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1950-52

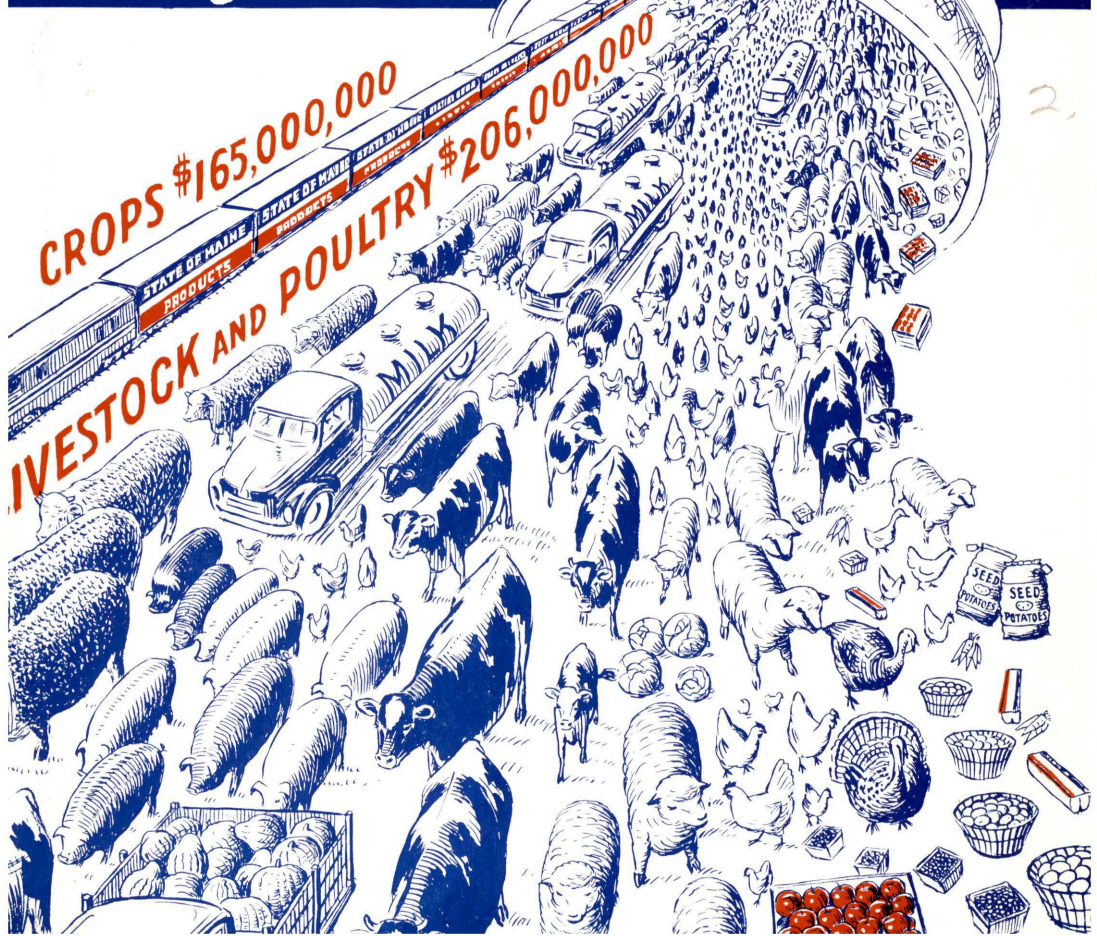
(in three volumes)

VOLUME I

MAINE DEPARTMENT of AGRICULTURE *Biennial Report*

JULY 1, 1950 TO
JUNE 30, 1952

\$371,000,000 CASH FARM INCOME



CROPS \$165,000,000

LIVESTOCK AND POULTRY \$206,000,000

2.

STATE OF MAINE

BIENNIAL REPORT

OF THE

Commissioner of Agriculture

TO

His Excellency the Governor

AND

Executive Council

July 1, 1950 to June 30, 1952

OFFICE OF THE COMMISSIONER
MAINE DEPARTMENT OF AGRICULTURE
STATE HOUSE
AUGUSTA, MAINE

*To His Excellency, Governor Burton M. Cross, and Executive
Council:*

Sirs:

In accordance with the revised statutes, I herewith submit the biennial report of the State Department of Agriculture for the period beginning July 1, 1950, and ending June 30, 1952.

Respectfully yours,

FRED J. NUTTER,
Commissioner

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Maps

This biennial report contains a series of maps showing the extent of intensive and moderate production in the various branches of Maine agriculture. The border key system used on the official highway maps of the state has been transferred to our series. The use of the route map and key with the agricultural maps will facilitate identification of local areas.

Organization of the Department

The major duties of the Maine Department of Agriculture are carried out by four operating Divisions: Animal Industry, Markets, Plant Industry and Inspection, all with offices at the State House, Augusta.

The Division of Animal Industry has three branches.

Animal Disease Control is headed by the State Veterinarian and includes, besides his assistants, private practitioners working on a fee basis. Its responsibility is the control and eradication of livestock (including poultry) diseases, in cooperation with Federal agencies. Brucellosis and bovine tuberculosis control are major activities. Other functions include control of the distribution of specified biologics, control of interstate movement of cattle (issuing health certificates and permits) and supervision and licensing of livestock dealers.

The Division's section of Animal Husbandry and Damage Claims carries out the projects of the dog licensing laws, including the procurement of dog tags and license blanks and supplying them to towns, cities and plantations, and the maintenance of records of payments for licenses by municipalities to the State. Other duties include investigation, the approval or adjustment of payments for claims covering loss of poultry and livestock caused by wild animals and dogs; the certification of bear bounty reimbursement by the State to towns and plantations. This section also issues licenses to packers and shippers (except common carriers) of live poultry. It has responsibility for the promotion of animal husbandry, advising individual farmers, farm groups and 4-H clubs on feed and management problems in livestock raising. It cooperates with the University of Maine, with agricultural fairs, industry groups and breed associations in promoting beef, swine and sheep raising.

The third branch of Animal Industry operates the Maine Broiler and Production Test, housed at Monmouth.

The Division of Markets is divided into two bureaus, one concerned with inspection of commodities, the other with general marketing activities including crop, livestock and market reports, and research and marketing projects (one-half of the cost of the last named paid by the Federal government).

Inspection activities of the Division of Markets are divided into two kinds, the enforcement of the potato, apple and egg grading laws of the State (with appropriated funds) and shipping point and processing plant inspection of commodities, payment for which comes in fees from the concerned shippers or processors. Inspections of the second type are for the purpose of determining grade and condition of products, so establishing a basis for payment to the farmer. When shipment of the product requires a Federal-State inspection certificate, as in the case of potatoes and corn, a part of the fee collected from the applicant for inspection goes to the Federal government to defray administrative expenses, although personnel carrying out the actual work is State-paid. This inspection branch also carries out special inspections of products licensed for sale under the Blue, White and Red State of Maine Trademark.

The marketing branch of the Division (under the joint Federal-State research and marketing projects) works with producers to devise better means of handling, processing, distributing and marketing farm produce. Its market news and crop reporting service includes a daily potato report during the season and the collection and distribution of market news in cooperation with the New England Crop Reporting Service and the Presque Isle Market News Service. Storage and crop condition surveys are conducted as necessary. This bureau is also charged with responsibility for the development of special quality grades to be marketed under the Blue, White and Red Trademark, and with their promotion in the markets. Displays and demonstrations and special programs to show producers, packers and distributors approved methods of handling and marketing, and to introduce new products, grades and packages to consumers, are arranged.

The work of the Division of Plant Industry is divided into four principal functions.

First is Seed Certification, carried on in two commodities, potatoes and oats. This includes inspection in the field, at harvest time, and at shipping time.

A closely allied work section operates the Maine Seed Board potato farm at Masardis, with the chief of the Division of Plant Industry acting as secretary and administrator of the program of the Board, which supplies Maine foundation growers with a super-foundation seed. (Foundation growers sell the next generation of seed to growers of certified seed.) This operation is carried on with a revolving fund of \$100,000. The personnel charged with the operation of the farm also operates a Foundation Seed Roguing Service for potato growers. The men of this unit remove diseased plants from seed fields at the expense of the farmer.

Insect Control work is conducted in a third sub-division of the Division of Plant Industry. It includes the location of infestations of insects and the supervision of commercial and cooperative (State and city) spray programs for the control of the browntail moth, gypsy moth and others. A program for the control of the European corn borer, supported by fees from the farmers and canners, is currently being carried out by research at the Maine Agricultural Experiment Station.

The Division's Bureau of Horticulture is charged with the inspection of nursery stock (including florists' stock) in greenhouses, in the fields, at stores and other retail sales points. The Bureau also conducts a seasonal program in the inspection of apiaries and cooperates with farm organizations, garden clubs and the like in progress to stimulate better use of nursery stock. It also operates a cooperative tree-selection and -buying pool for Maine orchardists.

The Division of Inspection conducts a type of food inspection markedly different from the inspection activities of the Division of Markets. It is coordinated with the work of Federal agencies enforcing pure food and drug laws. The Division's branches check commodities and facilities to prevent the manufacture or sale of adulterated foods or drugs containing any substances injurious to health. The Division seeks to protect consumers, rather than to establish the exact grade of commodities in the interests of farmers and processors. Division of Inspection men examine the physical set-up of food processing plants to determine whether the establishment conforms to required sanitary standards.

Five branches of the Division of Inspection operate services as above on either a full-time or seasonal basis. These branches are Blueberry, Sardine, Shell Fish, Slaughterhouse, and Food and Drug Inspection. In general the work of the sections is similar, except that the branch doing general food and drug inspection is authorized to inspect all establishments where food is processed or stored, inspect all establishments where food is sold at retail (except when consumed on the premises), sample all foods and drugs, and investigate food poisoning cases. The same personnel is used in Beverage Inspection, inspecting and licensing all plants producing beverages.

A sixth branch of the Division handles Milk Inspection, taking samples of milk at the farm, at the pasteurizing plant and in retail outlets, and also check-testing producers' composite milk samples, in which latter instance the work is an exception to the general rule in the Division in that it is essentially a grade test for marketing purposes. (The Division of Markets does no milk inspection work.) Men of the milk section of the Division of Inspection do ice cream plant inspection as well.

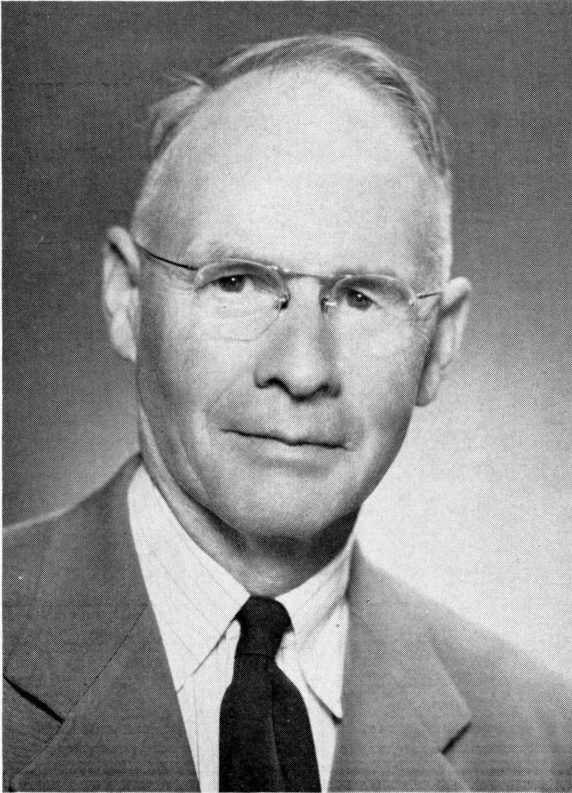
A seventh inspection unit deals with products going to the farmer — Seeds, Feeds, Fertilizers, Economic Poisons — sampling these items (for analysis on a cost basis in the University of Maine control laboratory) to see that the products offered for sale conform to their labelling.

The Division of Inspection, for administrative purposes, includes in its operating set-up a Weights and Measures branch, including a Deputy State Sealer (the Commissioner of Agriculture is ex-officio State Sealer of Weights and Measures). This unit works with local sealers testing their standards and advising them in their work. It also operates State-owned equipment for the testing of heavy duty vehicle scales and a portable 100 gallon testing unit which supplements equipment used by local sealers in the checking of gasoline pumps. A seasonal worker in this unit measures, marks, and seals the holds of all sardine boats, the cost being paid by the owner.

Digging-Time at the State Seed Farm



Report of the Commissioner



FRED J. NUTTER
Commissioner

Albert K. Gardner of Orono, who became Commissioner of Agriculture on August 1, 1945, resigned in the fall of 1951. He had stressed marketing and the need of better public relations for agriculture and left the Department to take a job with emphasis in those allied fields, that of consultant to the Maine Potato Tax Committee.

My appointment by Governor Frederick G. Payne took effect on September 1, 1951, and the report of this biennium is consequently a summary of activities conducted during fourteen months under Commissioner Gardner and during ten months of my administration.

Although the biennium began with a severe drought in the summer of 1950, the averaged income of the calendar years 1950 and 1951 stands at essentially the average income of the period 1946 through 1949.

Income for the first six months of 1952 has exceeded the returns of the corresponding period in the previous year by a few million dollars, according to the preliminary report of the Bureau of Agricultural Economics, United States Department of Agriculture.

The last six months of 1950, the calendar year 1951 and the first six months of 1952 — the period covered by this report — show a cash return to Maine farmers of \$370,971,000, of which \$205,734,000 is in returns from livestock, poultry and their products, and the remainder, \$165,237,000, is in income from crops.

The last biennial report of the Department invited attention to the fact that almost 60 percent of the funds on which this Department operates are derived in fees from farmers, shippers, processors and others rather than by appropriation from the state treasury.

It is, we think, of interest to report that in this period, the fiscal years 1950-51 and 1951-52, the cost of operation of this Department, insofar as appropriations are concerned, has amounted to only \$2.95 for each thousand dollars of income received on the farms of Maine. This compares with a cost from appropriations of \$4.39 per thousand dollars of cash farm income during the pre-World War II years, 1938-41.

This biennium began with the announcement of Maine's achievement in becoming a modified certified Brucellosis-free area — the third state in the country to gain this standing. It is pleasing to be able to report that subsequent area tests (which are necessary to maintain our standing) show still lower rates of infection in most counties. The details of this program and the standing of the various counties are to be found in the report of our Division of Animal Industry.

The report of the Division makes the recommendations that legislation be adopted restricting the establishment of "C" herds under the Brucellosis program and that the Legislature review the problem of indemnities for cattle slaughtered under the bovine tuberculosis control program.

This biennial report also contains a paper prepared in June, 1952, by Dr. B. J. Cady, who was then Veterinarian-in-Charge of the Augusta station of the U. S. Bureau of Animal Industry. This report, which has been widely distributed by the Federal government, describes the work of Brucellosis eradication in Maine from 1935 to 1952.

The dairy inspection service of the Department was transferred from the Division of Animal Industry to the Division of Inspection on January 1, 1952. It is believed that this change will be of benefit in making possible more efficient use of inspection personnel.

The report of our Division of Inspection will be of more than usual interest this biennium because it contains a summary of activities under the new laws passed by the Ninety-Fifth Legislature. The chief of this Division now recommends that attention be given to the revision of our general food law and to the adoption of the uniform food legislation sponsored by the national association of food and drug officials.

The varying conditions under which our shipping point inspection service has worked during the biennium are discussed in detail in the report of our Division of Markets. Another item of interest in that section is a report on the inauguration of a grain inspection service.

We are cooperating with the Maine Potato Tax Committee in the promotion of potato sales. It is expected that considerable progress in handling and merchandising potatoes will be made through the joint work of the Committee and our Division of Markets.

On June 24, 1948, it was found necessary to forbid the entry into the State of Maine of potatoes from a part of Suffolk county and all of Nassau county on Long Island. This was because of an infestation of the golden nematode, which was discovered in that area. There has been some spread of the infestation, according to the report of our Division of Plant Industry, and our deputy commissioner, E. L. Newdick, advises that a special study is needed to determine whether or not the present quarantine should be extended. Our quarantine action, deemed necessary to protect our seed potato industry, is regretted in part because the Long Island area is one of our best seed customers.

Division of Markets

To the Hon. Fred J. Nutter, Commissioner of Agriculture:

During the first year of our biennium, the Potato Marketing Agreement was still in effect. During the second year, the potato growers and shippers voted to do away with the marketing agreement. I think the main reason for this decision was dissatisfaction with Maine's position under potato price support. Our growers and shippers under the potato program saw their markets being taken over by other areas. For this reason, a large majority of our growers and shippers turned to a free market. We in the Division of Markets are always willing to cooperate with any of our agricultural interests. However, we were pleased to see compulsory inspection, which was required under the Potato Marketing Agreement, discontinued.

Starting the second year of our biennium, our potato growers voluntarily cut acreage in an effort to balance supply and demand. Poor growing conditions in some of our competing areas caused a short supply of potatoes, and when the Government clamped on ceiling prices in the middle of the shipping season, they were responsible for disrupting our marketing program. With black markets developing in both shipping and receiving markets, our inspection work suffered greatly. We had started off the year by inspecting about two-thirds of the movement, which was about the nominal amount we inspected previous to the marketing agreement. At the season's close, our inspection work had dropped off to practically nothing.

During the biennium, the Division of Markets has trained two inspectors and equipped two laboratories for the inspection of oats.

Following is a summary of our marketing and inspection work in the Division of Markets during the past two years.

Potato Inspection

With the government still supporting the price on potatoes at 60 percent of parity and the Marketing Order still in effect, a request to the farmers for another reduction in acreage was made by the Government. In 1950, 132,000 acres were planted, producing 63,360,000 bushels. Shipments started very slowly in the early fall months. In order to dispose of this large crop, the

Federal agencies urged all farmers to dispose of one-third of their crop by January 1, 1951, and in order to do this, 22 starch factories were put in operation in whole or part time beginning the last week in September and continuing through until June 30, 1951.

This estimate would normally give Maine approximately 75,000 cars to ship. The Potato Marketing Order still functioning made inspection compulsory. A total of 60,870 inspections were made, including 20,725 cars, 5,341 trucks shipped to commercial markets, plus 2,174 warehouse inspections.

The remaining part of the crop, other than Certified Seed, (which shows 4,783 cars) was diverted into several channels through government purchases, namely: Starch Factories, Live Stock Feed, School Lunch, Institutions, and stock purchased back by the farmer at one cent per hundredweight and spread on their fields for fertilizer. All this stock was paid for by the government on a basis of U. S. No. 1, U. S. No. 2, and U. S. No. 1 Size B.

Government Purchases 1950-51 Season

<i>Cars</i> 1,756	<i>Cwt.</i> 843,838	<i>Trucks</i> 47	<i>Cwt.</i> 5,276
<i>All Others</i> 18,255	<i>Cwt.</i> 11,719,444	<i>Process.</i> 12,572	<i>Cwt.</i> 8,367,245
<i>Total Cwt.</i> 20,935,803		<i>Carlot Equivalent</i> 46,524	

The truck shipments of potatoes from Maine were not as heavy as the previous season. The same also applies to rail shipments which was the smallest in many years, totaling slightly over 27,000 cars. The 50 lb. paper sack was the predominating type package used, showing more than 45 percent shipped in this size container; the 15 lb. paper sack was next with more than 23 percent, and the 10 lb. sack showing more than 15 percent. The remaining part of shipments were made up of 100 lb. burlap, 100 lb. wooden crates, five lb. paper, 25 lb. paper and bulk.

Approximately 150 inspectors and 18 clerical workers were used to handle this deal.

At the close of the June 30, 1951, season, the Maine Potato Marketing Agreement was discontinued along with the support program and the potato industry was once again on its own, free to increase their acreages if they chose or continue to reduce acreage. They chose the latter and planted 103,000 acres which produced 45,835,000 bushels, almost 20,000,000 bushels less than the preceding year. Many farmers did not plant any potatoes, sowing their land to grain, or going into some other type of farming (livestock, dairy, chickens and turkeys). Although many farmers sold freely during digging to dealers for \$2.00 to \$2.50, some were reluctant and held back.

Rail shipments were very light in early fall but by the middle of November prices had advanced to \$4.50 per barrel and shipments increased, reaching over 400 cars per day in February.

Once again Inspection Service was on a voluntary basis to carlot shippers and truckers. Having had compulsory inspection for the past three years, (which farmers, shippers and truckers criticized severely), it was surprising to all how much Federal-State Inspection was used, until the price of potatoes raised above parity, then the Office of Price Stabilization of Washington, D. C., placed a ceiling of \$3.50 per cwt. on potatoes in January for U. S. No. 1 stock, with an increase per cwt. the following months:

Maine:	<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>Apr.</i>	<i>May</i>	<i>June</i>
	\$3.50	\$3.60	\$3.70	\$3.75	\$3.80	\$3.80

Many adjustments for size, packages, and grade, (including washing,) were allowed.

<i>Grade and Size:</i>	<i>Amt. to be applied per cwt.</i>	<i>Type of Pack</i>	<i>Amt. to be applied per cwt.</i>
1. Size A, 2 inch minimum diameter	Add 10c	Paper bags	
(a) 2¼ inch minimum	Add 25c	15 pounds	Add 25c
(b) 2½ inch minimum	Add 40c	10 pounds	Add 30c
(c) 3 inch minimum	Add 50c	5 pounds	Add 40c

The placing of a ceiling price on potatoes by the government was an indication of a shortage, and the dealers were reluctant from then on about using inspection, as black market prices were cropping up at shipping point as well as in the receiving markets.

The 1951-52 season was the first time in many years that starch factories did not operate to near capacity. Practically all stock taken to factories was rot and small pee-wee potatoes, all other sizes from 1½ inches up were shipped, including many carloads of stock branded CULLS.

Exportation of potatoes to foreign countries was not as heavy this season, Bremerhaven, Germany receiving 190 cars.

Canada, our next door neighbor, imported nearly 1000 cars from Maine, the first time in many years. This potato shortage was felt all over the United States. Maine never had such a wide distribution of potatoes in all of its history. Shipments went to all states in the United States except four, with nearly 1000 cars going into California, Oregon and Washington.

Rail shipments amounted to 41,174, which included 20,252 cars Federal-State inspected.

There has been a sharp increase in shipments of Consumer Grade A Medium to Large during the past two shipping seasons. Of the total number of cars inspected, 635 were of this Grade.

The truck movement was heavier this season than last, making a total of 7,054 truck inspections. This represents about 50 percent of all truck shipments.

February 1, 1952, Inspection fees were increased 50 cents per car-lot of 45,000 lbs. as a minimum weight, and graduated up according to size of load. This also applied to trucks with a \$2.50 minimum fee.

<i>Truck Fees</i>		<i>100 lb. sacks</i>	
Up to 100 sacks	\$2.50	276 to 450 sacks	\$4.75
101 to 125 sacks	\$2.75	451 to 500 sacks	\$5.25
126 to 150 sacks	\$3.00	501 to 550 sacks	\$5.75
151 to 175 sacks	\$3.25	551 to 600 sacks	\$6.25
176 to 200 sacks	\$3.50	601 to 700 sacks	\$6.75
201 to 225 sacks	\$3.75	701 to 800 sacks	\$7.25
226 to 250 sacks	\$4.00	801 to 900 sacks	\$7.75
251 to 275 sacks	\$4.25		
All loads in excess of 275 sacks car lot fees will apply.		Other type packages such as 50, 25, 15 and 10 lbs. calculated on cwt. basis.	

As inspection was on voluntary basis this season, a great reduction was made in our personnel, which at the peak of the season required approximately 58 inspectors and eight office clerks.

Before the close of the fiscal year, all ceilings were discontinued by the Office of Price Stabilization. Shortly after this was done, prices began to move downward.

Cannery Inspection

We have continued offering inspection service to all canneries and processing plants desiring to use this service on the raw product as it is delivered to the plants by the growers.

The canneries and processing plants use this service to determine the price they will pay for the product and it also enables them to put up a more uniform pack.

During the summers of 1950-51, there were four inspectors at two pea processing plants in Aroostook County. The inspectors took samples of each grower's load and ran a tenderometer reading to determine the tenderness of the peas. During the summers of 1950-51, there were 13 inspectors at 11 bean plants or receiving stations and one supervisor. During the summers of 1950-51, there were five inspectors on cucumbers at one plant in Portland.

The summer of 1950, there were 18 inspectors and two supervisors at 15 corn factories. The summer of 1951, there were 22 inspectors and two supervisors at 20 corn factories.

Poultry Inspection

The poultry grading work at the processing plants has increased during the last two years. During the season of 1950-51, there were six resident graders and one supervisor at four dressing plants grading all the birds. The graders are licensed by the U. S. Department of Agriculture. The grader's work consists of grading all the birds which are dressed at the plant, and of seeing that the plants meet Federal sanitation requirements. All Grade A poultry is identified with a Federal stamp.

During the season of 1951-52, there were seven resident graders at five dressing plants and three bonded men at three dressing plants.

The bonded men are licensed by the U. S. Department of Agriculture as Poultry Plant Sanitarians. Their duties are to see that the plants meet the Federal sanitation requirements and to see that the birds are cooled, cropped, vented and dressed to meet the Federal requirements.

Miscellaneous Inspections

As in the past years, we have offered condition inspection work to wholesalers in all our terminal markets. This work consisted of making condition inspections on fruits and vegetables shipped in from other states. We also offered Federal inspection on fruits and vegetables for grade and condition to the U. S. Army Quartermaster Corps, steamship companies and the U. S. Veterans Administration. We also offered Federal inspection on eggs and poultry.

During the last two years, we have had one inspector stationed in Portland doing terminal market inspection work. During the season 1950-51, he issued State certificates for commercial inspections. During the season 1951-52, he issued Federal certificates. Last winter we sent the inspector to New York for a month's training at the Federal Training School on fruits and vegetables.

During the season of 1950-51, 672 commercial inspections were made at Portland and were issued on a State certificate, four commercial, one shipping

line and seven Veterans Hospital inspections were made on a Federal certificate.

During the season of 1951-52, 308 commercial inspections were made and were issued on a State certificate, 210 commercial, 22 ship line, 30 Veterans Hospital and 46 Quartermaster Center inspections were made on a Federal certificate.

In 1950-51, there were 44 inspections on eggs and in 1951-52, there were 53 inspections, mostly for the Veterans Administration at Togus. Two poultry inspections were also made for the Togus Veterans Administration.

In 1950-51, we made 116 shipping point inspections on apples. In 1951-52, 61 shipping point inspections were made on apples. Most of this inspection was on purchases by the government and for export.

In the last two years, we have had 17 maple syrup producers using the Blue, White and Red Trademark to identify their syrup. The Department of Agriculture insists that all syrup so identified with the State Trademark must meet Grade A quality or better. The producers must be licensed by the Commissioner of Agriculture to use the Trademark. During the maple syrup season, we use one inspector to visit the producers and see that the syrup meets our requirements for the Trademark. The producers have been very cooperative in complying with our regulations.

During the last two years, we have had two inspectors licensed by the U. S. Department of Agriculture on dry beans. We have 14 packers using the State of Maine Trademark, and our inspectors checking around at the stores pick up packages of beans packed under the Trademark and bring them to the laboratory to be checked for grade. The laboratory has a moisture meter, scales and a divider, and any grower or shipper may submit samples of beans for a moisture test and grade analysis at a small fee.

Our turkey inspection work has dropped off. During the 1950 season at Thanksgiving and Christmas time we made only nine inspections on birds tagged with the State Trademark. During the 1951 season, we made one inspection on birds tagged with the State Trademark.

During the summers of 1950 and '51, in cooperation with the Division of Plant Industry, we used three inspectors to check wholesale houses throughout the state to see if any of the potatoes coming into the state were from the Golden Nematode infested area of Long Island. Invoices were checked to determine whether potatoes were from stations located in the infested area.

We have approximately 70 egg producers and wholesalers packing eggs under the State Trademark. The eggs are inspected at the stores, producers and wholesalers by our three egg inspectors to see that they meet the Trademark requirements.

Egg Law

Our Egg Law inspection work has been continued for the past two years. In 1950-51 there were 3,900 regular inspections at stores, retail outlets, roadside stands, farms and wholesale establishments. In 1951-52, there were 4,188 regular inspections made. We have two full-time and one part-time inspectors doing the inspection work. The inspectors check the eggs to see that they are properly marked with the size and quality. All eggs that are sold at retail must be marked with the grade, such as: Grade A, B, C, or ungraded and the size, such as: Jumbo, Extra Large, Large, Medium, Small or Pee-wee.

Potato Branding Law

Our Potato Branding Law work has been continued for the past two years. In 1950-51, there were 3,326 regular inspections made at stores, wholesale establishments, warehouse, trucks and carlots. In 1951-52, there were 5,665 regular inspections made. We had three men checking carlots, trucks and wholesale establishments this last season to see that the potatoes were properly branded. The same two or three men who checked eggs at stores and wholesale establishments also checked the potatoes to see that they were properly branded at the stores before going out to the consumers.

Apple Grading Law

Our apple inspection work has been continued for the past two years. In 1950-51, there were 2,075 regular inspections made at stores, wholesale establishments, warehouse, packers, roadside stands and trucks. In 1951-52, there were 1,496 regular inspections made. The same two or three men who checked eggs and potatoes at the stores and wholesale establishments, also checked the apples to see that they were properly branded before going out to the consumers.

We have received good cooperation from packers, retailers and wholesalers in our efforts to enforce the egg, potato and apple branding laws.

Grain Inspection

In the fall of 1950 a new service to the farmers and grain shippers of Aroostook County was added to those already available when two potato inspectors from the Maine Department of Agriculture were issued licenses under the United States Grain Standards Act to inspect and grade oats, feed oats and mixed feed oats.

An office was established at Caribou and we made our first inspection of a carload of oats to be shipped out of the County for Maine Potato Growers,

Inc., on November 10th of that year. Since then we have made other "Out" inspections for Maine Potato Growers, who in the early spring of 1951 finished a grain elevator at their siding with facilities for cleaning, drying, storing and/or loading oats at the rate of several carloads per day; for Owen Hannigan of Houlton who has a drier and storage space for several thousand bushels in his grain terminal at the Houlton Air Base; for the Great Northern Grain Company, Presque Isle, which installed a cleaner in its warehouse in the spring of 1952; and for the State Road Grain Company, Presque Isle, which completed a warehouse in the summer of 1951 at State Road Siding and now have facilities for cleaning, drying, storing and loading oats.

In addition to our carlot work we make inspections of, and issue certificates on, samples of grain submitted by any interested party. These are known as "submitted sample" inspections. The greater part of this work has been for the Aroostook County PMA Committee. Under the CCC Ever Normal Granary Program oats were supported by the USDA at 85 cents per bushel during the 1951-52 season. In order to be eligible for loan, oats must meet the requirements of No. 3 Grade and contain not more than 14.5 percent moisture.

We made 58 "sample" inspections for the Aroostook County PMA Committee in the 1950-51 season and 522 in the 1951-52 season. Of these 32.8 percent in 1950-51 season and 27.2 percent in 1951-52 season were rejected for loan, mostly because of high moisture content.

We also made inspections of oats in farmers' or grain dealers' storage bins or of carlots of oats being shipped into dealers' warehouses. These are known as "in" inspections. During the 1950-51 season we made 10 "in" inspections while we made 21 "in" inspections in 1951-52.

Another service we gave the grain industry during the 1951-52 season was that of making moisture tests at harvest time on samples of grain brought to our laboratory by various farmers. There was no charge for this service. We found that of the 130 samples tested approximately 40 percent had a moisture content of over 14.5 percent.

In October of 1951, a second office was opened in the laboratory building at the Aroostook State Farm, Presque Isle, to better serve the grain dealers in that area.

Following is an analysis of the work done by the Grain Inspection Branch during the past two years:

<i>Season</i>	<i>Total</i> <i>Inspections</i>	<i>"OUT"</i> <i>Inspections</i>	<i>"IN"</i> <i>Inspections</i>	<i>"Submitted</i> <i>Sample"</i> <i>Inspections</i>	<i>FREE</i> <i>Harvest Time</i> <i>Moisture Tests</i>	<i>OTHER</i> <i>Moisture</i> <i>Tests</i>
1950-51	154	85	10	59	0	0
1951-52	984	282	21	542	133	6

There were approximately 95,000 acres of oats grown in Maine in 1950 and 130,000 acres in 1951 in the State, with Aroostook County having 87,000 acres in 1950 and 120,000 acres in 1951.

Marketing Services

Following is a brief summary of the activities of the marketing work in the Division, for the fiscal years July 1, 1950, to June 30, 1952. In carrying out our marketing work, we have been very fortunate in having excellent cooperation with the Maine Agricultural Experiment Station, Maine Extension Service, the Research and Marketing branch in Washington, together with industry committees representing the various Maine agricultural products.

Potatoes

In conjunction with the Maine Agricultural Experiment Station, a study of various containers for shipping potatoes has been conducted. The purpose was the development of a container in which potatoes could be sent to market without excessive bruising.

From these studies, the Potato Tax Committee is introducing for trial this year a thirty pound package which this Branch has been instrumental in designing and developing.

A test sale of potatoes marked as to variety proved that consumers would buy potatoes by variety. Recommendations to potato growers and shippers that all potatoes be sold by variety and grade are being made.

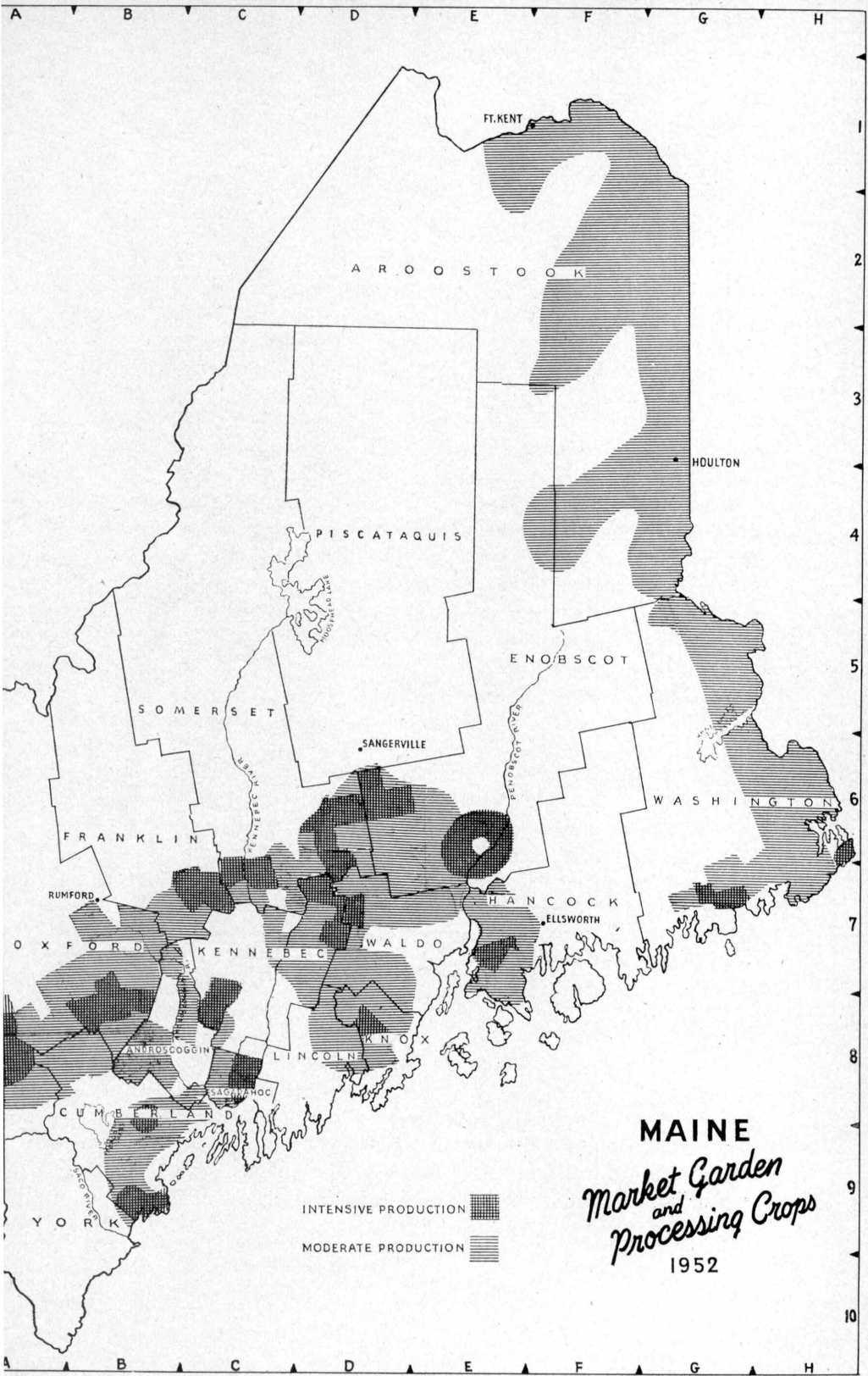
We have also been active in developing methods of washing and drying Maine potatoes and, in test sales in conjunction with the Experiment Station, have shown that washing can be done profitably and that the potatoes are readily accepted by consumers.

In conjunction with the Potato Tax Committee and the Potato Industry Council, we have arranged and presented many displays and exhibits to demonstrate uses of Maine potatoes. In addition, we have assisted in dealer-service work in various markets, both within and without the state, and also cooperated in designing advertising material.

Dry Beans

Continued assistance has been rendered the industry in developing better markets and promotional methods.

The Department's exhibit at the Eastern States Exposition in 1951 was devoted entirely to this industry, the result of which has been an increased market and an increased acreage of dry beans.



MAINE
*Market Garden
 and
 Processing Crops*
 1952

An active part has also been taken in helping the Dry Bean Growers Association develop a better seed program.

Apples

Work with wholesalers and retailers to improve the handling and display of apples has continued. It is gratifying to find that less fruit is being lost by poor handling methods and sales have increased under this program.

Studies to improve apple packages, to prevent bruising of the fruit, have continued. From these studies have come recommendations regarding methods of packaging, types of packages, and display procedures, which have increased apple sales.

The store-service work on apples has indicated that it would be advantageous for dealers supplying retail outlets to incorporate, as part of their service, some of the practices suggested by this Division.

We have continued to improve the crop reporting service, resulting in a much better crop estimate and better determination as to the use of the Maine apple crop.

Very active cooperation has been maintained with the Maine Apple Committee in promoting their Apple Harvest, Pie Baking Contest, Maine Apples on Parade, window displays, and many other promotional activities. We also worked closely with the Extension Service in conducting meetings on the proper grading and packaging of apples.

Poultry

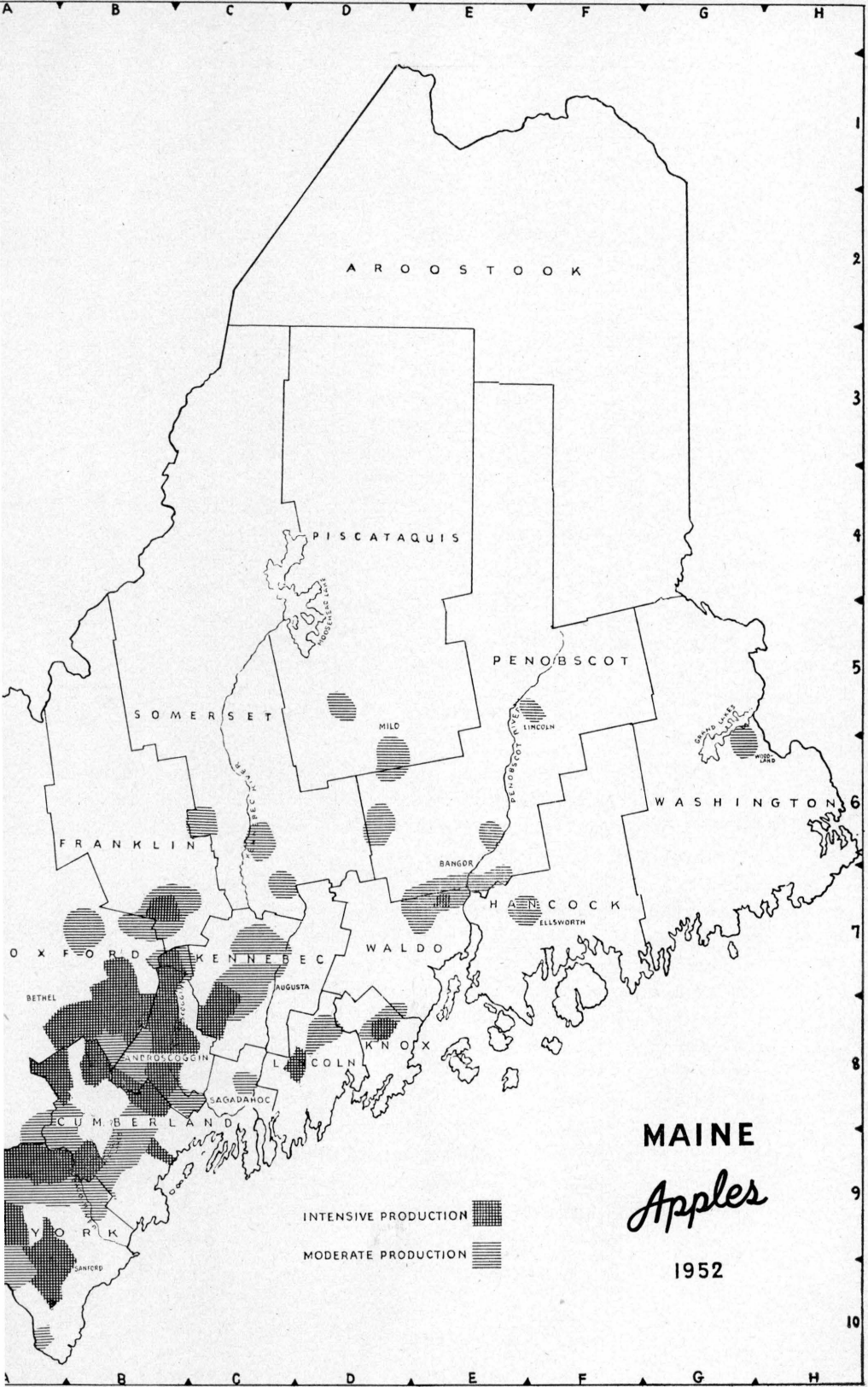
Assistance has been rendered to the rapidly growing poultry industry of Aroostook County. Graders were trained to candle and package eggs under the Blue, White and Red Trademark. Nine new licenses to use the State Trademark have been issued in this area.

The egg grading and candling schools were continued and were well attended but will be discontinued temporarily in favor of schools to improve the marketing of poultry meat. Three preliminary schools will be conducted in the immediate future.

Work in conjunction with the poultry dressing plants to improve the quality of meat packaged has been continued. At the present time, two dressing plants are identifying the individual birds as Maine Poultry. Work is continuing along these lines in order that greater benefit may be obtained from the extensive advertising program for Maine Poultry.

The Division continued to cooperate with the Maine Turkey Growers Association to promote the sale of Maine turkeys.

A very active part has been taken in promoting Maine Broiler Day, an outstanding feature of poultry promotion in the United States.



A R O O S T O O K

P I S C A T A Q U I S

P E N O B S C O T

S O M E R S E T

M I L D

W A S H I N G T O N

F R A N K L I N

B A N G O R

H A N C O C K

O X F O R D

K E N N E B E C

A U G U S T A

W A L D O

E L L S W O R T H

B E T H E L

A N D R O S C O G I N

S A G A D A H O C

L A C O L N

K N O X

C U M B E R L A N D

Y O R K

S A N F O R D

MAINE

Apples

1952

INTENSIVE PRODUCTION



MODERATE PRODUCTION



In addition we have maintained an exhibit at the annual meeting of NEPPCO.

A Hatchery and Broiler chick placement report has been inaugurated in conjunction with the United States Department of Agriculture, as part of its nation-wide program.

Miscellaneous

In this biennium we have, in cooperation with the Department's publicity representative, inaugurated a weekly crop condition report. There was previously no regularly released information sponsored by an official agency throughout the planting, growing and harvesting seasons. Weekly reports were obtained from local correspondents, mostly growers, giving good coverage of the state. Our summaries have been used consistently by newspapers, daily and weekly, and by the Maine radio stations.

Also in cooperation with the Division of Administration, we have assisted the Maine Maple Growers Association in designing and obtaining information on the feasibility of using a State Trademarked lithographed can to facilitate promotion of Maine's maple syrup.

Other cooperative activities have included the supplying of transcriptions used on Maine radio stations and on Radio WBZ, Boston, and the collaboration of our marketing specialist in the making of the Department's new promotional film, *Magic Milk*, a 16 mm. sound-and-color motion picture which will be distributed in New England by the Farm Film Foundation of New York City.

Personnel from the Division have attended various farm meetings to talk about the work of the Division, which has continued to promote Maine agriculture by exhibiting at conventions and other trade meetings in the eastern part of the United States.

We have continued during this biennium to cooperate with the New England Crop Reporting Service, and with the Market News Office in Presque Isle, Maine. We have also continued the special blueberry report, showing a summary of blueberries canned and frozen in the state. During this biennium, we have reported the pounds of blueberries purchased from Maine growers, together with the number of berries imported from Canada and processed by Maine plants.

This report of the Division of Markets is the cooperative effort of Merritt Z. Caldwell, Assistant in charge of Inspection; Stanley L. Painter, Assistant in charge of Marketing; Vernon Palmer, Chief Potato Inspector; Lewis Watson, Chief Grain Inspector; and the Chief of the Division.

Respectfully submitted,

GEORGE H. CHICK,

Chief, Division of Markets

Division of Inspection

To the Honorable Fred J. Nutter, Commissioner of Agriculture:

I respectfully submit the report of the activities of the Division of Inspection for the period from July 1, 1950 to June 30, 1952.

Seeds

In my report to former Commissioner A. K. Gardner two years ago, a change in the Maine Seed Law was recommended. This matter was brought before several interested members of the Ninety-fifth Legislature. An act was introduced which was entitled "The Maine Seed Law" and the same was duly enacted. It closely follows the Federal Seed Act and is the same as most other states have adopted. We have proceeded for one year under this law, which is essentially a labelling law requiring that specific information be on the tag or label of all seeds; that is, vegetable seeds as well as field seeds. Recent germination tests are required. The seeds of specific weeds are named as primary noxious weed seeds. The sale of seed containing these is prohibited. Likewise, secondary noxious weed seeds are specifically named and the number of these in seed is limited.

Through the efforts of the Commissioner of Agriculture and the Director of the Maine Agricultural Experiment Station, the Seed Laboratory was activated with a competent seed analyst in charge. This has been of real value in supervising the Uniform Seed Law. During the spring of 1951, 162 samples were collected for analysis. During the spring of 1952, 189 samples have been collected and analyzed. This work was done promptly enough at the Seed Laboratory so that it was possible to require certain seed houses to relabel their seed, setting forth the facts pertaining to their product and informing the buyer that there were certain weed seeds present. Several large lots of timothy containing an excessive amount of Yellow Rocket seed were ordered re-shipped from the state for cleaning or other processing. A considerable amount of the same seed was ordered relabelled. Minor infractions have been called to the attention of a number of seedsmen. All seed houses and their representatives have been most cooperative and their efforts in complying with our law are appreciated.

Feeding Stuffs

We have effected the registration of all brands of feeding stuffs being offered for sale on the Maine markets. There were 1,194 and 1,328 brands registered in 1950-51 and 1951-52 respectively, and 724 and 627 samples were analyzed during the same periods. We have taken such steps as seem necessary to encourage manufacturers to more promptly register their brands. This has brought very good results and has decreased somewhat the expense of supervision of this law. Two years ago, we received complaints and found from analyses that some feeds were being sold which had a relatively high number of weed seeds. This was a difficult case to handle under our Feeding Stuffs Law, and here again the Commissioner recommended the passage of legislation which now limits the weed seed content to 1% or not more than 15 viable weed seeds in the aggregate per ounce.

Fertilizer

We have continued the enforcement of the Fertilizer Law by registering all brands offered for sale and taking one or more samples from each of these registered brands. We are now collecting and disseminating information on the tonnage of fertilizer sold in Maine. In the seasons of 1950-1951 and 1951-1952 respectively, 149,156 and 201,855 tons were sold.

Economic Poisons

The need for revision of the Fungicide and Insecticide Law was called to the attention of Commissioner Gardner, who requested that legislation be prepared. Here again the Ninety-fifth Legislature enacted the so-called Uniform Economic Poisons Law, which not only requires the registration of fungicides and insecticides, but also of herbicides and rodenticides, and which has established a uniform registration fee of \$5.00 per brand. This law contains specific labelling instructions, including instructions which are necessary in the use of the product, and a statement of warning or caution if necessary, adequate to prevent injury to living man or other vertebrate animals. The Commissioner of Agriculture is given specific authority to seize any economic poison which is not being sold in compliance with the law. In 1950-51, 988 brands were registered and 137 samples collected. Under the new law this year, we have registered 1,208 brands. We have collected for analysis fewer economic poison samples inasmuch as we are cooperating closely with the U. S. Department of Agriculture, Insecticide Division, and have the benefit of the work which they do. We fail to see the need of duplicating expensive analytical work here in Maine.

Shellfish

The enforcement of the Maine Shellfish Law, which is supervised by this Division, has had its difficulties during the past two years and will continue to do so as long as clams for intrastate shipment are permitted to be shucked in kitchens, so-called, and those for interstate shipment must be shucked in a certified shucking house approved by the U. S. Public Health Service. We are doing what we can to keep up our certification with the U. S. Public Health Service and also to protect the users of Maine shellfish products. Samples are regularly purchased not only from certified shucking establishments, but also from sales outlets at retail levels. These samples are analyzed at the Experiment Station and sources of clams showing an excessive amount of coliform organisms are investigated.

Sardines

The inspection of all sardine packing plants is entrusted to the Department of Agriculture and is supported by an industry assessment of 2 cents per case. In the past two years we have had a resident inspector in all of the packing plants throughout the season. Samples of all sources of oil and other packing medium have been collected for analysis. The Sardine Law was amended two years ago by requiring that in all one-quarter key or keyless cans packed with eight fish or more, the heads of all fish are to be removed by cutting. The purpose of this inspection work is to not only insure that the final product will pass exacting examination by the Federal Food and Drug Administration, but also aid in improving the quality of the pack, which it is hoped we have done to some extent during the period of this report.

Blueberries

During the summers of 1950 and 1951, in accordance with the authority granted the Commissioner, we furnished a resident inspector in practically all of the blueberry plants and did as much field inspection work as our appropriation would permit. The season of 1951 was a difficult year in which to operate. It was a very wet season and the blueberry fly was prevalent. Through cooperation with the Federal Food and Drug Administration and the help of the packers, the largest pack on record was handled and inspected, and in all instances the berries passed Federal inspection. Funds available for financing this work seem to be inadequate and this should be given special consideration so that we may offer more services to the packer and grower.

Slaughterhouse

This work is being carried on by one food inspector supervisor with the aid of an assistant or inspector. In 1950-1951 there were 283 licenses issued, and in 1951-1952, 259 licenses were issued. The funds to do this work are totally inadequate and we are not affording the public the protection which I think is required. All red meat slaughterhouses and meat processing plants are licensed and inspected as often as possible. There are a considerable number of large and many small poultry slaughtering establishments in Maine which it is also necessary to license and to inspect. Millions of birds are slaughtered in these establishments yearly and the establishments should receive far more attention than it is possible to give them, not only to protect the public, but to protect the industry. There is a real need for a veterinary inspector to work with our present personnel and I hope that funds can be provided to make this possible. This will help take from the market meat from diseased animals and fowl, and to give more attention to the sale of unwholesome products from other causes. The Slaughterhouse Law was amended and now requires that all wholesale cuts of meat be plainly stamped with the license number of the slaughterhouse. This is proving of considerable value in that it gives us an opportunity to check on cuts of meat found at retail or wholesale establishments, and to assure us that it was slaughtered in a licensed and inspected establishment.

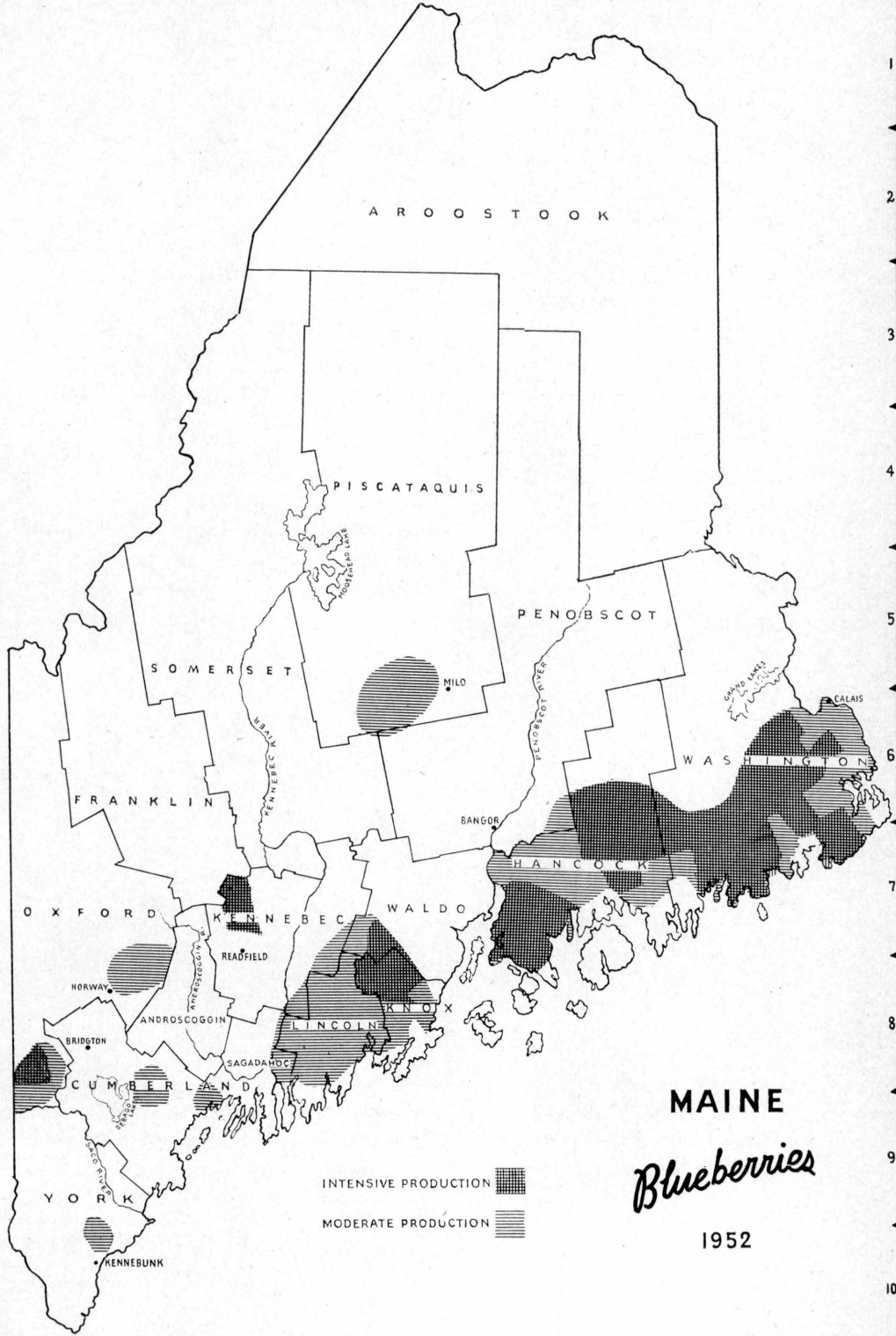
General Inspection

General inspection of food is an important part of the work of this Division. Special attention is given to non-alcoholic beverage manufacturers who are licensed by statute and whose establishments are regularly inspected to insure that they are operating under clean and sanitary conditions.

Bakery inspection has progressed during the past two years and places where bakery products are manufactured receive regular inspection. It may be well to consider sometime the registration of these establishments which will give us an accurate record of the places where bread and pastry products are prepared for market. This year the Federal Food and Drug Administration has established standards for bread. Earnest consideration should be given to the adoption of these or modified standards for Maine.

A Maine Frozen Dairy Products Law was enacted by the Legislature of 1951 which causes the licensing of all retail and wholesale manufacturers of frozen dairy products. This has been done and there were 233 licenses issued in 1951-1952. Samples of frozen dairy products mix are regularly collected

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



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MAINE

Blueberries

1952

INTENSIVE PRODUCTION 

MODERATE PRODUCTION 

A B C D E F G H

and caused to be analyzed. This keeps a careful check on the product used in frozen dairy products, although many samples of the finished frozen product have been collected for analysis during the past two years.

The work of the Chief Dairy Inspector and his assistants has been transferred to this Division, as mentioned in Kenneth Johnson's report in the following pages. Dairy inspectors are now not only inspecting milk and milk products but also are spending a considerable amount of their time on frozen dairy products. As time goes on I believe it is going to prove more efficient and less expenses will be involved in travelling, to somewhat integrate their work with the inspection work of this Division.

The general food law was amended to specifically declare that meat or meat products containing sodium sulphite, sodium bisulphite, or any drug, chemical, chemical compound, or preservative from which sulphur dioxide can be liberated, are adulterated food. In certain sections of the state some manufacturers seem to be very persistent in continuing the sale of meat or meat products containing sodium sulphite and inspectors are giving a considerable amount of attention to the enforcement of this law. Hearings have been held and several cases have been brought to a satisfactory conclusion in the municipal courts. Every effort will be put forth by this Division to stamp out this dangerous practice and to assure compliance with the new law.

As many retail outlets as possible, that is; grocery stores and the like; are inspected to assure that all food products are being handled in such manner as not to become contaminated.

During the spring of 1952, 228 drug samples were collected but all the results of the analyses have not yet been received from the chemist.

Earnest consideration must be given to increased appropriation for the work done at the Maine Agricultural Experiment Station, if we are to continue even to carry on the minimum amount of work that has been done in the past. Last year all expenses of seed analysis work were absorbed in our general appropriation and it is doubtful if this can be done in the future without curtailing materially the important work of analyzing food products as well as other commodities.

As brought to your attention in this report, many of our laws are amended or new ones adopted by the last Legislature. It appears to me now, after having supervised our general food law for two years, that attention must be given to the revision of this law and the adoption of the so-called Uniform Food Act as drawn up and recommended by the Association of Food and Drug Officials of the United States.

I believe that proper credit should be given to the Federal Food and Drug Administration, but more particularly its resident inspector, C. A. Wood, for the fine cooperation we have received from them in the work of food inspection during the past two years.

This report should not be concluded without giving thanks for the wise counsel and consideration that have been given the problems of this Division by the two Commissioners under which I have served during the past biennium.

Respectfully submitted,
CLAYTON P. OSGOOD,
Chief, Division of Inspection

Chief Dairy Inspector

To Clayton P. Osgood, Chief, Division of Inspection:

The following is a report of the activities of the Dairy Branch for the fiscal years, 1950-1951 and 1951-1952. This section was transferred from the Division of Animal Industry to the Division of Inspection on January 1, 1952, and we moved into our new quarters on Grove Street on the first of March.

Our work has been carried on the past two years with the same number of men as in the past, the state being divided into six districts with a man in each district who is responsible for his territory. We also have a man doing check testing in plants buying on a weight-and-test basis and running quality checks on incoming milk at plants throughout the state.

Milk and Cream Analyses

The quality of milk sold in the state, as measured by analyses of samples purchased, reflects the increasing care and responsibility being assumed by the majority of producers and dealers in order to do everything possible to furnish the consumer with the best of dairy products.

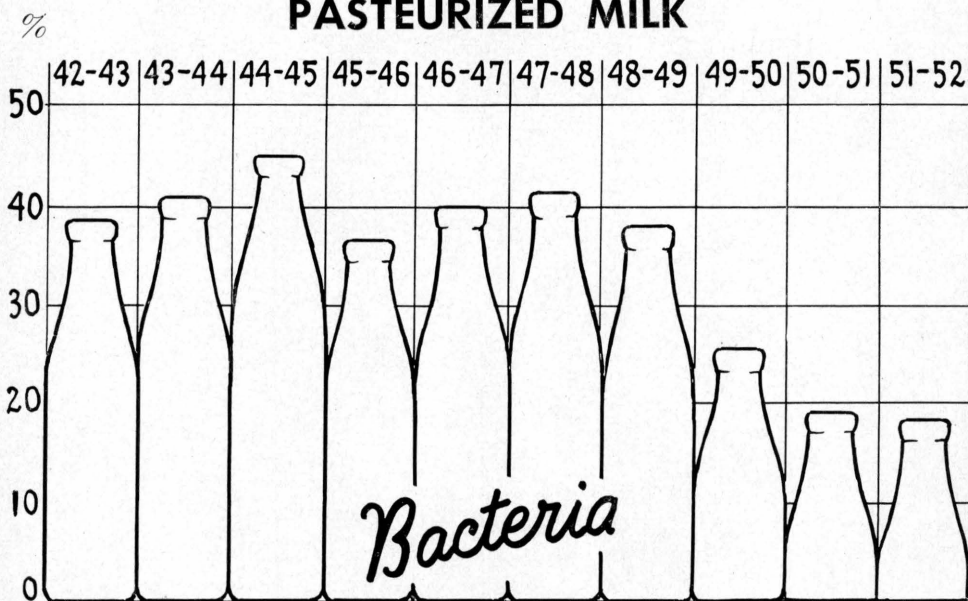
More dealers are making use of routine laboratory control of the raw and finished products than ever before. Some form of laboratory control is essential to maintain quality routinely.

Bacterial counts on samples of milk purchased during the biennium show that 75 percent of the pasteurized milk samples fell into the 25,000 bacteria per milliliter or under group, as compared to 63 percent for the preceding two years.

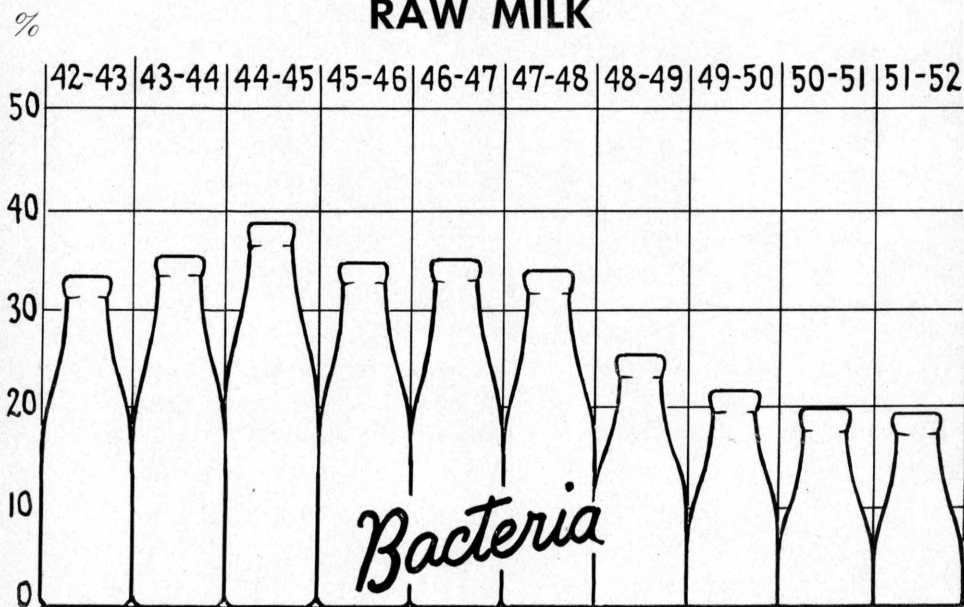
PERCENTAGE OF SAMPLES WITH EXCESSIVE BACTERIA

1942 - 52

PASTEURIZED MILK



RAW MILK



**ANALYSES OF MILK SAMPLES PURCHASED IN 1950-1951
AND 1951-1952**

Total number of samples analyzed	1950-1951		1951-1952	
	<i>Pasteurized</i>	<i>Raw</i>	<i>Pasteurized</i>	<i>Raw</i>
	1,709	1,982	1,763	1,704
	%	%	%	%
<i>Butter Fat</i>				
4% and over	54.89	70.84	54.51	71.66
3.25% to 4%	44.00	27.44	44.98	26.11
Below standard	1.11	1.72	.51	2.23
<i>Sediment</i>				
Clean	17.03	13.38	20.19	12.03
Satisfactory	77.35	75.02	75.78	72.42
Unsatisfactory	5.62	11.6	4.03	15.55
<i>Standard Plate Count</i>				
Below 10,000	54.54	33.91	54.57	42.49
10,000 to 25,000	19.73	23.92	23.71	22.
25,000 to 50,000	7.08	10.44	4.08	3.75
50,000 to 100,000	8.38	11.76	9.30	12.51
100,000 to 200,000	5.16	9.38	5.79	10.69
200,000 to 300,000	1.46	3.13	.57	2.52
300,000 to 400,000	.29	1.11	.11	.29
400,000 to 500,000	.13	.5	.05	.06
Over 500,000	3.23	5.85	1.82	5.69

Butter fat tests remain about the same as compared to the preceding two years, higher than in 1948-1949 but lower than in 1949-1950. Pasteurizing plant samples showed 54 percent in the four percent or over category, as compared to 55 percent in 1949-1950.

The number of cream samples taken remains about the same as in previous years. Samples are taken oftener from the larger dealers than the smaller ones because of the greater number of consumers supplied by the former. Our local cream is of good quality but cream from out of state brought in during short supply could be better.

Nineteen samples of underpasteurized milk and cream were purchased during this two year period as compared to seven for 1948-1950. Investigations have been made and each case will continue to receive special attention.

The elimination of coli organisms in pasteurized milk and cream is continually being stressed and with continued cooperation from the industry should not be too much of a problem.

Composite Sampling

The work of testing composite samples in those plants buying on a weight-and-test basis continues to be one of the important functions of this Branch. Approximately 8,200 composite samples have been tested during the past two years and patrons notified as to results. Dealers have been very cooperative with us in this respect.

In addition, approximately 2,000 special samples have been tested at the request of concerned parties. The inspector doing this work checks methods of testing, glassware and equipment used, and condition of samples to determine if they have been properly cared for. We feel that doing this will help prevent errors which might otherwise occur needlessly.

Farm Inspection

Farm inspection is being carried out on the farms of producers and producer dealers whose milk is sold in the state. Compliance with rules and regulations is good. It has been evident for some time that the thinking dairyman knows he must produce good milk under clean conditions to guarantee himself a market, otherwise the consumer's dollar will be spent for competing products. This attitude is the result of the dairyman's own thinking. When a producer understands just why he is being asked to spend money and what it is designed to accomplish, enforcement of rules and regulations is not the problem it was some years ago.

Some interest is being shown in the bulk cooling of milk on the farm. This system is already being used in the southern part of New England. As the milk is measured and sampled at the farm, this method would tend to eliminate some of the questions raised by present receiving methods.

Maine Dairymen's Association

The annual meetings of the Maine Dairymen's Association have been held in conjunction with the annual Trades Show meetings at the Lewiston Armory during the past two years.

Dr. Kenneth L. Turk of Cornell University was the speaker at the 1951 meeting and Robert Hogarth, manager of Butterfly Farms, Mexico, New York, was the speaker in 1952.

The attendance at both of these meetings was very good and it seems well worth while to continue them as long as outstanding speakers can be obtained.

The State Type and Production Show continues to be held at the Windsor Fairgrounds. Quality of cattle shown and attendance are very good. Particular interest is being shown in the 4-H entries which are a credit to the young people and dairy industry of the state.

Court Cases and Civil Hearings

Several court cases and civil hearings have been held. The latter were satisfactorily concluded without court procedure. Three persons were found guilty and fined in municipal courts for selling milk to which water had been added.

In conclusion, I would like to express my appreciation to you, to Francis Buzzell, chief of the Division of Animal Industry, to Commissioner Nutter and to former Commissioner Gardner for all the assistance and counsel received.

Respectfully submitted,

KENNETH B. JOHNSON,

Chief Dairy Inspector

Weights and Measures

To the Hon. Fred J. Nutter, Commissioner of Agriculture:

I respectfully submit the report of the State Bureau of Weights and Measures covering the work performed for the period from July 1, 1950, to June 30, 1952.

During the biennium, 755 fuel oil and gasoline vehicle tank meters were tested, 348 meters were adjusted and sealed and 210 were condemned for repairs. The number of vehicle oil meters found incorrect is quite disturbing but as this is the first time we have been able to make statewide surveys of vehicle meters, we feel that with cooperation from oil dealers this situation will greatly improve. Meters were found in error from one quart to 14 gallons on 100 gallons. Adjustment of these meters represents a saving of hundreds of dollars to dealers and consumers.

We are rendering a valuable service to merchants and to the people of the state in general in the supervision and testing of motor truck and heavy capacity scales. Our vehicle scale testing unit now operates over the entire state and handles the work in a manner more efficient and accurate than was possible under the former arrangement, where local sealers, with insufficient testing equipment, attempted to determine the accuracy of heavy capacity scales. Recommendations made to dealers involving repairs to equipment are being given prompt attention. In only a few instances has it been necessary for the scales to remain out of service for more than a short time. Four hundred and ninety-three vehicle scales were tested and 127 were condemned

for repairs. As an indication of the importance of this work, one vehicle scale had a minus error of 825 pounds when a combined test and strain load of approximately 22,600 pounds was applied, and another vehicle scale showed a minus error of 420 pounds on a 10,000 pound test.

During the period covered by this report, many calls were made on manufacturers of fertilizer and other commodities, scales were tested, and packages of the finished product were carefully checked for weight. Some faulty scales were found. These were taken out of use and packages were corrected. Visits were made to the various poultry processing plants and large capacity scales were tested and sealed.

Investigation of complaints from out-of-state buyers on short-weight potatoes in packages required a visit to Aroostook in February of this year, and several days were spent in reweighing packages and testing scales. Only two scales were found incorrect. One scale showed three pounds underweight on fifty pound bags. A small number of dealers were not making proper allowance for tare and shrinkage. When this matter was called to their attention, it was corrected.

The 1951 Legislature amended the law relating to Fees and Duties of the State Sealer of Weights and Measures to provide for a fee for testing and adjusting scales, weights and measures, to be paid by the person for whom this service is rendered. Local sealers are not to charge a fee unless they have adequate equipment to test accurately and such equipment must be approved by the State Sealer of Weights and Measures. This does not mean that the Bureau will be self-supporting, as this fee is charged for testing devices and represents only a portion of the expense. It can hardly be expected that the fees will ever be sufficiently large to equal costs of operations, but it can go a long way towards supplying funds for the purchase of equipment.

Arrangements were made to have Harlon D. Robinson, an inspector of the Division of Inspection, go to Boston early in the year for a short course of instruction in large capacity scale adjustment at the repair shops of the Howe Scale Company and the Fairbanks-Morse Company. It is felt that with this training he is qualified to make adjustments which will, in many instances, save expensive repair jobs. He will also be able to determine whether repairs on large capacity scales by various scale companies have been properly made.

The following covers statistics of the work done by the local sealers of weights and measures. In the interests of brevity, we have departed somewhat from the method of reporting formerly employed but have on file more comprehensive statistics which are available to any interested citizen.

	1950-51		1951-52	
	<i>Tested</i>	<i>Condemned</i>	<i>Tested</i>	<i>Condemned</i>
Scales	6,698	96	9,164	41
Weights	2,573	25	3,251	62
Dry Measures	120	0	16	0
Liquid Measures	434	40	416	27
Yard Sticks	203	101	163	131
Gasoline Pumps	4,198	40	2,824	27
Milk Jars	968	0	994	0
Kerosene & Oil Pumps	648	4	503	7
Molasses Pumps	51	0	36	0
Taxi Meters	228	101	127	131
Measuregraphs	20	0	25	0
Vehicle Tanks	317	3	587	1

It is almost impossible to obtain a report from each town. Many officials are lax in filling vacancies and in small towns the income received is not sufficient to make the position desirable.

Cooperating with the State Police and Highway Department, all wheel-load scales were tested, also State Police scales at Wells, Gray, Brunswick and Mattawamkeag. Too often in matters of controversy involving the weighing of highway loads, the performance of the scales is questioned. The facts do not substantiate that the scales are in error.

I attended the 36th and 37th National Conferences on Weights and Measures held in Washington, D. C., in May, 1951 and 1952. I was elected a member of the Executive Committee of the 36th Conference, which had the largest attendance and was probably one of the most interesting and instructive meetings in the history of the conferences. A total of 408 delegates registered. Thirty-five states and the District of Columbia were represented by Weights and Measures officials.

While at the conference we were given an opportunity to go to Virginia and inspect the recent installation of an electronic vehicle scale. These scales have no levers, pivots, weighbeams, pendulums, racks, pinnens or springs, common to the conventional types.

Various scale manufacturers are doing development work on this type scale. Consideration is being given to installation of an electronic scale in Maine.

We are grateful for the interest and cooperation received from you and from former Commissioner Gardner, as well as from Clayton P. Osgood, chief of the Division of Inspection.

Respectfully submitted,

JAMES A. BOYLE,

Deputy State Sealer

Division of Animal Industry

Francis G. Buzzell, Chief
R. E. Libby, State Veterinarian

S. F. Dorrance, Livestock Specialist
H. T. Covell, Supt. Egg Laying Test
and Broiler Test

General

The over-all livestock population has shown a slight reduction during the past two years, Aroostook county being the exception. That county has had a 25 percent increase in cattle numbers.

The opportunities for increased livestock production in the state present the greatest challenge in the agricultural field. Livestock as either the major or as a supplemental farm enterprise is practically a must for a successful, stable agriculture, which is becoming increasingly more important to the welfare of many rural towns forced to depend upon agriculture for a greater percentage of their income.

Milk production has been sufficient in the Boston market to cause considerable surplus at times during the past two years. This has resulted in lower blended prices for Maine producers, not only in that market but in the local market. There has been some depletion of dairy herds, which were especially hard hit in 1951 due to the poor haying season, and low-quality roughage, which made it necessary to feed more grain at high prices.

The high price of beef has had its effect, causing the decline in dairy cattle numbers, but the closing of the Canadian border on March 1, 1951, to the importation of all cloven-hoofed animals, plus inconvenient import regulations on hay and grain, have resulted in an increased interest in raising dairy replacements for export into southern New England. This interest should continue after the present Canadian restrictions are lifted.

The general quality of dairy cattle has increased considerably along with milk production per cow. The Artificial Breeding Cooperative, the continued progress of purebred breeders and their influence on breed improvement, tight economic conditions, and continued progress in eradication of Brucellosis and tuberculosis have done much to help bring this about.

Milk production in Maine has been quite stable and sufficient during the last two years but production of more milk cows for sale in states to the south offers real opportunities for expansion in this segment of livestock production.

Beef

During the past two years there has been a considerable increase in beef cattle production. Several new purebred herds have been established along with many commercial herds. The Division has been able to assist many in locating and selecting cattle during this period. Many high quality beef bulls have been imported, leaving their mark of increased quality along with increased numbers.

Beef cattle production, being rather flexible, offers opportunities for a profitable expansion in the state, particularly where labor is not the principal item for sale. The low number of hours required to take care of beef cattle, along with their ability to utilize grain and hay, crops that are easily grown but greatly neglected and often wasted, are inducements for raising beef cattle.

At present, production of beef is generally limited to feeder calf production. However, an increasing number of farmers are making grass beef with some supplemental grain feeding, and this offers another method which is proving satisfactory. Recent developments indicate that limited grain feeding, along with corn or grass silage, may put Maine beef men in a very favorable position to produce high quality beef which would find a ready market, particularly in the Kosher trade of southern New England.

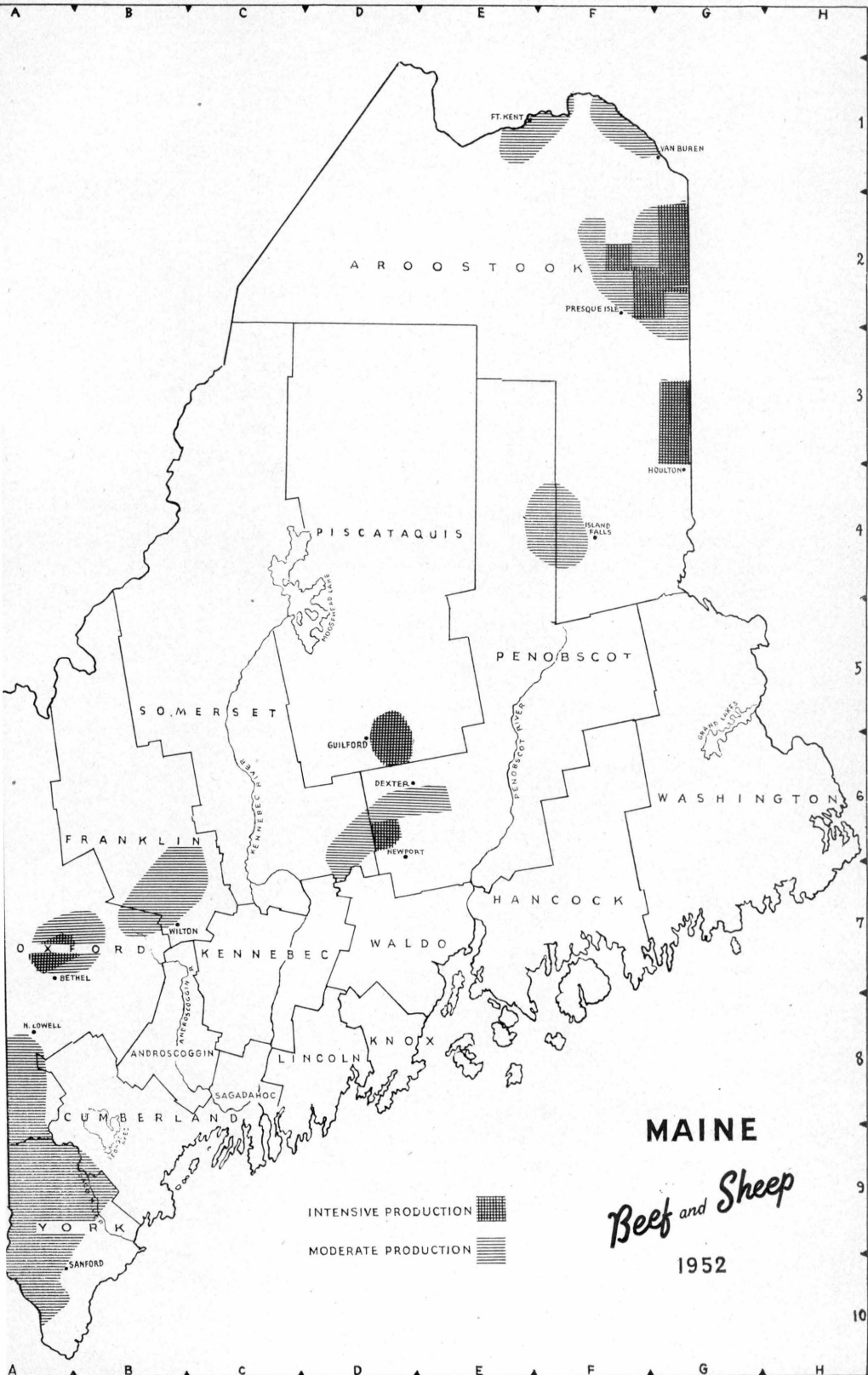
Under recent prices, feeder calf production in Maine, when properly handled, has returned to the operator about the same income for home-grown roughage and labor as a dairy cow producing about 7,000 pounds of milk. Much less labor is used.

There are few areas in the state where beef production can be the sole farm enterprise, due to the small acreages of tillable land available. The greatest need for expansion in beef cattle production is on cash crop farms — as a supplemental enterprise to utilize roughage now nearly worthless. Part-time farmers who have little labor to sell, and poultry farmers who have converted from a dairy to a poultry enterprise, have once productive lands now unused. Poultry manure available either on the farm or in the area could well be used to increase the fertility of this unused land. Such fertility would produce excellent roughage for beef cattle.

Sheep

The sheep population in Maine has remained fairly constant over the past biennium. There has been a substantial increase in numbers in central and southern Aroostook county, which offsets slight decreases in other areas.

The opportunities for sheep raising in the state are comparatively the same as beef cattle. They do, however, have some advantages not found in other types of livestock. Sheep are an attraction to the part-time farmer, or to anyone not having sufficient acreage to go into the cattle business. Also, sheep



do not require a high initial capital investment. They have a definite place on the poultry farm, where productive ranges are already fenced, and readily available poultry manure will produce excellent roughage on the hayfields.

The outlook for the sheep industry in Maine is excellent as the sheep population of the country has been low since 1942. The national increase since that date, the all-time low, is approximately two percent.

Maine produces only approximately one percent of the market lambs slaughtered in New England, which shows that overproduction is hardly possible.

There is a ready market for our wool through local buyers, mills, and the Boston wool commission concerns.

Poultry

The poultry industry has forged ahead these last two years to become a major agricultural enterprise in the state, thus helping livestock to yield more than half of the total agricultural income of the state. The greatest increase in the poultry industry has been in broilers and hatching eggs. Maine-produced broilers have shown a steady increase in quality as well as numbers.

Now in its sixth year, the Maine Production and Broiler Test, which is conducted at Monmouth under the supervision of the Division, has been of great assistance in increasing the quality of our meat birds. It continues to be of international interest and has been copied in many other states.

The Maine Egg Laying Test was established in 1930, being one of about sixteen established throughout the country at that time to test birds bred primarily for egg production.

The interest and possibilities of poultry meat production in Maine resulted in the modification of a program carried on at the Egg Laying Test to include the Broiler Test. In the fall of 1949, with the help of the Maine Development Commission, a suitable brooder house was erected to carry on this Broiler Test to a larger extent.

In the fall of 1951, the Advisory Committee to the Department endorsed plans which will eliminate the Laying Test and devote our limited facilities to tests connected with the Broiler industry.

During the past year the boiler at the laying house and residence was condemned and has been replaced. At the same time changes were made in the laying house to improve ventilation and make the building suitable for use in connection with the Broiler Test, which undoubtedly will be of greater value to the poultry industry in the state.

Swine

Production remains steady and offers little in the way of expansion beyond

garbage feeding and pigs for home consumption. However, sizeable numbers of feeder pigs are imported each spring and the opportunity for expansion in their production offers chances for increased income in all areas of the state. The extensive use of pastures offers some promise of making hogs pay on farms producing some grain, particularly oats and barley or corn.

Bovine Tuberculosis

Six of our 16 counties were area-tested for tuberculosis during the past biennium: Aroostook, Franklin, Kennebec, Knox, Washington and Sagadahoc. Throughout the state during the period, 95 reactors were found.

Although this is a comparatively small number, we have learned through experience in the past that this disease can not be neglected and we have tried to maintain a program of testing a third of the state each year, which seems to be adequate. However, many neighboring states carry on programs of area testing the complete state each year for tuberculosis.

The number of cattle tested annually at the owner's expense in the maintenance of accredited herds is gradually increasing.

Brucellosis

During the past two years, the Brucellosis program has been carried on under two sets of laws, which has resulted in considerable confusion among livestock producers and, in some cases, even antagonism to the program.

On July 1, 1950, the payment of indemnity was discontinued except on officially vaccinated reactors. This program remained in force until changed by the 95th Legislature which passed emergency legislation restoring indemnities on May 20, 1951. This act also made provision to pay indemnities to those farmers who had slaughtered their reactors between July 1, 1950 and May 20, 1951, and had not been eligible under the vaccination clause, providing they were not holding known reactors on that date.

During this ten-month period July 1, 1950 to May 20, 1951, the official number of "C" herds increased from 140 to 206. Many of these herd owners would not have considered retaining reactors under the present program. The large number of "C" herds made it necessary to employ two full-time inspectors to check on these herds and keep the spread of infection at a minimum.

Work during the past two years has shown a gradual decline in the incidence of the disease. However, in some counties, the number of reactors in "C" herds has been large enough to distort the picture. More than half of the herd owners operating under plan "C" as of July 1, 1951, have removed their reactors and are now operating under plan "B". The success in eradi-

PERCENT BRUCELLOSIS INFECTION IN CATTLE

According to Area Tests

	<i>1st Area Test</i>	<i>Given modified certified status for 3 years from date of test except as noted</i>		
		1948-50	1950-52	1952-54
Androscoggin	6.5 (1944-46)	.59	.45	
Aroostook	.96(1942-44)	.40	.22*	
Cumberland	5.3 (1944-46)	.95	.34	
Franklin	5.7 (1940-42)	.33	.33*	
Hancock	1.0 (1942-44)	.36		.04*
Kennebec	4.2 (1942-44)	.74	.41	.46**
Knox	2.9 (1944-46)	.29	.49**	
Lincoln	2.8 (1944-46)	.10		.50**
Oxford	5.4 (1942-44)	.95	.79	
Penobscot	4.4 (1942-44)	.81		.70**
Piscataquis	4.3 (1940-42)	.52	.48	
Sagadahoc	2.7 (1944-46)	.55	.07	
Somerset	7.6 (1940-42)	.88		.36**
Waldo	4.5 (1944-46)	.87	.73	.24*
Washington	1.0 (1942-44)	.25	.03	
York	6.3 (1944-46)	.86	.56	

* *Certified for two years under new practice of U.S.B.A.I., effective March 24, 1952.*

** *Incomplete.*

cating the disease under the "C" plan has not been as satisfactory, from the owner's standpoint, as many of them thought it would be before adopting this plan. Many owners have pointed out the problems they have encountered with abortions, mastitis, sterility and loss of production.

Although a time of three years was set for operation under the "C" plan, it does not prohibit the establishment of new "C" herds. In view of the progress that has been made in Brucellosis, it would seem advisable that further legislation be adopted that would prohibit the establishment of any new "C" herds after a certain date, or that any farmer wishing to operate under the "C" plan would have to obtain, from the U.S.B.A.I. and the Commissioner of Agriculture, a written permit to operate under this plan.

It is suggested that the Legislature review tuberculosis indemnity. At the present time, the law provides that \$50.00 be deducted from the salvage on each animal and retained by the State before any is remitted to the owner. It would seem advisable that any salvage obtained should be retained by the owner.

Calfhood vaccination has increased during the past two years. Although it is not 100 percent perfect, vaccination undoubtedly protects many herds when exposed, and when infection occurs in any vaccinated herd, vaccination offers some degree of protection. However, there is still a tendency among farmers to think this the only precaution which they need to take.

The economic side of the picture is definitely towards higher prices for vaccinated animals, particularly for export to the states which do not have eradication programs.

Calfhood vaccination has brought about problems relating to vaccination titer under present regulations, which have not been solved.

Swine Diseases

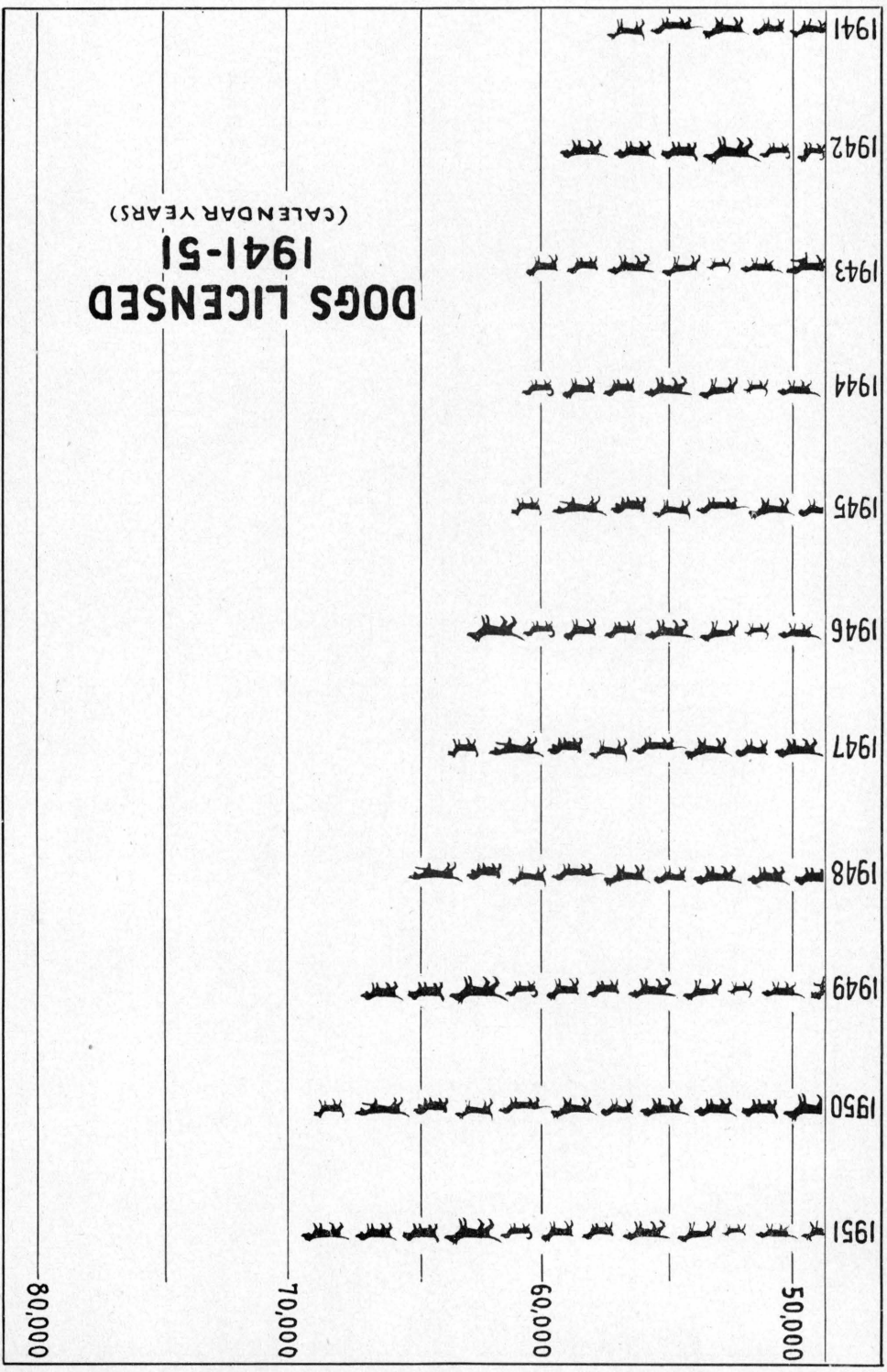
Maine has been fortunate in having a low incidence of swine diseases during the past biennium.

Hog cholera, prevalent to a high degree in many other states, remains at an extremely low percentage in Maine, existing in only a few scattered herds.

Swine erysipelas is found very rarely in herds of swine in this State.

A comparatively new disease of swine, vesicular exanthema, highly contagious and infectious, has recently been reported in 26 states of the United States. However, up to this date it has not struck the state of Maine, and as far as is known, there have been no reported cases in the New England States. Necessary precautions are being practiced to prevent this disease from entering the state. A permit is always required to accompany all swine imported into Maine for slaughter, and a health certificate, together with a permit, is required for importation of breeding and feeding swine.

DOGS LICENSED
1941-51
(CALENDAR YEARS)



Imports and Exports of Dairy and Breeding Cattle

	1950-51	1951-52
Cattle Exported from Maine	5,555	6,036
Cattle Imported into Maine	3,567	3,236

The importation of dairy cattle has decreased during the past two years, due primarily to less demand because of the effectiveness of the Brucellosis eradication program. A large percentage of the cattle imported has been immediately exported to other states.

The exporting of Maine-raised dairy cattle replacements has increased during the past two years. This trend should continue. Our progress in Brucellosis eradication will enable us to export into the Middle Atlantic States, premium paying areas, where high health requirements exist.

Other Diseases

Vibrio fetus is prevalent in many of the herds in the state but its increase apparently is not of epidemic proportion. The lack of general knowledge and of a reliable diagnostic test of this disease has made it very difficult to control.

A definite mastitis control program has not been adopted by the Division, partly due to lack of facilities and personnel. The eradication of this disease will involve an extensive educational program on management as well as close cooperation with the veterinary profession and others involved. Mastitis today is the dairy farmer's biggest disease problem. Not only is it expensive to treat, but the quality of the product is lowered.

Livestock diseases such as blackleg, hog cholera, swine erysipelas, etc., have not increased in numbers during the past two years and those cases reported have been quarantined and the disease eradicated, or proper vaccination has been carried out.

The problem encountered in the past several years in Aroostook county, generally accepted as calf pneumonia, has been partly solved by the local veterinary practitioners and veterinarians from the Division. It has been positively diagnosed as Vitamin E deficiency. Plans have been made to combat this condition when it makes its annual appearance next spring. More work will be necessary to determine why this deficiency occurs in roughage in this area and does not occur in other areas of the state.

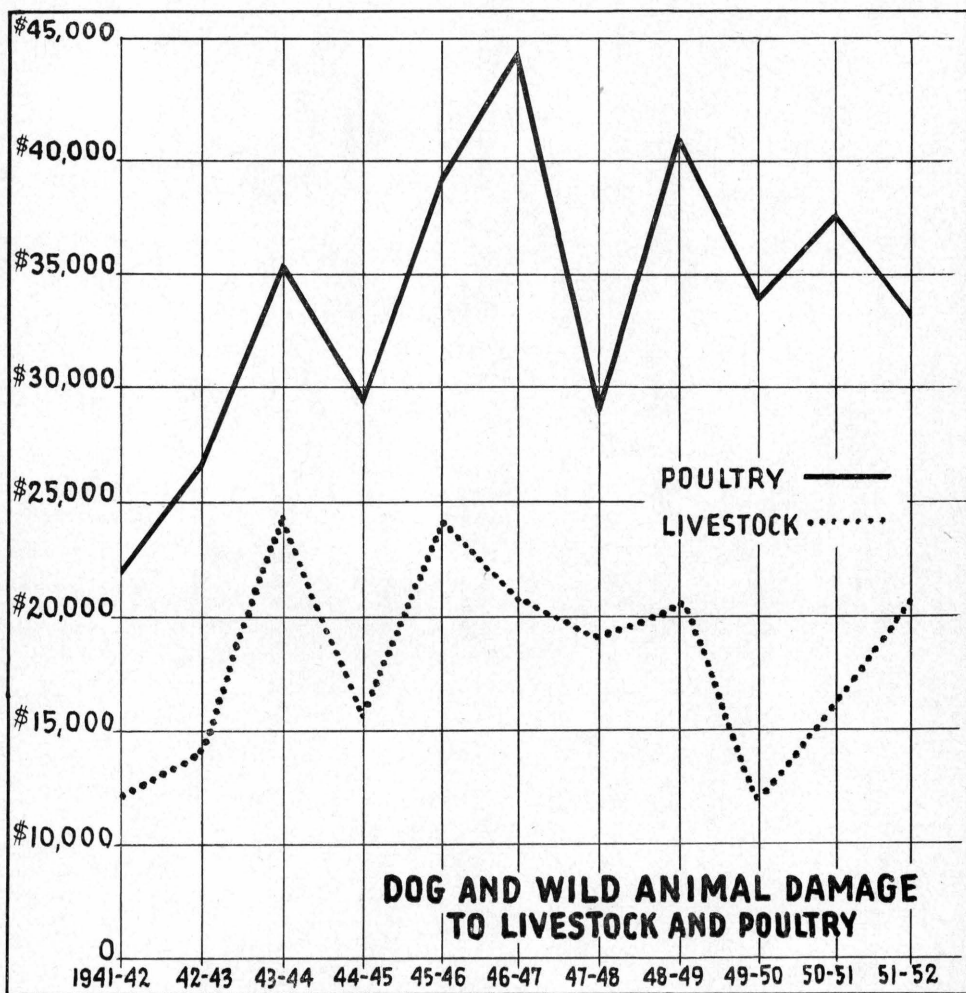
The disease problem in the poultry industry has increased along with the industry. Newcastle disease was prevalent in the fall of 1951 and inflicted

heavy losses in some areas. These were intensified by the fact that a vaccination program, which was effective for several years, had been partly discontinued due to the small number of outbreaks. Wing-web vaccination has generally been satisfactory. However, many poultrymen outside the concentrated poultry areas are questioning this practice from an economic viewpoint.

Air-sac disease was definitely diagnosed during this biennium but at the present time sanitation and management seem to be our only defense.

Damage Claims

Dog and wild animal damage to livestock and poultry for 1950-51 amounted to \$53,287.69, and for 1951-52 was \$53,735.91.



The dog and wild animal damage is unpredictable as shown by our graph. Some of the factors influencing the damage claims paid are a tremendous increase in the poultry population in the state, higher prices of poultry, and low fur values on the animals causing the poultry damage.

Dog Licenses

From 1941 to 1951 the number of dog licenses increased annually from 57,941 to 69,340. The kennel licenses also have increased from 369 to 454 over this 10-year period. The dog license receipts for 1950-51 were \$93,856.54, and for 1951-52 were \$94,593.86.

Poultry Licenses

There has been no material change in the poultry licenses issued in the biennium — 190 issued in 1950-51; 204 issued in 1951-52.

Promotion of Animal Husbandry

Beef

Aroostook county commercial cattle numbers have increased to the point where farmers carrying on a Cow-Calf type of enterprise were facing a problem in marketing steer and heifer calves.

Our efforts in organizing and sponsoring a feeder calf sale in the fall of 1951 met with approval to the consignors. This event was a huge success as all calves sold readily at good prices. This sale was set up as an annual affair and will act as a marketing outlet for the commercial beef cattlemen.

The offering of feeder calves at the Maine Hereford Breeders Association consignment sale at Fryeburg fair in 1951 also proved popular to consignors and buyers. This year a larger number of calves are expected to be entered in this annual sale. This event offers the southern and central Maine beef men a ready market for steer and heifer calves.

Cooperation has been continued with the Maine Hereford Breeders Association and the Maine Shorthorn Association in holding field days and cattle sales.

Also, promotional assistance has been extended to the beef producers through educational meetings, demonstrations, and help in selecting herd sires and cattle for foundation purposes.

Feeding, management, and supervision of 4-H projects has been continued.

THOUSANDS OF DOLLARS

4

6

8

10

12

14

16

51-52



50-51



49-50



48-49



47-48



46-47



45-46



44-45



43-44



BEAR BOUNTY

PAID IN MAINE
DURING FISCAL YEARS
1943-44 TO 1951-52

Sheep

Promotional activities with sheep have been confined mostly to educational meetings, demonstrations, and to cooperation with the Maine Sheep Breeders Association in carrying out their activities, most important of which is the annual wool pool sponsored by this organization. This pool provides a market which gives the sheep farmers the advantage of selling collectively on a volume basis. Through it Maine farmers will have the benefit of receiving government support price for their wool, which has been higher than the market price during the spring season.

Cooperation was extended to the Extension Service in organizing and sponsoring a market lamb show and sale at South Paris Fair in 1951. Thirty-five lambs were shown and sold. Approximately twice this number have been enrolled for the 1952 show and sale. We feel this is a project with many advantages over other types of livestock projects available to the younger 4-H boys and girls. Several last year participants have already started with a sheep breeding project for 1952.

Much assistance has been given to sheep breeders in selecting rams as flock sires, as well as ewes for foundation purposes. Three Columbia rams are under our supervision and will be used to cross-breed on a flock of island sheep and two flocks of native ewes in the central and northern parts of the state. The purpose of this cross-breeding is to develop a type of ewe that will yield more pounds of wool and lamb per ewe when crossed with the proper type of mutton ram. The progress of this cross breeding will be given in the next biennial report.

Assistant Animal Husbandry Specialist

John A. Smiley of Winslow, Maine, was employed as assistant animal husbandry specialist in May, 1952. His duties are to assist the animal husbandry specialist in carrying out the provisions of the dog licensing laws, adjusting livestock and poultry damage claims caused by dogs and wild animals, and the promotion of animal industry in the state. Much of his time during the summer months will be spent investigating livestock and poultry damage claims. With damage claims on a state-wide increase, it is necessary to make more personal investigations and adjustments.

Opportunities in beef cattle production and sheep raising in the state are such that more assistance is needed by livestock men who are new in their enterprises. With the help of the assistant animal husbandry specialist, more individual attention can be given to problems confronting livestock producers.

Division of Plant Industry

To the Honorable Fred J. Nutter, Commissioner of Agriculture:

The report of the work of the Division of Plant Industry is hereby submitted. There are several appropriations and sources of income.

Certification of Seed

The following table indicates the volume of work in Seed Potato Certification which has been done between July 1, 1950 and June 30, 1952:

	<i>Acres Entered</i>	<i>Acres Passed</i>	<i>Bu. Cert.</i>	<i>Cwt. Sold</i>
1950-51				
Katahdin	34,843	27,545	14,819,479	895,881
Chippewa	5,106	3,992	2,139,712	107,843
Green Mountain	4,411 ½	3,835	1,954,316	261,273
Irish Cobbler	3,833 ½	3,698	1,827,182	763,730
Sebago	492	433	222,995	35,718
Kennebec	1,765	788	448,372	57,711
All Others	1,597	1,225	647,747	72,242
	<hr/> 52,048	<hr/> 41,516	<hr/> 22,059,803	<hr/> 2,194,398
1951-52				
Katahdin	23,549	20,647	9,846,793	2,137,512
Chippewa	1,083	1,047	538,415	151,951
Green Mountain	4,194	3,690	1,704,780	429,645
Irish Cobbler	4,412	4,221	1,982,369	981,388
Sebago	382	368	168,622	60,570
Kennebec	3,907 ½	2,484	1,502,998 ½	280,243
All Others	1,757 ½	1,510	709,398 ½	176,031
	<hr/> 39,285	<hr/> 33,967	<hr/> 16,453,376	<hr/> 4,217,341

The above table for the first time in several years shows a change in the general trend of the Certified Seed potato business. The report for 1951-52 shows the smallest acreage as well as the smallest total production passing certification in several years. On the other hand, our sales were nearly 9,000 cars. This increased interest has resulted in a large entry for 1952, about 61,000 acres.

The situation is following a money pattern. Potatoes were in short supply this past year and we had a very wide distribution of certified seed, nearly 100 percent more being shipped than during the previous year. Not only was there a shortage in the United States but Canada was short, which aided us materially in selling a lot of seed at a fair return to the growers. The price reached a point in January of 1952 where OPS put ceiling prices on table stock but did not put a ceiling on seed and this made it still more comfortable for our seed producers. Because of the extreme shortage, shipments were made to practically every state in the country. Our potatoes kept unusually well and shipments were continued until sometime in early June. It is possible to believe that some of these cars may be used for seed in areas where Maine seed is not commonly used and we hope will result in repeat orders. The Kennebec variety which we have been watching quite closely because of its recent introduction, moved out in rather a large volume and we sincerely hope will make some friends for us.

We know that we were shipping under most favorable conditions and realize full well that if the Canadian Provinces get back to normal production that we will again face our usual competitive trade from that area. Maine Certified Seed has again been favorably received in the markets, the virus content has been low, and the only complaints have been from the few cars that were poorly graded and the mixtures in some Size B lots.

Potato Diseases

It is difficult for me to give the reason why there is so little virus disease in Maine seed potatoes at the present time. We are all agreed that the aphid population has been low. We are also agreed that our growers are using a lot of DDT and other insecticides which more or less control the aphid population.

Two or three years ago we were very much disturbed about the spindle tuber in Kennebecs. That situation has been taken care of through the Seed Board and the various foundation growers. We are disturbed, however, about the presence of verticillium wilt in this variety and there is not much that can be said at this time except that many soils in many states have this trouble. The Maine Agricultural Experiment Station has conducted work each year on this disease and again in 1952 has a plot on the Ashby Farm at Caribou which ought to give us more information. The fact is that we do not know too much about verticillium. The ideal condition, of course, is to have seed that is free from the trouble and to plant it in a field which is also free. Kennebecs are so well thought of by so many people that we should continue working with them until we are convinced that we are wrong. It is

possible that the aphid population may again step up within the next few years and become troublesome, but at the moment Maine is exceptionally well off in the matter of potato diseases. It is only a few years, in 1946, that we had five lots of ring rot show up in our Foundation Program. The past season there was no ring rot in the program and not as much in certified seed as we were finding a few years ago.

Historically, it seems as though we have reached a point in certified seed production where the seed produced and used, is nearer free from virus diseases than ever. Ninety percent of our growers are planting certified seed which means that in spite of high prices some years, the grower is conscious of the value of good seed. I think I should point out that we have gone a long way in making better seed available. The high per acre yields which have been credited to the State of Maine for the past two growing seasons is evidence of what I have in mind. The average in 1950 was 480 bu. per acre and in 1951, 450 bushels.

Our Customers

We have continued our usual procedure and have had both Everett Westin and Paul J. Eastman visit many of the states that purchase seed from us. These men have been through the territory before and have become acquainted with the handlers of large volumes of seed. There is a group of leaders in the industry in each state and it is well to know who they are and what they are thinking.

The 1950 crop, while of good quality, found us unable to meet the price differential that we found in many of the markets. Canadian water competition established a price in Florida and South Carolina at about a dollar less than we could ship seed from Maine. As we came north, however, the price differential was removed and we could do more business.

I have studied the reports made by these men and there did not seem to be anything particularly new in them, and it may be that we should discontinue our trips for a year or two, but it is too early to decide that question for sure.

One of the reports mentioned a situation which I have always been afraid of but have found no way to prevent. A car of Size B Kennebecs was being grown in Jersey and there was about four percent Cobbler mixture. This question of having Size B potatoes for those who want to buy them is fine in theory, but difficult in practice, because it requires that a number of cars be graded before enough Size B's can be graded out to make up a car.

We are positive that we won't suggest any more winter trips, because we are not particularly concerned with market prices. The attitude of an inspection service such as certified seed, should remain the same regardless of price.

We do believe that our visit to the Harrisburg Show in January should be continued because of the large attendance of real farmers. Seeing the crop during the growing season is much more important to our work because it is one of the best ways to check on the kind of seed that we are producing.

I would conclude by saying that it seems as though we are shipping excellent certified seed, that our customers are quite well satisfied; but that doesn't mean that we can stop the work that is now going on to build a better seed improvement program.

GRAIN CERTIFICATION

by Paul Eastman, Assistant Division Chief

Participation in this program increased from 1,356 acres in 1949 to 8,300 acres entered for inspection in 1951. In 1952, however, the entry dropped to 4,100. This decrease in acreage was brought on partly by a substantial increase in potato acreage and partly by the fact that weather during the 1952 planting season was very wet and many growers did not get their grain planted until very late or not at all. It should also be mentioned that in 1951 there were many certified seed oats sold for feed. This fact would naturally lead to a decrease in entry.

<i>Year</i>	<i>Acres Entered</i>	<i>Acres Passed</i>	<i>Number of Growers</i>	<i>Bushels Certified</i>
1949	1,356	943	53	25,814
1950	5,732	4,304	213	102,000
1951	8,300	6,190	230	186,000
1952	4,100		130	

Maine Certified Seed Oats are finding a good market in Southern New England and Pennsylvania. These oats, when well cleaned, have a very fine appearance and exceptionally high germination. Buyers like them particularly because of the plump, well filled, kernels.

Several modern seed cleaning mills have been set up in Aroostook County to process and treat certified oats. Maine Potato Growers, Inc., at Presque Isle and the State Road Grain Company at State Road Siding have two of the larger machines. Willingness on the part of such concerns to invest money in machinery and equipment has made possible the building of markets for Maine seed oats.

Problems encountered in the operation of the program have been mainly concerned with keeping weed seeds out of the oats and getting laboratory

tests done in time for marketing. The weed problem has been dealt with through education of growers and improved cleaning equipment. Seed testing was done in Iowa in the 1950 season. In 1951 the seed laboratory at Orono was re-activated and testing was done there. Some trouble was encountered in getting the large number of samples finished in a short time. Plans have been made to speed up this process in 1952 and with the reduced acreage it is hoped that the samples will be finished in plenty of time for early sales.

Oat Varieties

The leading variety of oats at present is Clinton 59. It comprises about three-fourths of the acreage entered in 1952. This is a stiff-strawed, high-yielding variety, having good disease resistance and high bushel weight. In order to produce good seed of this variety, it is necessary to renew seed stocks quite often from some improved source. This is due to the fact that this variety produces a certain percent of off-type plants each year it is grown. Unless these off-type plants are rogued out, the percentage will build up and the fields become very uneven. To solve this problem, a foundation program has been developed. We are growing about 40 acres of oats from Indiana Foundation Seed at the Seed Potato Board Farm in Masardis. These oats will be rogued for off-types and distributed to seed growers in small lots to plant seed plots. This program was started in a small way in 1951 and proved to be quite successful.

The only other variety of importance is Ajax. This is a tall-strawed Canadian variety having a white kernel. It has produced large yields in Maine for several years. Demand for Ajax seed in other states is not as great as that for Clinton 59. Ajax comprised about one-fourth of the acreage entered for certification in 1952.

One field of Henry spring wheat was certified in 1951 and the same grower has entered in 1952. One or two growers are also interested in barley certification.

It is very probable that the interest in oat growing will follow the potato business. When prices for potatoes are low, the most interest will be shown. Adverse growing conditions in 1952 will not help to increase the interest for next year unless the national oat situation warrants high prices.

Golden Nematode

We believe that New York State and the Federal Government have both done everything possible to control the spread of the golden nematode on Long Island, New York. In spite of this, the pest has now been found in

different places in Suffolk County and it almost seems as though the State of Maine would have to forbid the importation of potatoes from any part of Long Island, if we want to protect our seed growers. I regret this situation because Long Island is one of our best customers and no one likes to be unfriendly toward a friend.

There were no soil samples taken in Maine in 1951 but in 1950 one thousand soil samples were taken and analyzed, all with negative results. A thorough study of the situation will be made before it is definitely decided what to do.

To further complicate matters, a nematode has been found in Connecticut near the Massachusetts line. This appears to be the same specie as that on Long Island, but so far repeated efforts have failed to get it to work on potatoes. The Connecticut situation, we believe, will be investigated further by the USDA within a short time. Maine must protect its potato industry, especially its seed growing; therefore, we are watching the turn of events. We may have to quarantine still further but we do not like this method. At best it is only a stop-gap procedure. Maine's seed production is probably just as important to our own table stock growers as it is to the producers in other states.

Ring Rot

As time has gone on, each year we have lost fewer acres because of ring rot. I think it is because we have learned to live with it and in most cases the amount present is not sufficient to even indicate the situation.

I say, "Amen" to all this because it was only a few years ago when we were quite disturbed. I marvel at the way our potato growers can get into trouble, but the outstanding thing about it all is the speed with which they adopt the measures recommended by our Experiment Station and Extension Service, and get back into what I term at least a practical line. The fact that ring rot is not soil borne except in volunteers, has been of great help in handling what otherwise could be a bad situation. 1952 appears to be a season when the symptoms of this disease will be quite readily distinguished.

Florida Test

The Florida Test continues to be operated by the Maine Agricultural Experiment Station and they appear to be doing their usual good job. The fee is high but the results are worth the cost. There is no extra money available for conducting this project and at any time the Station may call on us to pay more for this special service. The Potato Tax Committee recognizes the importance of this project and has helped on several occasions.

The accuracy of the test, as everyone knows, depends upon the proper selection of the sample. A check in the field this season indicates that very rarely do we get a higher disease count in Maine than we do in the Florida sample.

We are anticipating some increased interest in this year's test because it looks as though our farmers might be able to spare the money for this additional project. Like practically everything else in the potato industry, this branch of the job is self-supporting which is probably as it should be.

The only regret we have is that the test does not give information on verticillium wilt. This would be of tremendous value.

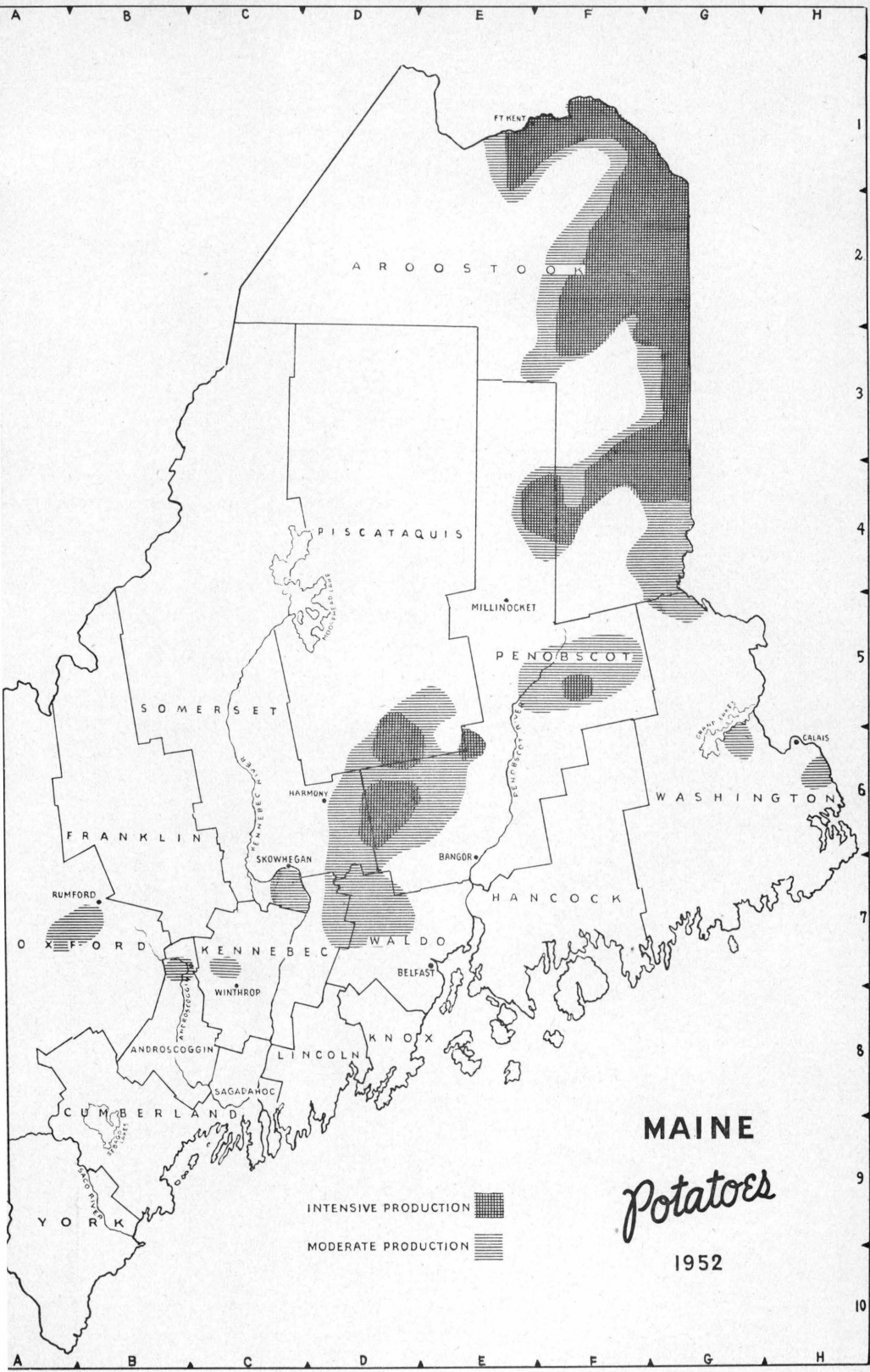
State Seed Potato Board

The State Seed Potato Board has continued to be active on its Masardis Farm. In 1950 we grew 15,500 barrels of foundation seed, and in 1951 we grew 17,100 barrels.

We have devoted considerable effort toward cleaning spindle tuber out of the Kennebec and believe that we have succeeded. As a matter of fact, there doesn't seem to be any particular virus problem on the Farm and it is not until the potatoes leave us and get into the regular channels of the industry, that the picture changes. This is to be expected because we have all the extra facilities to do the little things so necessary.

About a year ago it was brought to our attention that the Kennebec variety was more or less susceptible to verticillium wilt. This has caused and still is causing anxiety in the industry. Verticillium is a fungus disease which manifests itself from the middle to the latter part of the season. It is a fungus disease that is generally spread throughout the United States. We have known it in Maine since 1920. The Experiment Station is continuing research on this problem and I hope will soon be able to tell us how they can be helpful. We have never had any on the Masardis Farm and therefore, do not know too much about what recommendations to make.



The sale of seed is very easy when our farmers have the money to buy. The 1950 crop sold slow. We had to continue to reduce our price until the best Katahdins were sold for \$2.25 a hundred pounds. All in all, it was a difficult year and the Board just about broke even. 1951 was different, in that we had an excellent crop and sold more than 25,000 one hundred pound bags at a high price, thus improving our financial position. This seed was the best we ever produced and must do the industry a lot of good. As usual, the Foundation growers got the first choice and it is their multiplication plots that are helpful. The seed we sold would plant about 1500 acres and it is to be regretted that we have not established a program to follow this seed into its



MAINE

Potatoes

1952

INTENSIVE PRODUCTION 
 MODERATE PRODUCTION 

second year away from Masardis Farm. When new legislation is introduced to provide for the program after July 1, 1956, this thought should be given consideration.

The physical plant is in excellent condition. The barn has been repaired and now we can get all our machinery under cover and in addition have a workshop for minor repairs. We have installed a water pump for spraying in a small home-made pond. This will take the strain off the pump in the house cellar.

We have purchased new equipment when necessary and repairs were obtained if needed. We had rocks moved the past two seasons, using both bulldozer and dynamite. It looks as though an additional acre of ground had been brought into use.

In my last report I referred to the confusion that existed in the Kennebec variety. My reference was to spindle tuber. This disease is no longer a problem as we have by tuber index and hill selection eliminated it from our seed sources.

There are still many folks who cannot grow Kennebecs and who do not like them. In contrast there are many who do like them and we are getting requests for seed from the 1952 crop at this early date. Incidentally, our prospects for a crop are not very bright. Severe rain during May and June, followed by severe drought conditions, has left our crop not looking very good. Plants are small and an early frost could do a job on us.

To summarize, it seems best to publish a paper given by Paul J. Eastman, Assistant Chief of this Division, before the Potato Association of America at its last meeting in Cincinnati, Ohio:

A SUCCESSFUL FOUNDATION SEED FARM

Maine's history in the potato business has been beset with numerous problems, any one of which could have practically wiped out the industry had not a solution been found. With a staff of some of the best potato research men in the country, Maine has taken problems in stride, found their causes and worked out practical means for their solution. Leafroll "had us on the ropes" in 1936 and by the use of isolated seed plots, early harvest, and Florida testing we managed to get it under control. DDT, of course, came along with a helping hand in 1943. Other new insecticides now being developed will doubtless overshadow DDT. In the early 40's bacterial ring-rot seemed to be getting the better of us when more than 50 percent of our farms showed some degree of infection. Through sanitation, foundation growers and other allied practices bacterial ring-rot has been practically wiped out. A recent

survey showed that only about seven percent of the farms showed any infection at all and these were mostly trace amounts.

Experience with these and many other diseases over the years has led us into a very definite foundation plan. This plan was started as a cooperative venture with selected growers, and State crews, doing the field work. Progress was achieved under this program but experience taught us that we needed a farm of our own where we could carry out all the known methods of disease control and seed improvement regardless of cost. We needed this farm as a constant source of super-foundation seed where, at premium prices, a grower could get small quantities of seed to renew his stocks continuously and if necessary replace his seed. To fulfill this need the Maine Legislature in 1943 appropriated \$100,000. This money was to be used to purchase and operate a seed farm. Provisions were made to repay this money, if possible, over a ten-year period. This fund was under the supervision of the Maine Seed Potato Board, a group of outstanding seed growers including the Commissioner of Agriculture as ex-officio chairman. This Board, with Mr. Wesley Porter as program director, decided upon a farm in December of 1947 and the purchase was made. The farm, located in the town of Masardis, was chosen because of isolation and because the quality of the potatoes then in storage at that farm was the best available. With the potatoes on this farm plus the small lots which the Board had in its possession we were in business.

Available with this farm were greenhouse facilities at Presque Isle to do index work on all varieties. This greenhouse was provided by the Potato Tax, a self-imposed industry tax for research and advertising. With the farm, the greenhouse and experienced workers, we were well fitted to do a job for the industry.

The prime consideration in operating the new farm was to keep it free from bacterial ring-rot. To our knowledge this disease had never been found on the farm and the future success of our venture depended, and still does, on keeping this disease off the farm. Each variety is handled as a separate unit with all precautions being taken to prevent the possibility of spreading any disease from one variety to another. In other words, if we should find bacterial ring-rot in one variety we would not be forced to assume it was in all varieties.

As bacterial ring-rot has become pushed slightly into the background in importance, our emphasis has swung to latent mosaic. In all varieties where clean material is available we have built up latent-free lots of seed through index work. In varieties where no latent-free material is available we have built up selections which carry the less virulent strains. Inoculation of new

varieties with a weak strain of latent has been tried and found successful in some cases. At first, seed growers were a bit reluctant to believe our claims about latent-free Katahdins. However, as these lots have become distributed and tried, more and more growers can see the difference and want some of this seed. We have proved to our own satisfaction that our foundation growers will gladly pay a premium for the type of seed we are growing and thus make the whole program a success.

During the four years we have operated the farm we have distributed approximately 150,000 bushels of improved seed to our seed growers. This seed has gone, in many cases, to growers who enter it in our Foundation Program. Through this service the seed is increased under supervision for another year and is then Florida-tested and passed on to certified growers.

At the present time we have on the farm Kennebec, Katahdin, Sebago, Chippewa, Green Mountain, Mohawk, Teton, Cobbler, Pungo, Cherokee, and several numbered seedlings. Counting the different selections and different varieties there are more than 40 separate lots of seed. This amount of segregation involves a terrific amount of extra planning and labor which could never be done by an individual grower.

During the summer of 1951 about 150 new hill selections were made from six varieties. These are in addition to numerous hill selections which were made several years ago and are now being increased and further selected. Under our present plan we are indexing about 10,000 tubers each winter. From these indexed lots we can build, in three or four years, quantities large enough for distribution to foundation growers. We have found it possible to have only trace amounts of Virus X or latent mosaic in Katahdins after being increased four years following indexing.

As new varieties are developed we are ready with the machinery to increase and distribute them. We also have the facilities and the trained workers to apply whatever control measures may become necessary with the development of new diseases or problems.

Insect Control

Two years ago in our annual report, we referred to the fact that insect populations in general were at a low level. This continued through 1950. In 1951 there was a slight build-up, and in the spring and early summer of 1952, the picture has entirely changed. The Gypsy Moth is at the highest level in many years. The Browntail Moth is on the increase, and the European Corn Borer is creating a lot of havoc in our market garden and factory corn fields this year.

We have continued our cooperative work with the towns and each year

have assisted in carrying out a spray program. Our usual procedure has been to work through the commercial spray companies and find it more economical because of the size of the project.

We have known by continued survey just where the infestations were located, in reference to centers of population including lake and shore properties where large colonies of summer people use the facilities.

The defoliation in 1952 was more general than for several years, and the USDA furnished a plane for a woods survey of western Maine.

A most unusual report came to us in June of the presence of the gypsy moth in the town of Cherryfield, near the Deblois line. We were much surprised to hear of this situation and our field agent reported an infestation of several thousand egg clusters extending over an area probably three or four miles long and one-half a mile wide. We believe that we have completed arrangements with the Greenfield Field Office of the USDA so that a spray job can be done in the spring of 1953, in time to be of real value. The report was received too late this year and even though the blueberries were being damaged to some extent, we felt that it would not be good judgment to spray, especially as some of the larvae were already in the pupal stage.

We have continued to cooperate with the Federal people in the matter of the movement of quarantine materials from within the generally infested areas. This includes lumber and pulp shipments, Christmas trees, quarry stone, in fact many materials upon which the gypsy moth egg clusters can be laid and transported. Every effort will be made to expedite the movement of materials in interstate commerce and only recently a new regulation regarding the inspection of pulp after being received at the mill has been promulgated.

It seems almost essential to have legislation introduced that would provide for at least one phase of tree work to be done either by the Forestry Department or this Department. In the interest of efficiency and economy, there is no need of both of us calling on town officials and advising them regarding the insects present in their town and just what provisions they should make for control. Our office has taken the position that trees in the cities and towns and in the populated areas belong in the field of ornamental horticulture and that by law we were charged with the responsibility of that control work. Our thinking was that the Forestry Department had work enough with forestry problems not to be too much concerned with economic horticulture. We would be glad to sit down with anyone and attempt to draw legislation beneficial to the best interest of the State. The Forestry Department has a staff of competent entomologists and has already done much for the tree surgeons in that they give examinations and are helpful to this group

of workers. The fact that the Dutch elm disease has been found in southern Maine, and that the elm leaf beetle has become extremely important, probably necessitates some change in the present law.

Nelson Trafton, who has been our Field Agent for insect control work for many years, retired this summer and the Department has lost a faithful servant. He was loyal to the State, willing at all times to do his part, and knew the insect situation in central and western Maine very well. We regret that he has had to leave us because of ill health and hope that his retirement brings to him a renewed interest in the things about him and that he may well enjoy the years to come.

A short report should be made regarding the insect control programs from a national viewpoint. Hearings were held this past winter by a committee appointed by the Secretary of Agriculture. At a Boston conference, this Department was represented and gave testimony regarding the various programs and quarantine as they affect the State of Maine. One of the recommendations of this conference was that Federal assistance to states in controlling insects and plant diseases should be made contingent upon adequate state regulations. The Committee recognizes the severe damage caused by insects and has recommended that surveys of insects and plant disease infestations be unified and intensified by the Federal Government in cooperation with the States. The general program is to prevent the spread by means of quarantine, by means of spray to eradicate outlying and peripheral infestations, and by providing technical assistance to towns and communities within the generally infested area where local eradication is the objective.

At the present time a survey is being carried on in Maine to determine the status of the gypsy moth infestation. This in answer to a request from several of the infested states. After the appraisal survey is made, the Bureau of Entomology and Plant Quarantine of the USDA will suggest a program of control or eradication.

European Corn Borer

The money that has been received from the Corn Tax Committee has as for the past several years been assigned to the Maine Agricultural Experiment Station, except for a small amount used by the Department in survey work. At a meeting with the Corn Borer Committee of the Maine Canners Association, it was thought best not to assess a tax on corn during the 1952 growing season. This will leave about \$3,000 still available as of June 30, 1953, and we would hope to conclude the research work during the next fiscal year without any additional assessments.

In all fairness to the growers of corn, we should point out that the infestation is at a high level this particular season and while we do not want to do it, we could assess a tax in 1953 if there seemed to be need of money to do further control work.

Greenhead Fly

It is to be regretted that we were not able to secure the services of Everett Tuttle, who had previously done some very effective work for us in the matter of greenhead fly control.

Our field investigation this year led us to believe that the time of application of spray material is very important and the services of an expert are required to make that determination. It is our understanding that the fly was very active this season along our entire coast and that there was some degree of control where airplane spraying took place.

Bureau of Horticulture

To E. L. Newdick, Chief, Division of Plant Industry:

There follows a resume of the activities of the Bureau of Horticulture in the period from July 1, 1950 to June 30, 1952. The work of the Bureau has included the licensing and inspection of nursery stock and plant handlers, the operation of the Maine Apple Tree Pool, the licensing and inspection of apiaries, and cooperation with organizations, groups and individuals engaged in various horticultural pursuits.

Nursery Stock

Ever increasing interest in gardening and the use of flowers has been reflected in a continued increase in the number of growers and handlers of nursery stock and florist stock, as indicated by the number of licenses issued each year.

Part of this increase represents stores handling nursery stock of various kinds in addition to other types of merchandise. The quality of the nursery stock and floral stock handled through these outlets has improved very noticeably during the past few years. It has been our policy while inspecting the stock handled by them, to aid the store operators with suggestions as to proper methods of caring for plants and flowers while being held for sale.

This, together with more discrimination being used by the operators in buying stock for resale, has resulted in better material being offered to the public. With the possible exception of rose bushes and other bare rooted nursery stock which rapidly deteriorates under the conditions of temperature and humidity normally found in stores, the quantity of materials condemned and removed from counters as unfit for sale is continually decreasing.

Among outdoor flower crops, the gladiolus continues to become more popular both commercially and in home gardens. Here too we have been able to bring about a very noticeable improvement in quality in the course of our inspection activity, particularly in reference to disease incidence. An insect, the thrips, has long been a serious problem in gladiolus culture, but the advent of the insecticide DDT has reduced this to a minimum. More recently virus and other diseases, notably botrytis, have become troublesome. Acquainting growers with improved methods of culture and handling, and encouraging the vigorous roguing of crops in the field and of the corms in storage, has improved the picture considerably.

Numerous requests for the certification of strawberry plantings continue. It has become necessary, because of the nature of disease and insect pests of this crop, to make inspections both in the spring and the fall, adding considerably to the work load. The red stele root disease remains as a potential danger, and recently the cyclamen mite has become a serious factor.

The long periods during which the soil remained wet and cold during the fall of 1951 and the spring of 1952 brought on a renewal of trouble from the red stele disease. However, the wider use of resistant varieties, such as Sparkle, Temple and other new introductions, has reduced the severity of the disease compared to the previous outbreak in 1945. Among the new introductions, those developed by the Maine Agricultural Experiment Station show a great deal of promise. The varieties Monmouth, Orland and Maine 55, although not released to the trade until 1951, have already received much favorable notice.

The cyclamen mite, an almost microscopic creature which feeds mainly in the bud or crown of the strawberry plant, has in the past two years become more prevalent. Severe infestation by this pest results in a marked decrease in production due to the destruction of the developing flower buds. Mites are difficult to control because of their habit of feeding on the unopened leaves in the crown of the plant where they are difficult to reach with miticides, and because of the apparent intolerance of strawberry plants to such effective miticides as parathion.

At the present time the most effective practical means of control known is to remove and destroy plants showing the presence of mites in cases where infestation is light, and by methyl bromide fumigation of planting stock where the infestation is more general; at the present time we have two growers using the methyl bromide treatment. Prompt plowing of infested beds immediately after the fruit crop has been picked is also beneficial, as the mites may develop rapidly in old beds. The mites spread mainly through the runner plants as they are carried throughout the plant system on the developing runners; because of this characteristic thorough and persistent roguing can be an effective control measure.

Nursery Licenses Issued

<i>Year</i>	<i>Fee</i>	<i>No Fee</i>	<i>Total</i>
1943	461	223	684
1944	442	190	632
1945	434	184	618
1946	466	177	643
1947	512	199	711
1948	540	157	697
1949	657	121	778
1950	742	157	899
1951	823	150	973
1952 (to 7/1)	720	138	858

Licensed Strawberry Growers

<i>Year</i>	<i>Inspections</i>	<i>Disqualified</i>	<i>Certified</i>	<i>Total Acreage</i>
1944		—	30	—
1946		12	41	37 $\frac{3}{8}$
1947		11	73	38 $\frac{1}{4}$
1948		3	90	40 $\frac{1}{4}$
1949		4	92	65 $\frac{7}{8}$
1950	190	11	110	104
1951	161	20	113	151
1952 (to 7/1)	134	20	123	142

APPLE TREE POOL

Purchases of fruit trees through the Maine Apple Tree Pool, a service maintained to provide fruit growers with top grade planting stock together with the price advantage to be gained through quantity buying, have dropped somewhat below the ten-year average during the past two years. Responsibility for reduced plantings probably lies in the condition of the fruit market together with the fact that considerable numbers of young apple trees recently have come into production.

The selection of apple varieties being planted follows in general the pattern of recent years, with the McIntosh continuing to be the predominant favorite. An analysis of the orders, both as to variety and to age, follows:

1951					
<i>Apple Varieties</i>	<i>1 yr.</i>	<i>2 yr.</i>	<i>Total</i>	<i>Other Fruits</i>	
McIntosh	921	1119	2040	Pears	223
Yellow Delicious	974	468	1442	Peaches	454
Red Delicious	204	402	606	Plums	196
Cortland	282	205	487	Cherries	162
Northern Spy	79	204	283		—
Misc. (28 var.)	286	565	851	Total	1035
			—		
			5709		
	Other Fruits		1035		
			—		
	Total Number of Trees		6744		(70 orders)
1952					
<i>Apple Varieties</i>	<i>1 yr.</i>	<i>2 yr.</i>	<i>Total</i>	<i>Other Fruits</i>	
McIntosh	1012	633	1645	Pears	327
Red Delicious	221	335	565	Peaches	576
Cortland	257	114	371	Plums	276
Yellow Delicious	262	74	336	Cherries	282
Northern Spy	85	97	182		—
Misc. (33 var.)	541	191	732	Total	1461
			—		
			3822		
	Other Fruits		1461		
			—		
	Total Number of Trees		5283		(65 orders)

TOTAL TREES PURCHASED BY YEAR

<i>Year</i>	<i>Apple Trees</i>	<i>Total Fruit Trees</i>
1943	3,477	4,543
1944	2,649	3,132
1945	—	8,295
1946	5,937	6,534
1947	9,767	10,290
1948	12,309	13,384
1949	8,056	10,117
1950	6,484	7,659
1951	5,709	6,744
1952	3,822	5,283

Average Number of Trees Bought
per year for last 10 years . . . 7,598

Bee Industry

The operation of the Bee Law during the past two years has given promising results. The inspection of apiaries by Reginald B. Swan of Brewer during this period has resulted in the correction of many serious instances of disease infection, both in individual cases and in area problems. Mr. Swan's wide knowledge of beekeeping in general has also made it possible for him to offer much aid to the industry in the course of his regular inspection work, through the distribution of helpful information to beekeepers. This is of particular importance, for it appears that a lack of understanding of modern methods of management, particularly among many who keep only a few colonies of bees, is responsible in a good measure for much of the difficulty in successful beekeeping. Especially is this true in the matter of disease prevention and control.

Because time does not permit a single inspector to cover all of the licensed beekeepers in the course of a season, it has been our policy to concentrate the work in areas where disease is known, or reported, to exist. At the same time an attempt has been made to cover all areas of the state at least partially in order that a knowledge of the general condition of the industry could be maintained. The results of Mr. Swan's work are shown in the accompanying table; it is encouraging to note that there has been a marked reduction in the number of diseased colonies detected since the work started in 1950. Mr. Swan has also been helpful by maintaining contact with the State Beekeepers Association and other interested groups.

Bee Inspections

<i>Year</i>	<i>Licenses</i>	<i>Number of</i>		<i>Percentage</i>	
		<i>Colonies Reported</i>	<i>Number of Inspections</i>	<i>Colonies Inspected</i>	<i>Disease Found</i>
1950	549	3,594	287	1,765	10.0%
1951	594	4,065	292	2,198	6.5%
1952 (to 7/1)	351	2,467	102	941	3.4%

Miscellaneous Activities

Considerable time has been devoted to work with organizations dealing with various horticultural interests, encouraging and assisting the worthwhile work being done in their several fields.

The Maine State Florists' Association, which I serve as secretary-treasurer, has sponsored meetings each winter at the Agricultural Trades Show in Lewiston and each spring at the University of Maine. These meetings have brought before the groups many authorities in greenhouse management and experts in floral design whose discussions and demonstrations have been of much benefit to the industry. Significant, I believe, is the large number of trade visitors attending the Association meetings from out-of-state. Flower shows staged by the Association at the Trades Show meeting have been outstanding and have done much to stimulate public attendance. In 1950 the Association established a loan fund at the University of Maine, the purpose of which is to provide assistance to those students of ornamental horticulture who may need financial help in order to complete their studies.

The Maine Pomological Society, whose reports appear in separate form, has been active in studying and promoting more efficient and more profitable methods of handling, storing and disposing of Maine apples, a problem becoming more serious with increased competition from other areas and from

other fruits. At the same time the need for ever-improving methods of production is not overlooked.

The Maine Gladiolus Society is an active group of more than 400 members representing both amateur and commercial interests, and including many members from other states and countries. The annual exhibition of the Society, held in late August each year, is enthusiastically supported and widely attended. Among other regular events sponsored by the Society is the Bulb Auction in the spring, for which I have served as chairman the past two years. The purpose of the auction is to raise funds for the support of the Society's program, particularly its useful and popular Yearbook. In 1951 a series of Seedling meetings was inaugurated to stimulate interest in the development of new and improved varieties.

The Garden Club Federation of Maine is an affiliation of more than 65 local Garden Clubs, representing all sections of the state. I have been able to aid in its work by speaking to many of the local clubs on various horticultural subjects, by serving as its chairman of horticulture, and by aiding in the conduct of its meetings. The Federation is doing a great service to the State of Maine, particularly through its devotion to the principles of conservation and related fields.

Other activities of the Bureau have included the answering of many letters pertaining to insect identification and control, plant identification, and cultural and planting problems; the preparation and distribution of the "Maine Leaf", a monthly newsletter compiled for the interest and benefit of Maine plantmen, now in its ninth year; speaking to various groups and organizations, and by radio, on numerous horticultural topics; making calls in the field in response to requests for horticultural information; and judging horticultural displays at fairs, flower shows, and other exhibitions. Suggestions have been made for plantings and for the development of the grounds at the Dover-Foxcroft Hospital and Library, the new gymnasium at Lisbon Falls, the East Corinth Library, and the Maine Building at the Eastern States Exposition; plans have also been prepared each year for the flower bed plantings on the lawns of the State House.

I wish to acknowledge here the very able and helpful assistance of Albion Goodwin, Assistant Horticulturist, in carrying out the duties of the Bureau; his efforts as manager of the Agricultural Trades Show in Lewiston deserve commendation for they have done much to improve the operation and success of that meeting. I also wish to thank Professor Roger Clapp of the Department of Horticulture, University of Maine, for his cooperation in preparing material for the "Maine Leaf" and for his assistance in field inspections during the summer seasons.

I have greatly valued your counsel and guidance in all matters pertaining to this position, and extend to you my sincere appreciation.

Respectfully submitted,

EDWARD D. JOHNSON,
State Horticulturist

Summary

During the first year of this biennium, the Division's assistant chief worked with the Department's publicity representative in the production of a half-hour motion picture on the Maine Seed Potato program. The film story was built in part upon the development of a new potato variety (the Kennebec) but covers the varied phases of our well-rounded plan. Copies of the motion picture (16mm. sound Kodachrome) were loaned to states which are good users of Maine seed, and showings were arranged with important industry groups, including the Potato Association of America. *Better Seed* is now being distributed in states east of the Mississippi by the Farm Film Foundation of New York.

Shortly after finishing the motion picture, the same personnel worked together in the preparation of a promotional booklet, *More Dollars from Maine Seed*, which was printed with Maine Potato Tax Committee funds.

The Gypsy Moth infestation has reached a new high and this insect will be troublesome in the summer of 1953. The government has promised assistance in handling a bad outbreak in the town of Cherryfield on the edge of blueberry barrens.

There is also a bad situation in the State Park at Camden.

A special study in the Golden Nematode situation is necessary to determine whether or not our quarantine could be extended to include all of Suffolk County, Long Island, New York.

We shipped 9,000 cars of certified seed last year and the only real trouble we had was caused in shipments of sized seed. This practice of shipping seed from $1\frac{7}{8}$ inch to $2\frac{1}{2}$ inch is fine in theory but difficult in practice. Handling of seed and table stock from the same house continues to be a problem.

Respectfully submitted,

E. L. NEWDICK,
Chief, Division of Plant Industry

Brucellosis Eradication in Maine

*As reported in June 1952 by B. J. Cady,
Veterinarian-in-Charge of the Augusta, Maine,
station of the United States Bureau of Animal Industry*

From 1935 to 1940 Maine, in common with many other states, had a voluntary program for eradication of Brucellosis. We paid indemnity on reactors and several herds were freed of the disease, although they later became reinfected as a result of our inability to follow through. During this time area tests were conducted in certain towns in every county to establish the rate of infection, which ranged from three to 23 percent.

In the late 30's and 1940, it became evident to livestock people in Maine that Brucellosis eradication could not be accomplished under a voluntary plan, and that with the program then in force, the man with an absolutely clean herd had small chance of remaining clean with neighbors on all sides having infected herds, unless he adopted calf vaccination as an adjunct to testing and herd management. In 1941 the State Legislature enacted legislation making it compulsory that all cattle be tested and reactors removed except in highly infected herds, which might retain reactors under a special program with the consent of the U. S. Bureau of Animal Industry and the Maine Department of Agriculture.

Area tests were started in three counties in 1941-42, which showed a rate of infection from 4.3 to 7.6 percent. Somerset County, which showed an infection of 7.3 percent, had, previous to the area test, voluntarily removed over 5,000 reactors, which was three and one-half times as many as were found on the area test. The last county to be area tested was completed in the biennium of 1944-46, and in this biennium infected herds were placed under quarantine, which had not been done previously. During 1946-48, most of the work consisted of retesting, due to the fact that the Federal force at that time was very small. In fact, at times there were but one or two men

in the field, and the success of the program was dependent to a considerable extent upon local practitioners who worked for the State on a fee basis, retesting infected herds. Only one county, Penobscot, was area tested in this two-year period.

In the 1948-50 biennium, we resumed area testing, this being made possible by the addition of lay technicians, who took blood samples, to the Bureau force. The results obtained on area tests were consistently good, despite the fact that all counties except one had gone several years without an area test, and several of these counties had shown four or more percent on the last area test. All of the 12 counties area tested in the 1948-50 period were declared modified on this test. This was the second area test for nine of these counties, the first being performed from four to six years previously.

It was a happy event in the State of Maine when the entire state was declared a modified certified Brucellosis-free area on August 1, 1950, with the 161,544 head of cattle tested indicating a rate of infection of 0.58 percent. It is interesting and gratifying to note that the rate of infection has dropped since that time to 0.44 percent for the entire state.

During the past two years, 1950-52, all but one county has been area tested and the number of herds on the retest list has dropped to less than 10 percent of what it was six years previously. Maine claims a national record in that in Washington and Sagadahoc counties, each with approximately 3,000 head of cattle, only one reactor was found in each county.

The Maine program consists of test and slaughter, with calf vaccination optional with the farmer, and indemnity paid on reactor cattle. Undoubtedly, this is the best program that could have been adopted in this state, and its success is no doubt due to certain fundamental recommendations and practices in the program—first, compulsory testing, and second, restrictions for holding reactor cattle, which can be moved for slaughter only or are retested under a special quarantine plan. The latter has not proved successful here because of the policing costs on these herds, which require double fencing, permission to sell any animals except veal calves for any purpose, supervision, and periodic testing. In addition to these disadvantages, there were dissatisfied neighbors, and production was lowered in these herds. This plan became economically impossible. All these factors have demonstrated that retention of reactors is not satisfactory in Maine except under very unusual conditions. Possibly well-bred purebred herds would be the only exception.

The paying of dealer indemnity by the Maine Department of Agriculture has undoubtedly been a big factor in locating infected herds because it is nec-

essary for the dealer to indicate where he bought the reactors, and in that way these herds are located and tested. The majority of these tests reveal an infected herd. Such herds are quarantined and placed on the retest list.

The licensing of livestock dealers has undoubtedly helped in some cases in the control of the disease, but has not been as much of a factor as has been public opinion in the livestock field. The reports show that dealers who were not too careful about health status of replacement cattle are gradually being forced out of the business. Recent legislation which requires the testing of all farmer sales of cattle over six months of age, except from certified herds or through licensed dealers, has been of questionable value, due to the fact that funds are not available for enforcement, and also due to the low percentage of infection in all areas in the state. At the present time only about 200 herds are known to have infection in them, which makes this legislation of doubtful value from a practical standpoint, and these infected herds are under quarantine.

During the clean-up it was impossible to obtain replacement cattle from clean herds under supervision, and the vaccination program had not progressed in any area where vaccinated cattle were available to supply any appreciable amount for replacements needed. The states embarking on an eradication program should, in my opinion, pay more attention to vaccinated animals for replacements, and they should insist that these animals come from clean herds under supervision. Such animals would have a better chance of standing up should exposure occur in transit or at destination.

The livestock growers in Maine are satisfied that the disease is well under control, but in highly infected states, undoubtedly calf vaccination, possibly coupled with intradermal adult vaccination and a time limit when all reactors must be removed, can lick this disease. It has been demonstrated in Maine that cattle moved within an area or imported into an area on an eradication program are no better than the character of the men who handle them. When conditions are such that large profits can be made on replacements, the quality of the cattle from the standpoint of disease decreases. Experience in Maine would indicate that where indemnities have been paid, it is not advisable to drop such payment even if it is small. This was demonstrated when indemnities were dropped from July, 1950, until May, 1951, during which time the number of herds holding reactors doubled, and the morale of most livestock growers was reaching a low ebb. When indemnities were returned in May, 1951, interest and activity were immediately restored and the program advanced much faster than it had in the past. Any program to be a success must be generally accepted by the livestock producers, dealers, and veterinarians in the state where it is carried out.

At the present time the manpower available for summer testing in Maine is very favorable. We will have 15 men on the U. S. Bureau force, including technicians, and six men on the State force, besides approximately 30 local practitioners working for the State on a fee basis.

Area testing was recently completed in Aroostook County for Brucellosis and we are still in the process of completely area testing that county for tuberculosis. Thirty thousand head of cattle were tested for Brucellosis, with a rate of infection of 0.22 percent, and 25,000 head of cattle have been tested for tuberculosis with a rate of infection of 0.04 percent.

During the fiscal year now closing, we have completed area tests of four counties for tuberculosis, and plan to continue. We have completed area tests of five counties for Brucellosis, and plan an intensive continuing program.

We have reached the point in Maine where our future, so far as Brucellosis is concerned, depends to a large extent on what other states and areas do with regard to this serious disease of animals and man. The people in Maine would like to have Federal restrictions placed on the movements of breeding and dairy cattle into the state, in the interest of protecting the investment made to achieve their present status of a certified, Brucellosis-free state.