858,630	4,814,450.94	5.61
October	3,007	88,103,422	5,063,394.82	5.75
November	2,986	83,898,295	4,917,145.42	5.86
December	2,930	87,760,911	4,967,469.87	5.66
1961				
January	2,953	90,381,037	4,905,000.47	5.43
February	2,926	84,171,255	4,473,400.15	5.32
March	2,914	96,973,524	4,966,340.40	5.12
April	2,890	94,764,819	4,721,638.45	4.98
May	2,875	105,961,884	5,055,163.37	4.77
June	2,819	94,156,627	4,461,390.38	4.74
Total		1,086,123,959	\$57,536,716.89	
Average	2,948	90,510,330	\$ 4,794,726.41	\$5.32
Total 1959-60	3,100	1,080,481,000	\$58,557,604.16	\$5.44
Per cent change 1960-61 as com- pared to 1959-60	-4.90	+0.52	-1.74	-2.21

TABLE 5. COMPARISON OF PRICES PAID TO PRODUCERS BY HANDLERS REGULATED BY NEW JERSEY OFFICE OF MILK INDUSTRY WITH PRICES PAID TO PRODUCERS UNDER FEDERAL ORDERS 61 AND 27, FOR 3.5 PER CENT MILK, 1960-61

	Blend Prices Paid Producers			Amount New Jersey Price Exceeded	
	N.J. Handlers ¹	Order 61 ²	Order 27 ³	Order 61	Order 27
1960					
July	\$5.74	\$4.84	\$4.238	\$.90	\$1.502
August	5.64	4.84	4.578	.80	1.062
September	5.79	5.03	4.808	.76	.982
October	5.88	5.20	4.918	.68	.962
November	5.92	5.24	5.018	.68	.902
December	5.87	5.23	4.828	.64	1.042
1961					
January	5.88	4.93	4.568	.95	1.312
February	5.91	4.89	4.438	1.02	1.472
March	5.81	4.82	4.238	.99	1.572
April	5.82	4.62	4.078	1.20	1.742
May	5.53	4.48	3.878	1.05	1.652
June	5.62	4.34	3.868	1.28	1.752
Average	<u>\$5.78</u>	<u>\$4.87</u>	<u>\$4.45</u>	<u>\$.91</u>	<u>\$1.33</u>

¹ Average price paid New Jersey producers for Grade B milk by New Jersey handlers not regulated by either Federal Order 61 or Federal Order 27.

² Blend prices paid producers by Order 61 handlers converted to a 3.5 per cent butterfat basis.

³ Blend prices paid producers by Order 27 handlers at the 61-70 mile zone.

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TABLE 6. SALES OF FLUID MILK AS REPORTED BY NEW JERSEY HANDLERS

1960-61			
(QUARTS)			
	North Jersey	South Jersey	New Jersey Total
1960			
July	51,944,348	16,146,184	68,090,532
August	53,105,862	16,046,096	69,151,958
September	54,682,567	15,072,486	69,755,053
October	56,176,409	15,091,987	71,268,396
November	54,664,884	14,458,066	69,122,950
December	55,221,303	14,837,307	70,058,610
1961			
January	54,977,359	14,462,253	69,439,612
February	50,122,947	13,556,334	63,679,281
March	56,332,475	14,843,696	71,176,171
April	52,626,573	13,944,350	66,570,923
May	54,680,280	14,287,049	68,967,329
June	52,828,678	14,227,300	67,055,978
Total	647,363,685	176,973,108	824,336,793
Average	53,946,974	14,747,759	68,694,733
Total 1959-60	656,825,814	183,384,852	840,210,666
Per cent change 1960-61 as com- pared to 1959-60	-1.44	-3.50	-1.89

TABLE 7. SALES OF CREAM AS REPORTED BY NEW JERSEY HANDLERS
1960-61

(Quarts - Reported in fluid milk equivalent)

	North Jersey	South Jersey	New Jersey Total
1960			
July	8,304,152	1,996,101	10,300,253
August	8,169,681	2,092,284	10,261,965
September	7,781,461	1,642,581	9,424,042
October	7,608,458	1,497,323	9,105,781
November	8,536,890	1,690,425	10,227,315
December	10,179,603	1,638,644	11,818,247
1961			
January	7,623,452	1,303,578	8,927,030
February	6,525,297	1,277,567	7,802,864
March	8,873,999	1,667,566	10,541,565
April	8,479,347	1,579,718	10,059,065
May	9,603,191	2,345,267	11,948,458
June	9,082,803	2,069,100	11,151,903
Total	100,768,334	20,800,154	121,568,488
Average	8,397,361	1,733,346	10,130,707
Total 1959-60	101,145,175	19,646,117	120,791,292
Per cent change 1960-61 as com- pared to 1959-60	-0.37	+5.87	+0.64

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TABLE 8. EXPORTS OF NEW JERSEY PRODUCED MILK

1960-61

(POUNDS)

	North Jersey	South Jersey	New Jersey Total
1960			
July	19,671,083	2,322,277	21,993,360
August	19,278,817	1,923,822	21,202,639
September	18,151,596	1,792,951	19,944,547
October	19,566,794	3,159,994	22,726,788
November	17,870,771	2,823,395	20,694,166
December	19,759,274	2,943,481	22,702,755
1961			
January	18,134,039	3,167,803	21,301,842
February	17,932,023	3,087,465	21,019,488
March	19,047,062	3,457,229	22,504,291
April	19,624,061	3,412,218	23,036,279
May	22,354,862	3,971,617	26,326,479
June	19,434,529	3,434,134	22,868,663
Total	230,824,911	35,496,386	266,321,297
Average	19,235,409	2,958,032	22,193,441
Total 1959-60	243,258,413	20,702,028	263,960,441
Per cent change 1960-61 as com- pared to 1959-60	-5.11	+71.46	+0.89

TABLE 9. IMPORTS OF MILK FOR NEW JERSEY UTILIZATION

1960-61

(POUNDS)

	North Jersey	South Jersey	New Jersey Total
1960			
July	68,657,990	21,164,390	89,822,380
August	70,317,080	20,552,496	90,869,576
September	74,150,136	18,514,824	92,664,960
October	77,923,318	19,457,970	97,381,288
November	76,281,643	15,990,897	92,272,540
December	80,934,195	16,570,140	97,504,335
1961			
January	76,374,301	17,691,828	94,066,129
February	68,046,443	17,431,710	85,478,153
March	72,918,234	18,637,026	91,555,260
April	65,377,670	18,858,063	84,235,733
May	63,486,373	17,267,224	80,753,597
June	65,453,758	19,068,598	84,522,356
Total	859,921,141	221,205,166	1,081,126,307
Average	71,660,095	18,433,764	90,093,859
Total 1959-60	882,106,936	217,387,062	1,099,493,998
Per cent change 1960-61 as com- pared to 1959-60	-2.52	+1.76	-1.67

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TABLE 10. CREAM IMPORTED FOR USE IN NEW JERSEY

1960-61

(POUNDS)¹

1960	North Jersey	South Jersey	New Jersey Total
July	16,575,645	3,027,357	19,603,002
August	16,235,522	2,912,971	19,148,493
September	13,412,623	2,011,749	15,424,372
October	13,297,066	1,424,190	14,721,256
November	14,079,349	1,351,117	15,430,466
December	16,486,050	1,951,614	18,437,664
1961			
January	11,226,914	1,481,584	12,708,498
February	11,258,415	1,032,784	12,291,199
March	13,251,225	1,837,053	15,088,278
April	13,751,189	1,812,987	15,564,176
May	17,442,543	3,552,538	20,995,081
June	17,484,055	2,786,134	20,270,189
Total	174,500,596	25,182,078	199,682,674
Average	14,541,716	2,098,507	16,640,223
Total 1959-60	188,020,136	24,392,045	212,412,181
Per cent change 1960-61 as com- pared to 1959-60	-7.19	+3.24	-5.99

¹Reported in fluid milk equivalent

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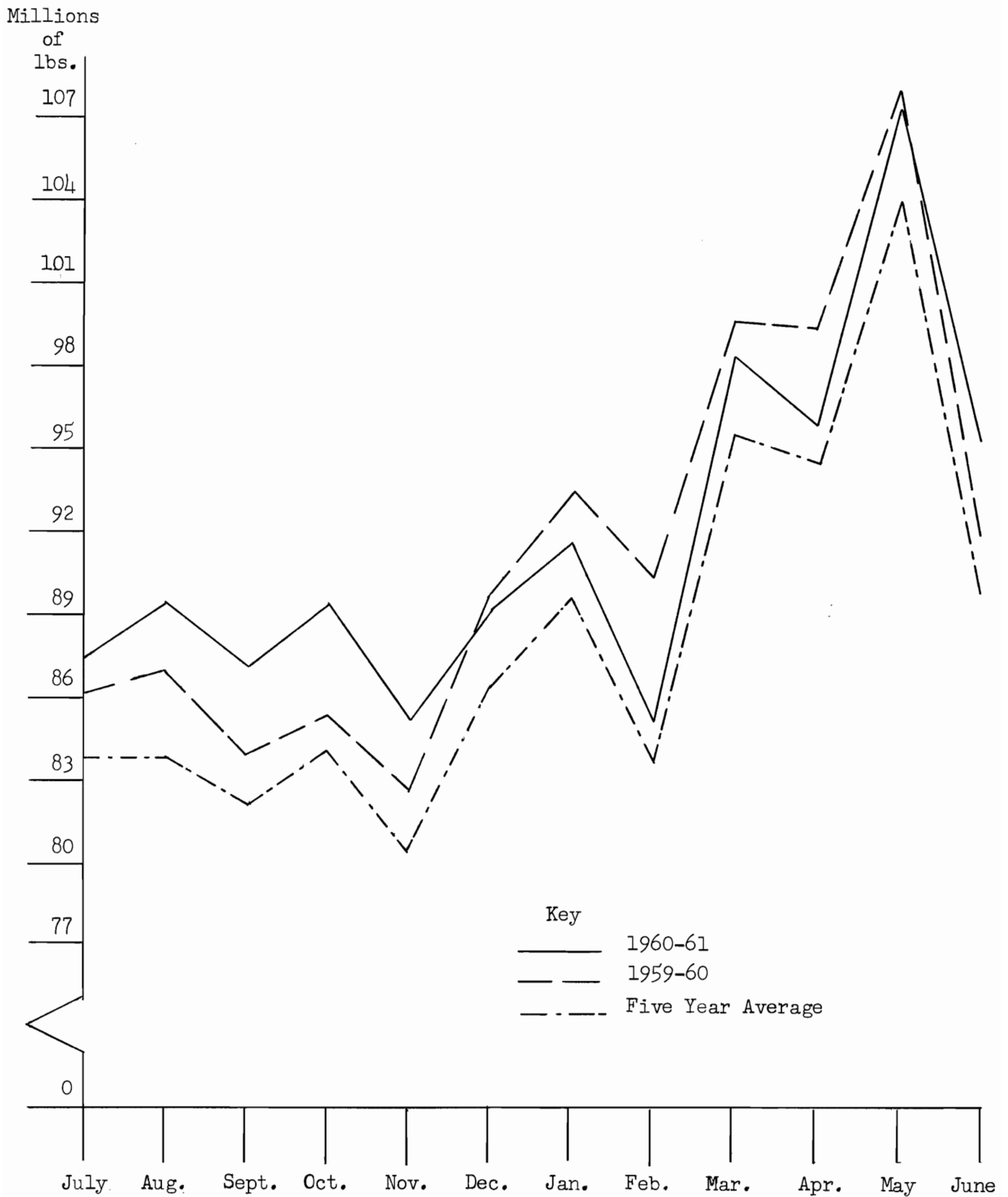


Chart 1. Comparison of Monthly Milk Production in New Jersey 1960-61, 1959-60 and Latest Five-Year Average

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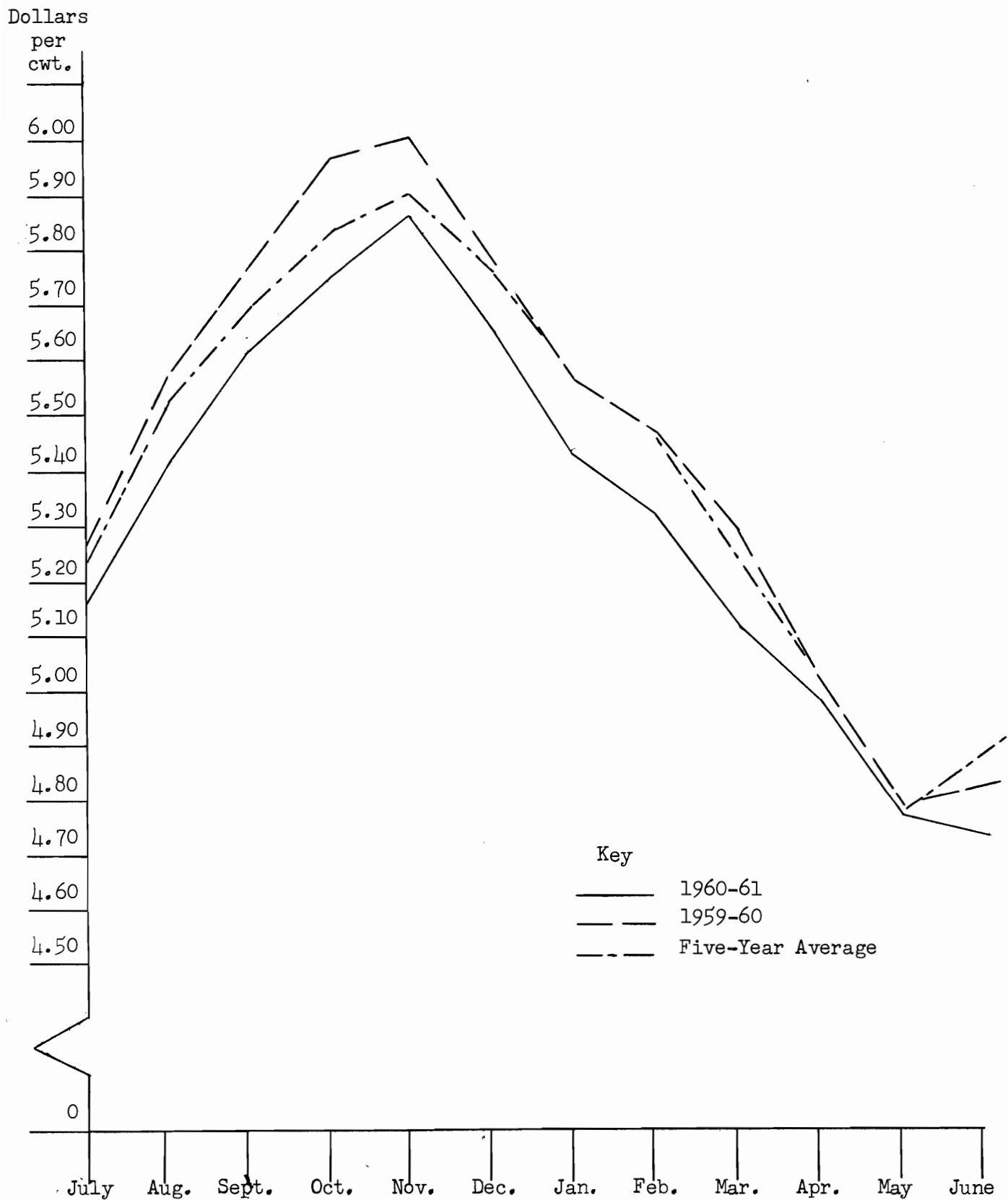


Chart 2. Comparison of Average Monthly Prices Received by New Jersey Producers for Milk, 1960-61, 1959-60 and Latest Five-Year Average

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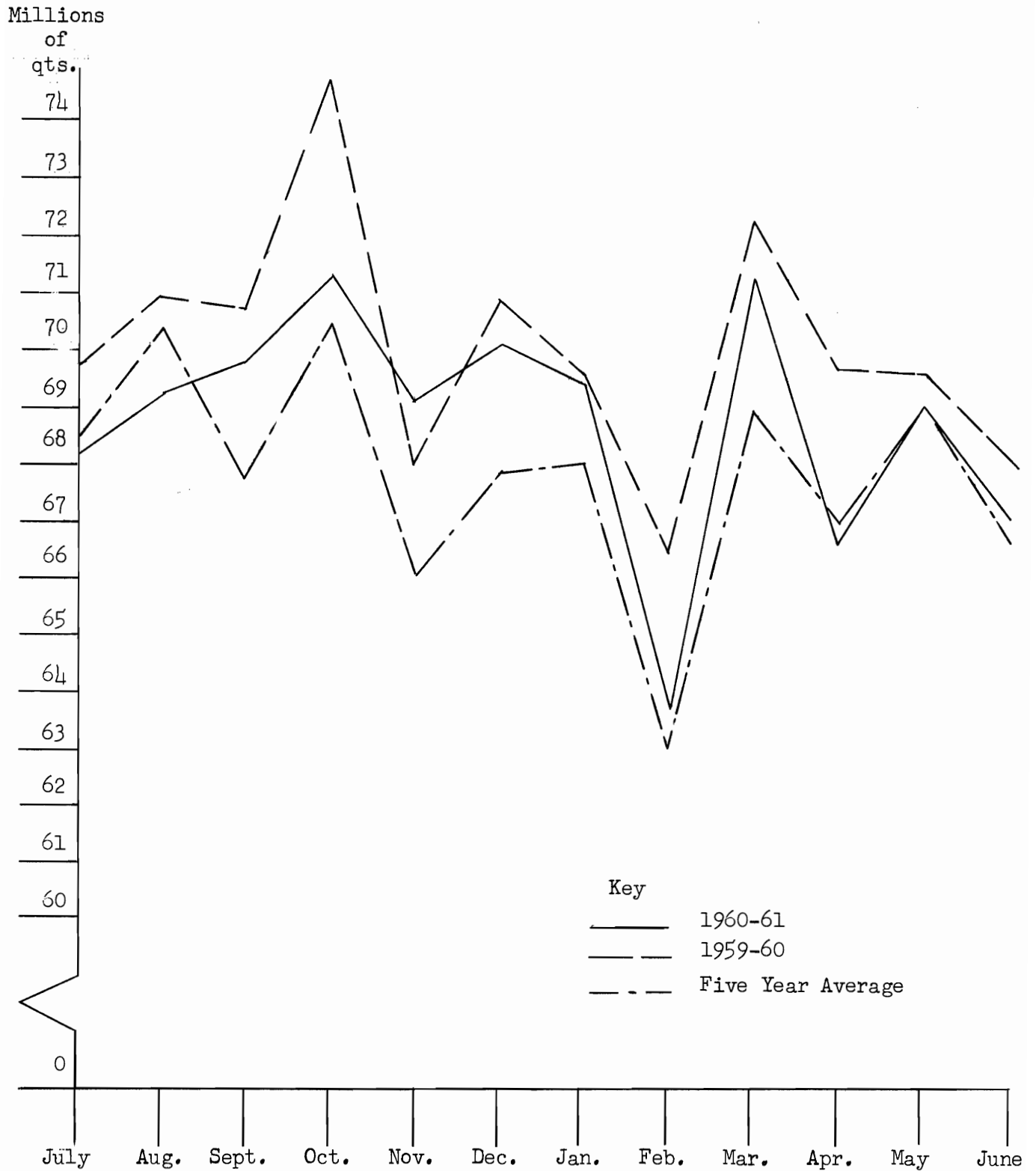


Chart 3. Comparison of Monthly Sales of Fluid Milk in New Jersey, 1960-61, 1959-60 and Latest Five Year Average

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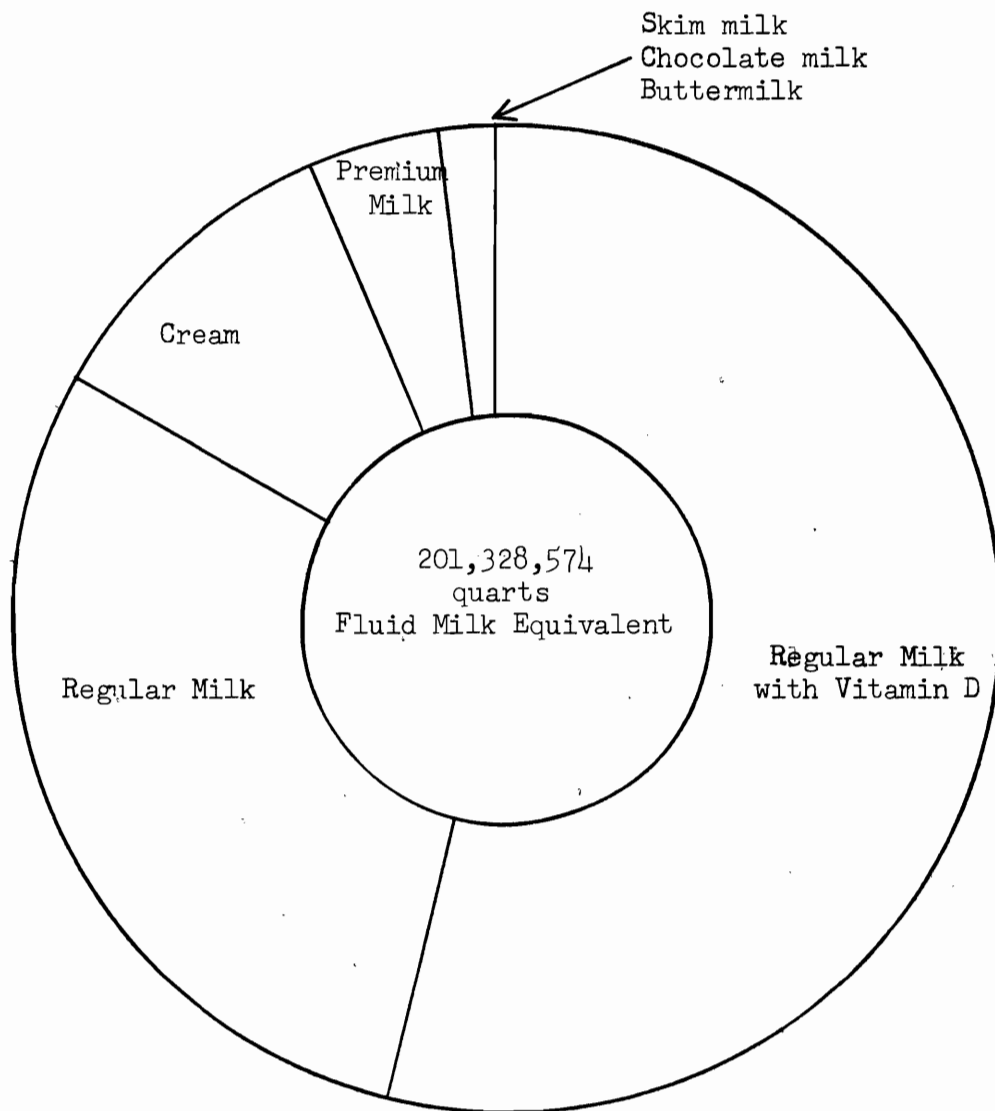


Chart 5. Dealer Sales by Type of Product, South Jersey, 1960-61

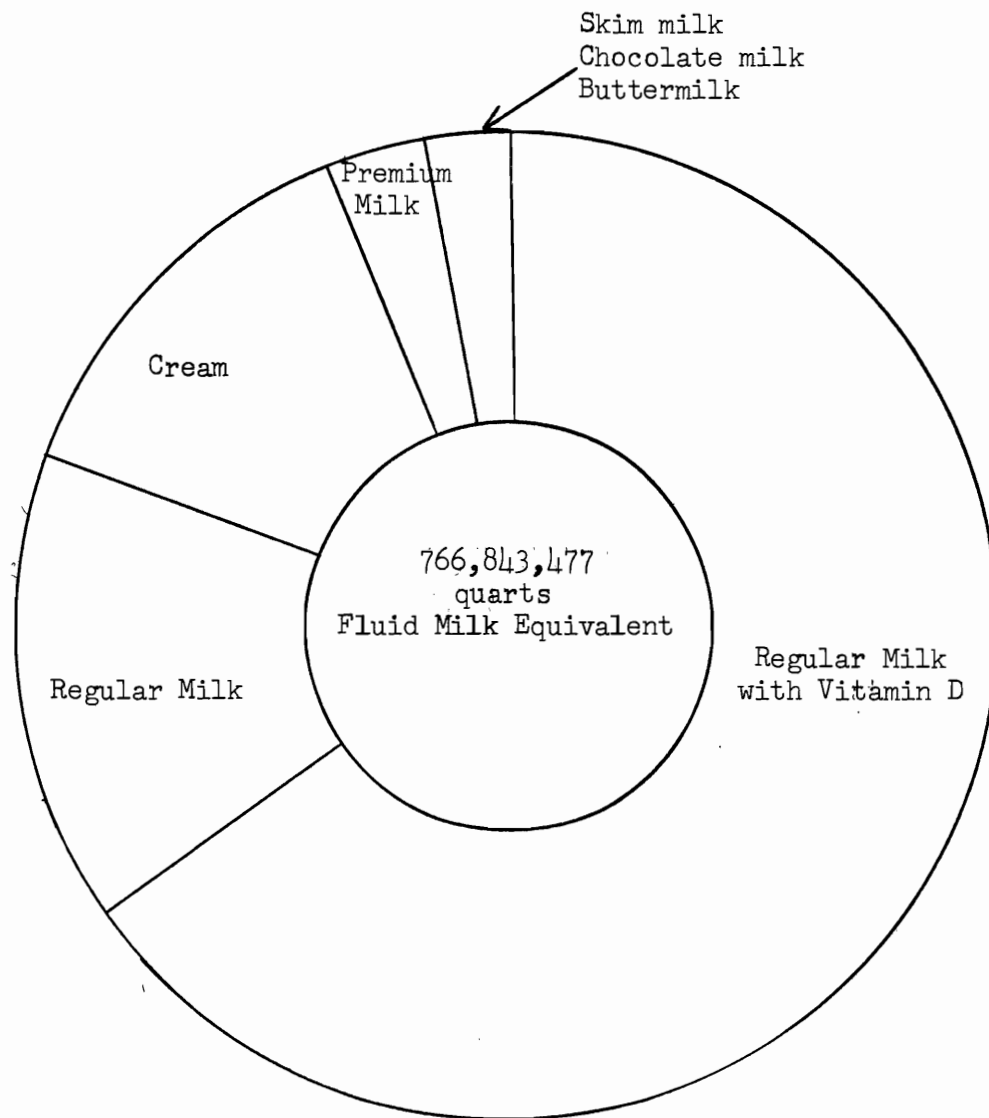


Chart 4. Dealer Sales by Type of Product, North Jersey, 1960-61

OFFICIAL PROCEEDINGS OF THE FORTY-SIXTH
ANNUAL STATE AGRICULTURAL CONVENTION

The forty-sixth annual State Agricultural Convention was held in the Assembly Chamber of the State Capitol in Trenton, on Tuesday, January 24, 1961. The meeting was called to order at 9:35 a.m. by Alfred H. Lowe, president of the State Board of Agriculture. The invocation was offered by the Reverend Robert L. Blackwell, pastor of the First Presbyterian Church of Plainsboro.

The roll of delegates was called by Secretary of Agriculture, Phillip Alampi as follows:

DELEGATES OF THE STATE AGRICULTURAL CONVENTION

From County Boards of Agriculture

<u>Name</u>	<u>Address</u>	<u>County</u>
John Melora	Hammonton	Atlantic
Delmo Muzzarelli	Vineland	Atlantic
Henry B. Kellog	Tenafly	Bergen
David H. Tice, Jr.	Woodcliff Lake	Bergen
Lester C. Jones	Medford	Burlington
Clement B. Lewis	Riverton	Burlington
Samuel C. DeCou	Haddonfield	Camden
Elmer J. Duncan	Grenloch	Camden
Lester J. Germanio	Woodbine	Cape May
Felix E. Wuerker	Cape May	Cape May
Albert S. Fogg	Bridgeton	Cumberland
Wesley McClosky	Millville	Cumberland
Harry L. Birdsall, Jr.	North Caldwell	Essex
Ernest J. Ricca	West Orange	Essex
Joseph Maccarone	Swedesboro	Gloucester
Santo Miserendino	Westville	Gloucester
Dr. Clarence F. Manziano	Jersey City	Hudson
Albert Schenone	Union City	Hudson
William Kinney	Asbury	Hunterdon
William W. Phillips	Milford	Hunterdon
Louis Gantz	Princeton	Mercer
Robert N. Simpkins	Yardville	Mercer
Raymond Baker	Deans	Middlesex
Marvin Hulick	Cranbury	Middlesex
Walter W. Lott	Freehold	Monmouth
William Schlechtweg	Freehold	Monmouth
Lowry Mead	Chester	Morris
James P. Vreeland	Towaco	Morris
Daniel M. Crabbe	Toms River	Ocean
Martin Schubkegel, Jr.	Lakewood	Ocean
Orrie Feitsma	Totowa	Passaic
Chester J. Krulan	Clifton	Passaic
John Catalano	Woodstown	Salem
Arthur Jarman	Monroeville	Salem
David W. Amerman	Neshanic	Somerset
Charles Grayson	Belle Mead	Somerset

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George H. Clark	Sussex	Sussex
Herman Kleindienst	Newton	Sussex
Thomas V. Albert, Jr.	Plainfield	Union
John Koscielny	Scotch Plains	Union
Stuart Hartung	Phillipsburg	Warren
Lloyd W. Heritage	Bloomsbury	Warren

From State and Pomona Granges

Clinton H. Cowperthwait	Moorestown	State Grange
W. Ellsworth Oberly	Stewartsville	State Grange
Martin Decker	Hammonton	Atlantic
John Clauss	Fair Lawn	Bergen-Passaic
C. Harold Joyce	Medford	Burlington
Reuben H. Dobbs	Marlton	Camden
Allen McClain	Green Creek	Cape May
Karl J. Wentorf	Whippany	Central District
Robert P. Wheaton	Bridgeton	Cumberland
Kenneth T. Stretch	Mullica Hill	Gloucester
Chester Smith	Ringoes	Hunterdon
T. Richard Evans, Jr.	Lawrenceville	Mercer
Harry Dietrich	New Market	Middlesex-Somerset
Howard P. Story, Sr.	Freehold	Monmouth
Lawrence C. Broomell	Woodstown	Salem
George H. Clark	Sussex	Sussex
Charles S. Smith	Broadway	Warren

From Other Organizations

American Cranberry Growers' Association -- William Haines, Chatsworth; Edward V. Lipman, New Brunswick.

Jersey Chick Association -- William Rapp, Farmingdale; William Rutherford, Jamesburg.

New Jersey Association of Nurserymen -- William Flemer, III, Princeton; J. Peter Vermeulen, Neshanic Station.

New Jersey State Florists' Association -- Carl J. Klotz, Robbinsville; Lester G. Pyle, Paramus.

New Jersey State Horticultural Society -- C. William Haines, Sr., Masonville; Charles E. Maier, Pine Brook.

New Jersey State Poultry Association -- Irving Berger, Lakewood; Herbert O. Wegner, Newfield.

United Milk Producers of New Jersey -- Calvin Danberry, Ringoes; Henry Zdancewic, Freehold.

Blueberry Cooperative Association -- Fred E. Scammell, Toms River.

Cooperative Growers' Association, Inc. -- Placido Varsaci, Beverly.

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The Cooperative Marketing Associations in New Jersey, Inc. -- Victor Lenco, Robbinsville.

New Jersey Agricultural Experiment Station -- Charles W. M. Hess, Wayne.

New Jersey Beekeepers Association -- Henry L. Vogel, Old Bridge.

New Jersey College of Agriculture -- John L. Swink, Westfield.

New Jersey Crop Improvement Association -- Thomas H. Sutton, Burlington.

New Jersey Guernsey Breeders' Association, Inc. -- J. Ellis Croshaw, Jr., Wrightstown.

New Jersey Holstein-Friesian Cooperative Association, Inc. -- Stanley B. Roberts, Montague.

New Jersey State Potato Association -- John Pollak, Cranbury.

E. B. Voorhees Agricultural Society -- William M. Nulton, Jr., New Brunswick.

APPOINTMENT OF COMMITTEES

The following committees were appointed by President Lowe:

Nominating Committee for Members of the State Board of Agriculture

Herbert O. Wegner, Chairman
Reuben H. Dobbs, Vice-Chairman
Thomas Albert, Jr.
David W. Amerman
George Clark
John Clauss
Calvin Danberry
Albert S. Fogg
Lloyd W. Heritage
Chester J. Krulan
Victor Lenco

Clement B. Lewis
Charles E. Maier
Dr. Clarence F. Manziano
Allen McClain
Delmo Muzzarelli
Lester G. Pyle
Ernest J. Ricca
Fred E. Scammell
William Schlechtweg
Kenneth T. Stretch

New Jersey State Poultry Association
Camden County Pomona Grange
Union County Board of Agriculture
Somerset County Board of Agriculture
Sussex County Board of Agriculture
Bergen-Passaic Pomona Grange
United Milk Producers of New Jersey
Cumberland County Board of Agriculture
Warren County Board of Agriculture
Passaic County Board of Agriculture
The Cooperative Marketing Associations
in New Jersey, Inc.
Burlington County Board of Agriculture
New Jersey State Horticultural Society
Hudson County Board of Agriculture
Cape May County Pomona Grange
Atlantic County Board of Agriculture
New Jersey State Florists' Association
Essex County Board of Agriculture
Blueberry Cooperative Association
Monmouth County Board of Agriculture
Gloucester County Pomona Grange

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Nominating Committee for Member of the State Fish & Game Commission

C. William Haines, Sr., Chairman
Charles W. M. Hess, Vice-Chairman

William Flemer, III
Lester J. Germanio
Henry B. Kellog
Martin Schubkegel, Jr.
Charles S. Smith
Lowry Mead
Robert P. Wheaton

New Jersey State Horticultural Society
New Jersey Agricultural Experiment
Station
New Jersey Association of Nurserymen
Cape May County Board of Agriculture
Bergen County Board of Agriculture
Ocean County Board of Agriculture
Warren County Pomona Grange
Morris County Board of Agriculture
Cumberland County Pomona Grange

Committee on Resolutions

Martin Decker, Chairman
Clinton H. Cowperthwaite
Elmer J. Duncan
Lester C. Jones
C. Harold Joyce
William W. Phillips
William Rapp
Robert N. Simpkins

Atlantic County Pomona Grange
New Jersey State Grange
Camden County Board of Agriculture
Burlington County Board of Agriculture
Burlington County Pomona Grange
Hunterdon County Board of Agriculture
Jersey Chick Association
Mercer County Board of Agriculture

Committee on Credentials

Stanley B. Roberts, Chairman

John Catalano
Edward V. Lipman
Santo Miserendino
Karl J. Wentorf

New Jersey Holstein-Friesian Cooperative
Association, Inc.
Salem County Board of Agriculture
American Cranberry Growers' Association
Gloucester County Board of Agriculture
Central District Pomona Grange

Committee to Wait on the Governor

William M. Nulton, Jr., Chairman
Samuel C. DeCou
Marvin Hulick
Howard P. Story, Sr.
Dr. John L. Swink

E. B. Voorhees Agricultural Society
Camden County Board of Agriculture
Middlesex County Board of Agriculture
Monmouth County Pomona Grange
New Jersey College 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 Joseph Maccarone of Swedesboro, Gloucester County and James P. Vreeland of Towaco,

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Morris County, both vegetable growers, in nomination for membership on the State Board of Agriculture. There being no further nominations, the Secretary cast a ballot to make this election unanimous.

ELECTION OF A MEMBER OF THE FISH AND GAME COMMISSION

The chairman of the nominating committee placed the name of Fred Totten of Ringoes, a Hunterdon County dairyman, in nomination for membership on the Fish and Game Commission for the Central Jersey District vacancy. There being no further nominations, the Secretary cast a ballot to make the election unanimous.

CITATIONS

Citations for distinguished service to agriculture were awarded to the following: Charles H. Connors of New Brunswick; Almena D. Crane of Pittstown; Tunis Denise of Freehold; and Enos J. Perry of Highland Park. The citation to Dr. Connors was made posthumously.

The citations, read by Secretary of Agriculture, Phillip Alampi, were as follows:

Citation of Charles H. Connors (Awarded Posthumously)

During nearly 50 years of devoted service at the New Jersey Agricultural Experiment Station, Dr. Charles H. Connors made many substantial contributions to the advancement of horticulture in his native State. His unique career brought him special distinction in two fields, -- in the revival of a decadent peach industry through the development of improved varieties and in winning wider recognition for those engaged in ornamental horticulture.

As a most competent member of the pioneer research team that launched an extensive peach breeding program in 1912, Dr. Connors bred, tested and appraised thousands of seedlings, searching constantly for the superior qualities so sorely needed to rebuild the industry.

Of equal consequence were his foresight and early activities in seeking recognition of the culture of ornamentals as an important factor in the agricultural economy of the State. To his zeal and perseverance are credited the establishment of the first courses of instruction and programs of research in that field at Rutgers University.

His interest embraced both the esthetic as well as the utilitarian aspects of plants. He has been honored as one of the founders of the Federation of Garden Clubs of New Jersey, the organization through which he shared with thousands of home gardeners, his own deep appreciation of plants and flowers. He encouraged their use in civic beautification. In many communities the extensive landscape plantings which he inspired and planned now serve as living memorials.

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Saddened at his sudden passing so soon after he received notification of this award, the members of the State Board of Agriculture on this occasion join his host of friends in paying tribute to his memory with this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

Citation of Almena D. Crane

Rural New Jersey, particularly Hunterdon County, is deeply indebted for your many contributions to the betterment of farm people. Your intimate understanding of the needs and aspirations of those engaged in agriculture is widely recognized.

Ever since you came to our State in 1930, you have answered countless calls and performed well in many diversified fields. You have devoted your energies and wealth of talent to supporting better schools, furthering health and welfare measures, aiding the Extension Service, expanding library facilities and building stronger farm organizations, to name but a few of the causes you have advanced.

Your colleagues pay tribute to your rare acumen for readily discerning the full import and significance of a situation. They cite your ability to assemble facts and arrive promptly at a sound conclusion that is expressed with such conviction as to promote accord and cooperation. Thus by example, you have inspired others to greater effort.

For these attributes and the able leadership you have displayed year after year, you have won renown as the First Lady of New Jersey Agriculture. You have demonstrated conclusively that there is an important role for women in our present day farm economy. Thanks to you, rural women have attained new stature in public affairs. As a practical farmer too, you are to be commended for the successful operation of your own extensive enterprise.

In grateful recognition of your outstanding career the members of the State Board of Agriculture deem it most fitting to pause in these proceedings and award to you this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

Citation of Tunis Denise

You have upheld in good measure the rich heritage and the traditions of your distinguished family, long prominent in New Jersey agriculture. Your fellow farmers are proud of you as an outstanding son of New Jersey soil.

You have been recognized frequently as a leader in agricultural affairs of both your home county of Monmouth and your State. You have been honored with high offices in which you have served with distinction, always giving unsparingly of your time and talent.

Successful in the operation of your own extensive orchards, you have sought to attain the highest standards in production and marketing practices, seeking always to uphold the reputation of New Jersey-grown products.

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For tests and demonstrations you have continuously shared with other growers your facilities as well as your knowledge and experience, thus aiding them to remain alert to new trends and to make prompt adjustments.

As one of the founders and as a director of Jersey Fruit Cooperative Association, Inc., you have devoted countless hours to the task of developing an efficient system for marketing apples. To that challenge you have addressed your whole endeavor, seeking a merchandising plan that will meet the needs of the distributor, insure satisfaction to the consumer and provide the greatest possible return to the producer.

Ever gracious, modest and self-effacing, you are respected by your co-workers and colleagues. They, in turn, are aware of your consideration and regard for their views.

The members of the State Board of Agriculture, grateful for your leadership as president of the New Jersey Agricultural Society and mindful of your past service as a member of this Board, desire to publicly pay tribute to your example and so award to you this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

Citation of Enos J. Perry

As you relax in your well-earned retirement, two generations of New Jersey dairymen acknowledge their indebtedness to you for nearly 40 years of devoted service to the betterment of their industry.

They unite with thousands of fellow farmers throughout the Nation to express sincere gratitude for the vision and sound judgment you displayed when you introduced and promoted the practice of artificial insemination of cattle. Increased production, due to the superior blood lines thus made available to all herds, has accounted for an annual increase of many millions of dollars in farm income.

Less spectacular but none the less beneficial is your outstanding career as a dairy specialist in the New Jersey Extension Service. Day by day, since 1923, you spared no effort to bring to New Jersey milk producers the most timely aids and advice available. Throughout the State there are legions of dairymen, including many who began as 4-H club members, who readily attribute to you a large share of the success they have obtained.

Noteworthy are the leadership and loyal service you have contributed to the breed and other dairy organizations with which you have been associated during your long career.

Your colleagues and many friends noted with pride your recent call to direct an important mission overseas. They appreciated such recognition of your high rank in your profession and your rich talent as a teacher. Your performance abroad has justified their confidence in your aptitude and proficiency.

For these and your many other achievements, the State Board of Agriculture congratulates you and awards to you this CITATION FOR DISTINGUISHED SERVICE TO NEW JERSEY AGRICULTURE.

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REPORT OF THE COMMITTEE ON RESOLUTIONS

The following resolutions, presented by Martin Decker and reported favorably by the committee, were adopted by the State Agricultural Convention:

WHEREAS, Considerable progress has been made in planning for the construction of a new Health and Agriculture Building to include much needed laboratory and administrative facilities for the Department of Agriculture at a more suitable location; and

WHEREAS, The Legislative and the Executive Branches of our government have approved a source of funds for construction of these needed facilities; and

WHEREAS, The Department is hopefully looking forward to occupancy of the new building on or about January 1, 1963; therefore be it

RESOLVED, That this convention of agricultural delegates duly assembled by law on January 24, 1961, commend Governor Robert B. Meyner, the members of the Legislature and State Treasurer John A. Kervick for their interest in providing suitable facilities for the Department of Agriculture.

WHEREAS, The 1960 convention of agricultural delegates requested our Secretary of Agriculture, the Honorable Phillip Alampi, to survey existing marketing orders and agreements in other states for possible adaptation to the marketing needs of New Jersey farmers; and

WHEREAS, Our Secretary of Agriculture has caused a survey to be made and with the assistance of an advisory committee of farmers and agricultural leaders has prepared legislation that would enable commodity groups desiring marketing orders to have them if approved by a majority of two-thirds of producers voting; therefore be it

RESOLVED, That enabling legislation for marketing orders be introduced and supported by all farm organizations.

WHEREAS, Lettuce is an important vegetable crop in New Jersey with a gross annual income of about three million dollars; and

WHEREAS, Western lettuce shippers are permitted by Interstate Commerce Commission Regulation No. 1582 to turn over to the carrier unsold or rejected carlots of lettuce upon arrival in Eastern markets; and

WHEREAS, Such lettuce has a disastrous effect on the markets for Eastern lettuce when it is disposed of by the carriers; therefore be it

RESOLVED, That this convention request our Secretary of Agriculture to assist our New Jersey lettuce growers in their efforts to have this unfair practice stopped as soon as possible; and be it

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FURTHER RESOLVED, That copies of this Resolution be forwarded to Governor Robert B. Meyner and to the Attorney General, the Honorable David D. Furman.

WHEREAS, The Federal Humane Slaughter Law which was enacted in 1958 and made effective as of July 1, 1960 covers only slaughterers that sell meat to the United States Government; and

WHEREAS, It leaves large numbers of animals that are slaughtered in New Jersey unprotected; and

WHEREAS, In proposed legislation now introduced in the Legislature ritual slaughter is proclaimed humane; and

WHEREAS, The proposed legislation prohibits any inhumane method of handling, such as shackling and hoisting of conscious animals; therefore be it

RESOLVED, That the delegates to this convention duly assembled by law on January 24, 1961 recommend all farm organizations support passage of humane slaughter legislation similar to that passed in other states.

WHEREAS, The present law requiring the licensing and bonding of commission merchants dealers and brokers who obtain fruits, vegetables, eggs and live poultry from New Jersey producers exempts "cash buyers"; and

WHEREAS, The existence of this exemption is often used by persons who should be licensed as a means to avoid the licensing and bonding procedure; thus preventing the Department of Agriculture access to records of purchases; therefore be it

RESOLVED, That the present act be amended so that all "cash buyers" be licensed without bond requirement, if proper investigation discloses the buyer is a "cash buyer" within the purview of the act.

WHEREAS, The migrant labor situation is becoming more difficult each year through demands for increased housing requirements and wage regulations; and

WHEREAS, Farmers in the State have made great progress in raising both housing standards and wage returns to migrant workers; and

WHEREAS, The State Migrant Labor Board establishes minimum housing and sanitary requirements for migratory farm housing; and

WHEREAS, Farmers have but one official farm representative on the Migrant Labor Board; therefore be it

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RESOLVED, That farmers be granted a greater share in the regulation of farm labor problems by the appointment of at least three farm members to the Migrant Labor Board; and be it

FURTHER RESOLVED, That a copy of this Resolution be forwarded to Governor Robert B. Meyner, members of the New Jersey Legislature and the Secretary of Labor and Industry.

WHEREAS, There is unequal representation of farmers and sportsmen on the New Jersey Fish and Game Council; and

WHEREAS, Through their land holdings farmers furnish a large portion of the fishing and hunting sites in New Jersey; therefore be it

RESOLVED, That this convention of agricultural delegates lawfully assembled at Trenton this 24th day of January 1961, recommend that farmers be given equal representation on this Council.

WHEREAS, Deer damage to farm crops is a serious problem in certain areas of New Jersey; therefore be it

RESOLVED, That we urge the FISH AND GAME COUNCIL to continue present control measures and seek out solutions to this problem in order to maintain a proper balance in deer herds in all areas of New Jersey.

WHEREAS, At the present time "farm use" licensed vehicles are permitted to draw within five miles of the farm one piece of farm equipment or machinery; therefore be it

RESOLVED, That all vehicles bearing "farmers" licenses be granted the same privilege by the Division of Motor Vehicles.

WHEREAS, Occasionally two different organizations select the same man as an official delegate to this convention; and

WHEREAS, This convention of delegates lawfully assembled on January 24, 1961 do not feel that the best interest of either organization is fully served by such dual appointment which prevents another delegate from participating in this convention; therefore be it

RESOLVED, That we strongly recommend in the future that any delegate so chosen by two organizations should decline the second nomination so that organization may immediately nominate and elect another delegate; and be it

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FURTHER RESOLVED, That the Secretary of Agriculture be authorized hereafter to withhold acceptance of credentials until such correction be made.

WHEREAS, Governor Robert B. Meyner has for more than seven years shown his deep interest in the agriculture and the farmers of New Jersey, by seeking the advice of our Secretary of Agriculture and other farm leaders upon problems of mutual interest and concern; therefore be it

RESOLVED, That this Agricultural Convention officially assembled by law in Trenton on this 24th day of January 1961, commend our Governor for his aid to agriculture over the past seven years, and respectfully request his interest be continued in this important industry of New Jersey; and be it

FURTHER RESOLVED, That we request our Secretary of Agriculture, the Honorable Phillip Alampi, to forward to Governor Meyner a copy of this resolution conveying to him our esteem and highest regard, together with our sincerest wishes for a continuation of this fine relationship which has existed since his occupancy of office.

WHEREAS, Since our last convention, God in His infinite wisdom has taken from our midst several of our friends and leaders among whom were Dr. Charles H. Connors of Rutgers University, prominent peach breeder who was also well known for his research in ornamental horticulture; Fred Lippincott of Burlington County, prominent dairy farmer and member of the State Board of Agriculture from 1919 to 1927; Ellis E. McCoy of the State Department of Agriculture, a highly regarded capable and faithful public servant who gave 27 years of dedicated service to the plant industry of this State particularly in control work for Japanese beetles; Dr. Thurlow C. Nelson of Cape May Court House, internationally recognized oyster research authority, one of New Jersey's pioneer conservationists and long time chairman of the Water Policy and Supply Council; Lyman G. Schermerhorn of Rutgers University, widely known breeder of the Rutgers and Queens tomato varieties and for many years professor of vegetable gardening; Milton C. Tice of Cumberland County, well known farmer and former member of the State Board of Agriculture; and

WHEREAS, The passing of these friends has caused sorrow which is best alleviated by the recollection of their fellowship and service to others; therefore be it

RESOLVED, That we pause in our deliberations for a moment of quiet as a respectful tribute to their memories.