

MAINE STATE LEGISLATURE

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MAINE

DEPARTMENT OF AGRICULTURE

BIENNIAL REPORT



JULY 1, 1942 - JUNE 30, 1944

AUGUSTA

STATE OF MAINE

Biennial Report
OF THE
Commissioner of Agriculture
TO
HIS EXCELLENCY THE GOVERNOR
AND
EXECUTIVE COUNCIL

July 1, 1942 to June 30, 1944

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

*To His Excellency, Governor Sumner Sewall, and
Executive Council:*

Gentlemen:

In accordance with the revised statutes, I herewith submit the biennial report of the State Department of Agriculture for the period beginning July 1, 1942, and ending June 30, 1944.

Respectfully yours,

CARL R. SMITH,
Commissioner

MAINE DEPARTMENT OF AGRICULTURE

Commissioner

Carl R. Smith, Exeter

Staff

Chief, Division of Inspection A. M. G. Soule, Augusta

Chief, Division of Plant Industry E. L. Newdick, Augusta

Chief, Division of Markets C. M. White, Augusta

Chief, Division of Animal Industry

Francis G. Buzzell, Fryeburg

Assistant, Division of Markets George H. Chick, Monmouth

Chief Inspector, Tablestock Vernon W. Palmer, Caribou

Dairy Inspector Clayton P. Osgood, Hallowell

Animal Husbandry Specialist

Samuel F. Dorrance, Richmond

Horticulturist Stanley L. Painter, Monmouth

Assistant Horticulturist Edward D. Johnson, Monmouth

Deputy Sealer of Weights and Measures

Gardner K. Heath, Augusta

Chief Inspector, Certified Seed Everett Westin, Caribou

Chief Inspector, Insect Control

Nelson R. Trafton, York Harbor

Secretary to the Commissioner Agnes M. Williams, Auburn

Clerks and Stenographers

Marion T. Bean Augusta

Josephine Belden Winthrop

Elisabeth R. Brown Augusta

Gwendolyn P. Degerstrom Augusta

Rhea W. Goodwin Augusta

Avis Hennigar Winthrop

Jeanette Hopkins Augusta

Doris C. Hutchings Litchfield

Shirley E. Millett Windsor

Barbara A. Patterson Augusta

M. Ethel Quinn Hallowell

Madeline S. Quinn Hallowell

Jacqueline A. Rancourt Hallowell

Charlotte F. Southard Hallowell

Jane Sproul Augusta

Jeanette Wood Augusta

FARM LANDS LOAN COMMISSION

Farm Appraiser

Lawrence W. Hersom, Winthrop



Expert Judges of Fine Raspberries

Maine Department of Agriculture

By CARL R. SMITH,
Commissioner

Although the biennium beginning July 1, 1942 and ending June 30, 1944 found the Department of Agriculture immersed in the added duties and problems which are part and parcel of a wartime economy, I feel that it has not only kept abreast of rapidly changing conditions but has made progress that will be reflected in still better service to the farmers of Maine in the postwar world.

Here and now I wish to give all credit for what has been accomplished to the Division Chiefs and their assistants. These men and women have been loyal to the department and to the people it serves to a marked degree. Like good

soldiers they have assumed added duties and have worked long hours uncomplainingly. Many of them have had opportunities for employment elsewhere at more attractive wages, but the knowledge that they were being of service to their state and their country during a critical period in our history has kept them on the job, often at a great personal sacrifice.

As was the case during the previous biennium, much time has been given by the department in this present period to assisting Maine farmers in cooperating with federal agencies in the raising and distribution of the food so necessary for the successful conduct of the war.

In doing this work all of us have been deeply impressed with the high patriotism of the Maine farmers. In the face of the greatest of obstacles they have gone forward and produced more food than anyone thought possible.

Despite the distractions of the war, this department has not lost sight of its long-term program for bettering the lot of the farming industry wherever and whenever possible. We have, and will, cooperate to the fullest in aiding in the production and marketing of more and better foodstuffs after the war. It is our conviction that Maine agriculture will have a great and glorious future and we look forward to the opportunity of working with all concerned to bring it about.

During the biennium this department has had the greatest of cooperation from the executive and legislative branches of government for which we are exceedingly grateful.

It is my hope that the following general review, together with detailed accounts from the various Division Chiefs, will present a sufficiently clear picture of our activities during the past biennium.

Division of Animal Industry

In the spring of 1943 we had just started on a livestock promotion project when we found ourselves handicapped for funds to meet the drafts on carload lots of cattle from the West consigned to the Department of Agriculture for distribution to less than carload buyers. The Legislature being

in session, State Senator Lee C. Good of Monticello suggested that the Governor and his Council be petitioned to set up a revolving fund from money then lying idle to be used in paying the drafts while the cattle were in process of being distributed and the payments collected.

This suggestion was adopted and, as is usually the case when a sound project is presented to a Maine Governor and his Council, the petition was granted. A \$30,000 revolving fund was set up for the purpose thus contributing immeasurably to the success of the livestock promotion program. As indicated in Mr. Dorrance's report, 1,400 heifers were brought into the state. On the back cover is a picture of some of these animals after spending one season in Maine.

Despite a shortage of veterinarians imposed by the war, the Bang's Disease Program has gone forward. At the end of 1942 only one county (Piscataquis) had been declared as a modified accredited area. Since then Somerset, Franklin, Hancock, Washington, Aroostook and Oxford Counties have been modified accredited. Penobscot, Kennebec and Waldo Counties have received their first area test. We anticipate that four additional counties will be tested during the next fiscal year 1944-45, namely, Knox, Lincoln, Sagadahoc and Androscoggin.

Calfhood vaccination is increasing steadily. Owing to the shortage of veterinarians it is impossible for the state to continue to vaccinate all the calves as was the original practice. However, the vaccine is still being furnished by the state to practitioners to carry on this phase of the program.

Several cases of hog cholera have been reported. The premises have been quarantined immediately and owners instructed in proper treatment with inoculation being insisted upon. Although cholera is being reported more frequently it is believed that the reason can be found in the added education of hog owners and the cooperation of veterinarians rather than in an increased prevalence. Swine erysipelas has been reported in a few instances during the past two years and owners instructed as to proper procedure and the cases have been followed up.

As shown in Mr. Buzzell's detailed report in this volume it is evident that we are not carrying as many cattle as we

should. The abundance of grass and roughage in this state indicates that we should be exporting at least three times as many cattle as we do at present.

The large number of swine imported during the biennium was due to the fact that so many were raising their own meat during this war. We are importing from sections around Boston and it seems that Maine should be able to take care of its own trade in this respect. There is a demand for a thousand more pigs for feeding purposes which could be raised here.

During the past two years the Maine Egg Laying Test has followed along the lines outlined in the last report, that is, eggs for hatching have been sold back to owners of birds in the test including eggs from the old hen test as well as from the mated pullet pens in the 13th and 14th tests. It is encouraging to note that over half the birds in the 14th test were Maine owned.

During the past two fiscal years the number of poultry licenses issued has increased. This law has been a great help in creating a healthier market for all concerned.

An interesting insight on present day conditions in the dairy industry has been noted by Mr. Osgood, State Dairy Inspector. He has found that there has been a 50 percent decrease in the number of licensed distributors since 1942. Many, therefore, have gone out of business and their businesses have been absorbed by others.

A project for increasing the numbers and the quality of Maine sheep shows progress. Boys are being interested in rearing the better grades of sheep and two Future Farmers Clubs have been assisted in obtaining registered ewes.

Sheep damage by dogs and bears is still a very great deterrent to the progress of sheep raising in Maine. In the past year 978 sheep were killed by bear and, in the fiscal years 1943 44, 908 were killed by dogs.

Practically all of the farmers who formerly kept sheep say that the reason they are not keeping them now is due to the ravages of dogs and bear. Unless adequate laws are promulgated to abate these menaces the future of sheep raising in Maine must remain hazardous.

Poultry losses have reached an all time high in 1944 with foxes being responsible for 80 percent of the damage. Although foxes have been taken off the protected list, losses continue. Perhaps after the war when more persons return to trapping this menace will be lessened.

Division of Markets

Outstanding developments in marketing have been influenced heavily by war conditions. In addition to the staple crops of our state already covered by inspection, the necessity for proper quality of supplies for Army and Navy has widened the field of food-product inspection to include butter, cheese, eggs, poultry and miscellaneous fruits and vegetables. As a result, the volume of inspections has reached an all-time high with 33,720 inspections, exclusive of several hundred inspections of miscellaneous products. Twenty-three starch factories were supplied with regular inspection for the purchase of potatoes under the Government buying program.

Marketing agencies have stood the strain of handling record-breaking production of both livestock and field crops with a minimum of wastage. The only item to show undue surpluses was eggs, with the result that the Government supported prices and fifteen carlots were purchased within the state and shipped to other destinations.

The regular weekly "Market Report" and "Exchange List" have proven to be an outstanding service in this time of emergency. With livestock at a premium, and farm implements and equipment difficult to obtain, the "Exchange List" has been crowded each week with the needs of farmers as well as the items of surplus which they wish to dispose of. Countless exchanges have resulted with benefit to all parties.

Maine's 1944 potato crop was one for the history books. An all-time record acreage of 212,000 was planted and 73,485,000 bushels of potatoes, also a record, were harvested. Although 5,000 acres remained undug because of unfavorable weather, the crop was so great that millions of bushels had to be stored in sheds, barns, cellars, private dwellings

and even church basements. In order to avoid complete loss of this overflow, the farmers appealed to the government to take the surplus off their hands and 2,000 cars were shipped field-run to receiving markets and out-of-state storage houses.

By-product disposal of many thousands of bushels was a feature of the season's operations. Dehydraters and starch manufacturers operated their plants during virtually all of the shipping season.

Division of Plant Industry

During the past biennium there has been a notable increase in the number of acres entered for seed potato certification. Whereas in 1942 a total of 39,000 acres were entered, the number in 1943 was 53,000 and 68,000 acres in 1944, or approximately one in every three of the total acreage planted. This indicates that we are holding our position in the seed industry very well.

Over 700 samples were tested in the Florida Test Plot last winter and this test is proving its worth. Chippewas are now required to be Florida tested under a new regulation.

Early harvest of seed potatoes is being increasingly practiced and is paying dividends to those practicing it.

Work on potato diseases continues under the direction of the Experiment Station. Much of value has been discovered to assist in control and, as the staff of entomologists has been strengthened, we can look forward hopefully to even more help along these lines.

A great deal of time is being spent trying to develop a new, inexpensive material for killing tops. This would be of great help to our potato seed growers.

The severe winters of the past two years have aided greatly in reducing the number of gypsy and brown-tail moths. We can expect an increase when conditions again become more favorable. A larger appropriation is needed to clean up places where infestation is bothersome, but such work must await the availability of younger men.

Our farmers have not been hurt enough yet to be seriously concerned over the European corn borer even though

it has spread over a wide area. It is believed that a good clean-up job would keep the borer count low and avoid a major menace in the future.

Much progress has been made in assisting beekeepers to rid their apiaries of disease. A survey of the industry and the incident of disease has been made and disease resistant queens have been distributed. Inspections this year in what had been found to be the most highly infested areas disclosed only four hives of infested bees in 472 hives inspected.

There has been an appreciable growth in the demand for hardy stock nursery apple trees for the planting of new orchards. The Growers Hardy Stock Nursery, a Maine co-operative of growers, hopes to have 20,000 trees per year available in the near future. This venture promises to increase the scope of the apple industry throughout Maine.

Division of Inspection

In administering the new Slaughterhouse Law a good beginning has been made, but further legislation is necessary to provide for a more complete inspection including an ante mortem and a post-mortem examination of all animals slaughtered comparable to the inspection furnished by the United States Department of Agriculture for all animals that are shipped in interstate commerce.

The improvement of the food supply that would come from this sort of inspection would be most desirable especially when we contemplate the building of freezer lockers in this state.

In our work thus far we have found that 85 percent of all slaughterhouse licensees have cooperated fully with the department.

The results have been most gratifying in the enforcement of the branding law. Violations have been fewer than in previous years and most potato shippers have cooperated heartily.

Packaged goods have been weighed and re-checked and, this last year, some short weight was found in fifteen and fifty pound bags of potatoes. Investigation proved that

shortages were caused by defective scales and careless filling of bags, both attributal in part, no doubt, to the wartime rush and inexperienced or inefficient help.



A Good Pull at the County Fair

Fairs

Under Chapter 87 of the Public Laws of Maine it was possible to include in the stipend allocation for the season of 1943 any agricultural society or association which, on account of war conditions, had been unable to operate and thus share in the stipend since 1941. This law provides that these societies and associations may receive an allocation from the stipend which would allow them to defray fixed charges and thus reopen at some future date. It is of interest to note that whereas 26 fairs operated in 1941 only

14 opened their gates in 1942. Under the new law 27 fairs shared in the stipend in 1943 despite the fact that only eight operated. This law which became effective July 9, 1943 becomes inoperative six months after the war.

The so-called Beano law was changed by the 91st Legislature making the game legal in every county in the state. Licenses are issued by the Chief of the State Police.

A brief summary of Maine Fair activities during the biennium ending June 30, 1944 is presented:

No. of Agricultural Societies receiving State Aid, 1942	14	
Poultry Societies receiving State Aid, 1942	2	
Pomological Society receiving State Aid, 1942	1	
	<hr/>	17
No. of Agricultural Societies receiving State Aid, 1943	27	
Poultry Societies receiving State Aid, 1943	2	
Pomological Society receiving State Aid, 1943	1	
	<hr/>	30
Total Attendance reported by these Societies, 1942	174,518	
Poultry Societies	4,000	
Pomological Society (Annual Meeting and Trade Show)	1,000	
	<hr/>	179,518
Total Attendance reported by these Societies, 1943	42,270	
Poultry Societies	3,500	
Pomological Society (Annual Meeting, with Trade Show Omitted)	300	
	<hr/>	46,070

Report of Division of Animal Industry

To Hon. Carl R. Smith, Commissioner of Agriculture:

Herewith is submitted the report of the Division of Animal Industry for the biennial period July 1, 1942 to June 30, 1944 as follows:

Bang's Disease

Since its inception in May, 1941, the Bang's disease program has been conducted in cooperation with the U. S. Bureau of Animal Industry in accordance with the plan inaugurated whereby the providing of State of Maine Agricultural bonds has made it possible.

At the close of the fiscal year June 30, 1942, as indicated in the former report, Piscataquis County had been pronounced a modified accredited area. Since that time six more Counties have been modified accredited, Somerset, Franklin, Hancock, Washington, Aroostook, and Oxford Counties. The qualifications for a modified accredited area are that the rate of infection cannot exceed 1 percent of the cattle nor 5 percent of the herds. Penobscot, Kennebec and Waldo Counties have received their first area test. We are planning to test Knox, Lincoln, Sagadahoc and Androscoggin Counties during the next fiscal year 1944-45.

Owing to the war, the force of veterinarians employed by the Federal Bureau has been reduced. This crew now numbers six, five of whom are in the field and one in the Bang's disease laboratory. Every effort is being made to increase this force, but with the shortage of manpower it has been most difficult. However, we are assured of a temporary increase, at least, in this force.

Many of the veterinarians in this State in private practice have assisted this Division during the past fiscal year as each could afford the time away from his practice. This is done on a fee basis and consists principally of work in test-

ing infected herds in counties that have been area tested. This is a decided help to the program and is a good investment for the State as it is much more economical to test often than to pay additional indemnity, besides being more successful. Much spread of the disease has been avoided by our being able to keep up the retest work. We are most grateful for the cooperation extended by these veterinarians and look forward to a continuance of this policy.

Calfhood vaccination is steadily increasing, but due to the shortage of men it has become an impossibility for the State to continue to carry on this work, although we take care of it when possible. Through education and publicity, the farmers are being urged to assume this responsibility for their own herds and keep up this practice in infected herds. The State furnishes the vaccine to all practitioners for this phase of the work. The table below gives the data as to the number of doses of vaccine used during the two fiscal years represented by this report, representing the same number of calves vaccinated.

Following this report a map of the State of Maine appears indicating the progress of the Bang's disease program and proposed work.

This table gives statistics pertaining to Bang's disease:

July 1, 1942 to June 30, 1943

	<i>Herds</i>	<i>Cattle</i>	<i>Reactors</i>
Number Tested	17,631	132,616	3,569

During the fiscal year 1942-43, 4,800 doses of vaccine were purchased and distributed to accredited veterinarians throughout the State.

July 1, 1943 to June 30, 1944

	<i>Herds</i>	<i>Cattle</i>	<i>Reactors</i>
Number Tested	12,508	129,177	4,260

During the fiscal year 1943-44, 8,000 doses of vaccine were purchased and distributed to accredited veterinarians throughout the State.

Financial Statement—Disease Control Program

Agricultural Bond Issue

July 1, 1942 to June 30, 1943

Brought Forward July 1, 1942	\$ 47,872.83
Allotment Feb. 27, 1943	225,000.00
Income	3,293.07

Total Income	\$276,165.90
Expenditures 1942-43	-94,754.97

\$181,410.93 Balance

July 1, 1943 to June 30, 1944

Brought Forward July 1, 1943	\$181,410.93	
Income	5,184.51	
		<hr/>
Total Income		\$186,595.44
Expenditures 1943-44		-83,574.43
		<hr/>
		\$103,021.01 Balance
Amt. Allotted 5/29/41		\$225,189.00
Amt. Allotted 2/27/43		225,000.00
Income		8,477.58
		<hr/>
Total Amt. Available		\$458,666.58
Total expenditures since May 1, 1941		-355,645.57
		<hr/>
Balance 6/30/44		\$103,021.01

Tuberculosis

We have continued the work of tuberculosis testing of bovine animals in cooperation with the Federal Bureau of Animal Industry. Although this disease is not very common an expense is involved in checking on it as it cannot be ignored. We are still conducting the cooperative tests once in three years, as we have since the T. B. eradication program started. However, the requirements of the Federal Bureau are that a minimum of 20 percent of the cattle in each modified accredited area be tested in order to qualify for reaccreditation.

We are listing below the statistics pertaining to tuberculosis testing of cattle during the past two fiscal years ending June 30, 1944:

	July 1, 1942 to June 30, 1943		
	<i>Herds</i>	<i>Cattle</i>	<i>Reactors</i>
Number Tested	1,227	19,745	35
	July 1, 1943 to June 30, 1944		
	<i>Herds</i>	<i>Cattle</i>	<i>Reactors</i>
Number Tested	1,363	23,574	11

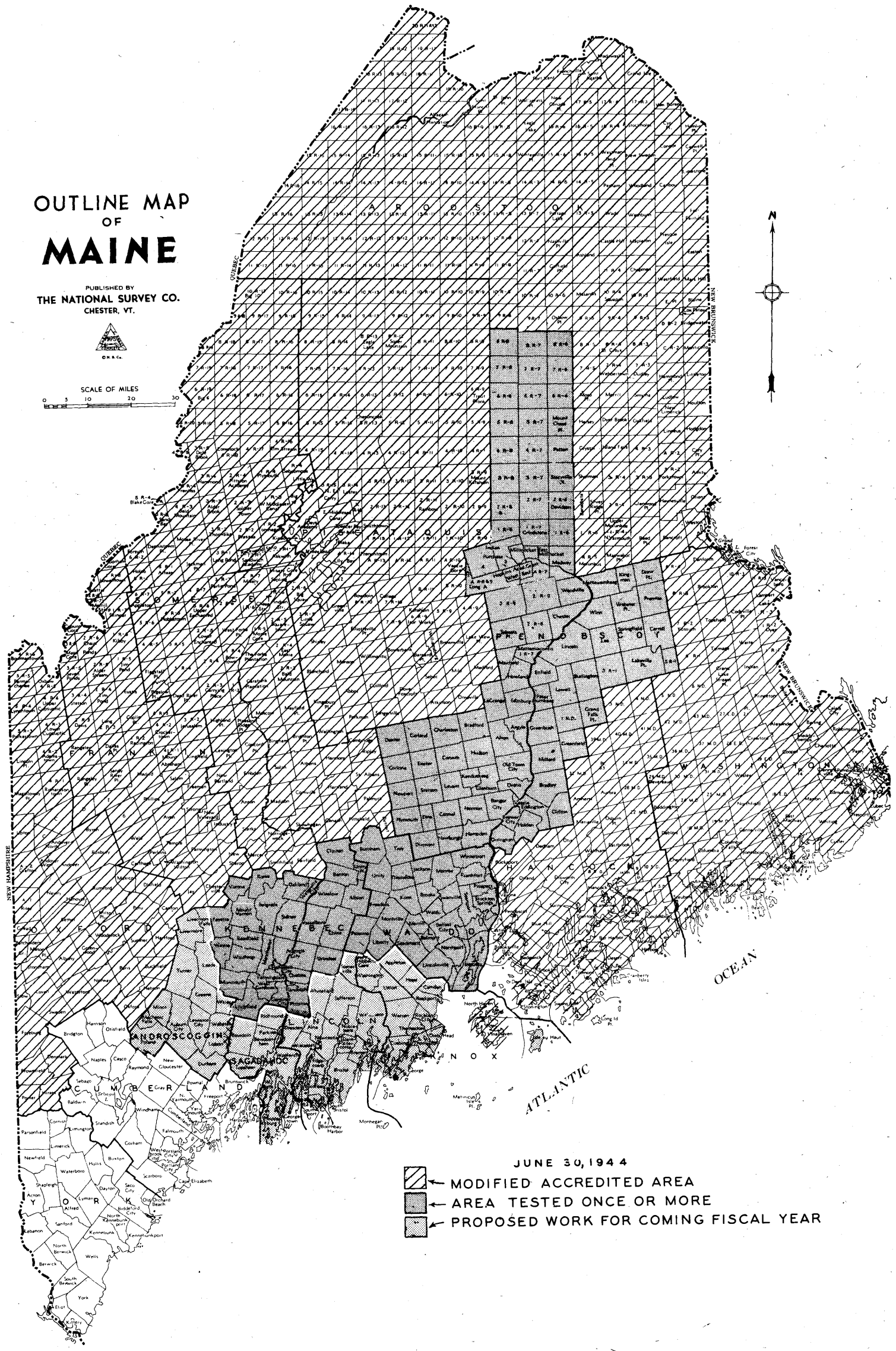
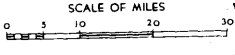
Interstate Shipment

The table below indicates the imports and exports of cattle, horses and swine during the past two fiscal years:




	July 1, 1942 to June 30, 1943	
	<i>Imported</i>	<i>Exported</i>
Number of Cattle Other Than for Slaughter	4,969	5,919
Number of Horses	3,269	
Number of Swine	1,790	
Cattle Imported for Slaughter	4,079	
Swine Imported for Slaughter	25 carloads	

OUTLINE MAP OF MAINE

PUBLISHED BY
THE NATIONAL SURVEY CO.
CHESTER, VT.



JUNE 30, 1944

-  MODIFIED ACCREDITED AREA
-  AREA TESTED ONCE OR MORE
-  PROPOSED WORK FOR COMING FISCAL YEAR

July 1, 1943 to June 30, 1944

	<i>Imported</i>	<i>Exported</i>
Number of Cattle Other Than for Slaughter	7,513	4,596
Number of Horses	2,141	
Number of Swine	665	
Cattle Imported for Slaughter	7,294	
Swine Imported for Slaughter	3	carloads

During the year 1942-43 a contributing factor in the large number of cattle imported was the beef promotion program whereby heifers were brought into Maine from the West. The extraordinary number of imports during 1943 and 1944 can be partially traced to the war, because of the shortage of manpower, to increase cattle production. This cannot be attributed to the slaughter of Bang's disease reactors because the number imported far exceeds the number of reactors taken in the State.

It is evident that we have not been carrying as many dairy cows as we should. It is indicated that this trend should reverse itself and we should be exporting at least three times the number of cows that we have during the past year. It seems that with the abundance of grass and roughage this opportunity should not be neglected by our Maine farmers.

During the years 1942-43 the large number of swine imported, approximately 1,800, was evidently due to the fact that everyone was attempting to raise his own meat. These importations were made from establishments around Boston, and it seems that in the future the State of Maine should be able to take care of its own trade in feeder pigs. Apparently, there is a demand for about one thousand more pigs for feeding purposes in the State, which we are now importing, that we should be raising.

Hog Cholera

During the past two years several cases of hog cholera have been reported to this office. Immediate steps have been taken in each case to quarantine the premises, instruct the owners and insist on proper treatment and inoculation. This disease is now being reported to this office more frequently. However, we do not consider that the disease is increasing, but rather that through education of hog owners

and cooperation of veterinarians the presence of the disease is being reported to this office, and in this way spread of the disease avoided.

Swine Erysipelas

A few cases of swine erysipelas have been reported to this Division during the past two years and the premises in each case were placed under quarantine, the owners instructed as to the procedure to follow, and the cases followed up.

J. F. Witter, Consulting Veterinarian

Until November, 1943, we were fortunate in having the services of J. F. Witter, Professor of the Department of Animal Industry at the University of Maine as Consulting Veterinarian for this Division. During the summer of 1943 the Chief of the Division was loaned to the Department of Institutional Service to assist in supervising institution farms and Dr. Witter took over a great many of the duties of the Chief in his absence. He has also rendered invaluable service in advising relative to communicable diseases and has given great assistance in compiling the laws, rules and regulations pertaining to the Division of Animal Industry. He still conducts post mortem examinations on birds that die at the Maine Egg Laying Test. At the present time Dr. Witter is conducting educational work through Farm Bureaus and is making a Bang's disease study for the Maine Agricultural Experiment Station. He is in close touch with breeders of livestock and continues to be helpful to our program by his whole-hearted cooperation.

The booklet containing the List of Purebred Breeders, the laws, rules and regulations pertaining to the Division of Animal Industry, and directory of veterinarians was published during the fiscal year 1943-44. We appreciate the cooperation received from all sources during the preparation of this book and hope to be able to publish the List of Purebred Breeders more frequently as time and money will permit.

In conclusion I wish to thank the Commissioner of Agriculture for his assistance and interest in the work since I have assumed the duties of Chief of the Division of Animal Industry. I wish also to express my appreciation to the other members of the Department of Agriculture, the U. S. Bureau of Animal Industry, local veterinarians, the Extension Service and County Agents of the University of Maine, and to all others who have contributed to the work of this Division. It is hoped that this Division may be contacted at any and all times that we may be of assistance to any person or group.

Respectfully submitted,

FRANCIS G. BUZZELL,
Chief, Division of Animal Industry.

The Maine Egg Laying Test

To Francis G. Buzzell, Chief, Division of Animal Industry:

Herewith is submitted a report of the activities of the Maine Egg Laying Test covering the fiscal years June 1, 1942 to June 30, 1944.

During the past two years the program of the Maine Egg Laying Test has followed along the lines outlined in the last biennial report. That is, selling eggs for hatching back to the owners of birds in the Test, from their best birds at five cents per egg. This includes eggs from the Old Hen Test as well as the eggs from the mated pullet pens in the Thirteenth and Fourteenth Test.

There was a slight reduction in the number of eggs returned to the breeders this last spring compared with the year before. This decrease was due more or less to the curtailment of the whole chick program here in the East, the shortage of labor on most poultry farms, and the high price and shortage of feed.

The most outstanding record made during the Thirteenth Test was made by a pen of Rhode Island Red pullets owned

by Harco Orchards Poultry Farm of South Easton, Massachusetts. This pen of pullets laid 3604 eggs and had 3848.45 points which not only was the highest record at the Maine Test but was the highest Rhode Island Red record for the entire country and ranked second in the country all breeds, losing first place by a few points in the last month to a pen of Barred Plymouth Rocks in the Storrs Test.

In the Fourteenth Test now going on over half of the birds belong to Maine breeders and we feel on the whole that in spite of some feed and labor shortage at times during the past year we will finish on September 21, 1944 with a satisfactory year.

As in the past we are grateful for the whole-hearted cooperation always received from you as well as from the Commissioner of Agriculture and other members of the Department, the contestants, the Extension Service, the University of Maine, the Maine Experiment Station and to all others who have contributed to the success of the Maine Egg Laying Test. We hope that we may be contacted at any time that we may be of assistance to any interested party.

Respectfully submitted,

H. T. COVELL,

Supervisor, Maine Egg Laying Test

To Francis G. Buzzell, Chief of the Division of Animal Industry:

I am, herewith, submitting my report for the two year period, July 1, 1942 to June 30, 1944.

Although we have been limited on mileage for the past two years, in carrying on our regulatory work of the Division, we have made every effort to carry on the most essential duties of the Dairy Division.

Samples of milk and cream have been purchased from dealers and forwarded to the Maine Experiment Station at Orono for analysis. Fewer samples have been purchased

during this period than in previous years. It has been necessary to curtail this work somewhat because of the tremendous amount of mileage involved in getting samples from every dealer throughout the state. In the past, it has been our policy to cover the state at least three times a year. Another reason for the smaller number of samples purchased is because so many distributors have gone out of business and their businesses absorbed by other distributors. For instance, one sample purchased may represent many thousands of quarts today whereas a year ago it would take scores of samples from many dealers to give the public the same protection. There has been nearly a fifty per cent decrease in the number of licensed distributors since July of 1942.

For your information, I have compiled the following table to show the number of samples purchased during the past two years and their respective analyses :

MILK SAMPLES	1942-1943		1943-1944	
Total number of samples	2509		1366	
Butter Fat				
4% and over	1969	78.48%	1041	76.21%
3.25% to 4%	484	19.29%	310	22.69%
Below standard ...	56	2.23%	15	1.1 %
	2509	100 %	1366	100 %
Sediment				
Clean	650	25.91%	499	36.53%
Satisfactory	1065	42.45%	549	40.19%
Unsatisfactory	794	31.64%	318	23.28%
	2509	100 %	1366	100 %
Standard Plate Count				
Below 10,000 per c.c.	433	17.26%	224	16.41%
10,000 to 25,000	473	18.45%	231	16.91%
25,000 to 50,000	356	14.19%	197	14.42%
50,000 to 100,000	429	17.10%	247	18.08%
100,000 to 200,000	386	15.39%	200	14.64%
200,000 to 300,000	157	6.26%	75	5.49%
300 000 to 400,000	69	2.75%	50	3.66%
400,000 to 500,000	35	1.39%	22	1.61%
Over 500,000	181	7.21%	120	8.78%
	2509	100 %	1366	100 %

Breakdown on samples of pasteurized milk figures included in above statistics.

Total number of samples	498	385
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Butter Fat

4% and over	362	72.69%	249	64.68%
3.25% to 4%	129	25.90%	133	34.54%
Below standard	7	1.41%	3	.78%
	<hr/>		<hr/>	
	498	100 %	385	100 %

Sediment

Clean	133	26.71%	139	36.10%
Satisfactory	214	42.97%	165	42.86%
Unsatisfactory	151	30.32%	81	21.04%
	<hr/>		<hr/>	
	498	100 %	385	100 %

Standard Plate Count

Below 10,000 per c.c.	135	27.11%	100	25.98%
10,000 to 25,000	94	18.86%	70	18.18%
25,000 to 50,000	74	14.86%	54	14.02%
50,000 to 100,000	64	12.85%	54	14.02%
100,000 to 200,000	64	12.85%	52	13.51%
200,000 to 300,000	21	4.22%	13	3.38%
300,000 to 400,000	7	1.41%	15	3.90%
400,000 to 500,000	7	1.41%	6	1.56%
Over 500,000	32	6.43%	21	5.45%
	<hr/>		<hr/>	
	498	100 %	385	100 %

Underpasteurized samples	55	11.04%	21	5.45%
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In addition to the samples analyzed at Orono, seven thousand two hundred and eighty-four samples have had bacteriological analyses made on them in the Bang's Disease laboratory. We now have a full time technician to handle these samples. This work has proved to be of a decided help to dealers in improving their milk supply, and also has given us a good cross section of the milk purchased and has aided us materially in our farm inspection work. Nearly every sample which comes into the laboratory is pasteurized before being plated out. This gives us an indication of the number of bacteria that there would be in the milk after pasteurization in the milk plant.

At the beginning of 1944, we obtained the services of a full time inspector to do butter fat checking of producers' composite samples in milk plants and creameries. He is giving careful attention to the methods of sampling, care taken of samples, as well as the technique used in the testing of the samples. He has found it necessary to recommend changes all along the line. Every effort is being put forth to get better compliance with our rules and regulations governing the sampling and testing of milk.

It is felt that with the high butter fat differential paid to the producers on a weight and test basis that this work is essential. Producers are now paid six or seven cents per hundredweight more in price for each tenth of one per cent of butter fat above a three and seven-tenths per cent test. This is more than double what it was a few years ago. This inspector is also making many check-tests of producers' composite samples as he goes from plant to plant. We still have a problem in the installation of agitators in present dump tanks or getting dump tanks constructed which will insure the complete mixing of the entire batch of milk received from each producer.

All of the inspectors have done as much farm inspection as our travel allowance has permitted. Milk producers and dealers are experiencing many difficulties in producing and handling milk under war time conditions. As labor and machinery are so very scarce, it has seemed to me that it is important to pay more attention to the quality of the milk than to the conditions under which it is produced, but we do not countenance any unsanitary conditions at any time or place.

Milk plant operators have their problems in obtaining properly trained help which, added to their inability to obtain the amount and type of equipment needed, makes it very difficult for them to process and distribute milk of high quality.

In regard to violations, one dealer has been prosecuted and found guilty of selling milk which was not properly pasteurized. We have had five cases of watered milk. Three of these were found guilty in Municipal Court and paid fines. The other two cases were settled after civil hearings.

For the past six months, I have been loaned by Commissioner Smith to the War Food Administration and have devoted one or two days per week to the administration of War Food Order #79-83. The purpose of this Order is to curtail sales of milk and cream in the areas coming under the Order, or in other words, the rationing of milk and cream by distributors. This work has not been unpleasant because of the splendid cooperation I have received from the industry.

In closing, I wish to express my appreciation of your interest in my problems and your helpful advice. I also wish to express the same appreciation to Donald P. Corbett who served as Chief of the Division of Animal Industry for the greater part of the past two years. I wish to thank Commissioner Smith for his appreciation of, and assistance with, our problems in the Dairy Division.

Respectfully,

C. P. OSGOOD,
State Dairy Inspector

To Francis G. Buzzell, Chief of the Division of Animal Industry:

A brief summary of the activities of the Animal Husbandry Specialist is herewith submitted for the fiscal years July 1, 1942 to June 30, 1944.

Promotion

In following up the demand and opportunity for beef raising in the State we assisted farmers interested in beef raising in purchasing 1400 head of choice commercial Hereford breeding heifers. These cattle were distributed in Aroostook, Oxford, Kennebec, Somerset, Penobscot, Hancock, Cumberland, and Knox Counties. The majority of these heifers were bred to calve out this summer, and a survey is under way to determine the progress of this project.

A foundation demonstration flock of 22 registered Oxford ewes was presented by the Maine Development Commission this spring, with our assistance, to the Future Farmers Club of Van Buren High School. These ewes were selected from several of the leading flocks in Ontario. The purpose of this project was to stimulate interest in sheep among the

boys taking this course in high school, as well as supplying the Van Buren area with better breeding stock. A similar project is being carried out with the Future Farmers Club at East Corinth Academy. The boys of this school chose Hampshires as the breed they wished to work with. Fourteen head were selected this spring from one of the best flocks in Michigan. These boys have between 400 and 500 sheep enrolled as their project. Their knowledge and experience with sheep should make this project a huge success.



A Profitable Flock in Ideal Surroundings

Several shearing demonstrations were held this spring as sheep shearers were scarce.

The parasite control and management program has been covered by circulars sent from this office at three month intervals. Cooperation by the Maine Sheep Breeders' Association has been very helpful in making this program effective as it is very important to successful sheep raising. Four hundred thousand grams of phenothiazine have been used by our Maine sheep growers through the above sheep organization. This amount is nearly double that which appears in our last report.

Dog Licensing

Dog license collections for the year ending June 30, 1943 were the largest in the history of the dog licensing law. The income amounted to \$81,218.76, with a deficit of \$1,287.15 which was added by the State Treasurer to the state tax of the respective towns and cities delinquent in making their dog tax payments.

From the dog tax fund are paid all claims for poultry and livestock which total \$35,699.62 for the 1943 fiscal year and \$60,222.71 for the 1944 fiscal year, the bear bounty on which \$4,640.00 was paid on 464 bear for the last fiscal year, and \$7,596.23 for administration of office of the Animal Husbandry Specialist for the last fiscal year. The balance of this fund was prorated to the towns and cities in proportion to the amount they paid in. The refunds for this year will be considerably less than in the past due to the fact that the poultry claims have doubled the past year over the previous year. In the last report it was mentioned that the dog license collections for the period of April to July were better than any previous year. Again, we can say that payments up to June 30 this year have exceeded those of previous years for the corresponding period.

Licensing Poultry Dealers

During the past two fiscal years the number of poultry licenses issued has increased. One hundred and eighty-three were issued during the fiscal year 1943-44. This law has been a great help in creating a much healthier market for all concerned. No complaints of irregularities have been received at this office.

Claims for Livestock and Poultry by Dogs and Wild Animals

Sheep Damage by Bear. The State paid for 978 sheep killed by bear the past year which is a record for recent years. This number does not represent all the sheep that are killed by bear as many cannot be found after they have been killed and where there is no evidence of the remains the State cannot pay for them. Twenty-three head of cattle were killed by bear over this same period which is also the

largest number in recent years, most of these being calves and yearlings.

Sheep Damage by Dogs. The dog damage remains approximately the same over the last two years, 908 sheep being killed in 1943-44. Most of these losses are caused by stray dogs that get together and roam over the country causing no end of trouble to the flocks of sheep, as well as deer. Legislation is needed to control this type of dog.

Our sheep population decreased 2000 head per year over the past twenty years until 1941 when an increase of 5000 is shown by the census reports, making the present day sheep population roughly 45,000. The decrease in the sheep numbers per year over the past number of years is equal to the number killed by dogs and bear. We feel that the loss of sheep numbers in the State can be contributed to the dogs and bears more than anything else. Practically all the farmers who formerly kept sheep state the reason they are not keeping them today is that either dogs or bear drove them out of the business.

Poultry Damage. The poultry losses for the year ending June 30, 1944 are also another all time high, \$35,417.48 being paid this period as compared with \$21,624.39 the previous period. Foxes are the cause of 80% of this damage. Legislature took the protection from foxes and it was hoped this would help reduce the fox population which would cut down poultry losses. This does not seem to be true as the months of May and June this year equal the damage paid the corresponding period a year ago. It is extremely difficult to make satisfactory settlements to the raisers on these fox losses due to the fact that so many of the birds are carried from the ranges thereby leaving no evidence on which to base a count to determine the amount of the loss.

I wish to take this opportunity to express my hearty appreciation to you and the Commissioner for your advice and assistance in my work and to the other members of our department for their splendid spirit of cooperation.

Respectfully submitted,

SAMUEL F. DORRANCE,
Animal Husbandry Specialist

DOG DAMAGE TO SHEEP AND OTHER ANIMALS PAID BY STATE

July 1, 1943 to July 1, 1944

<i>County</i>	<i>Sheep</i>	<i>Heifers</i>	<i>Calves</i>	<i>Cows</i>	<i>Pigs</i>	<i>Total</i>						
Androscoggin	17	\$ 190.00	2	\$ 90.00	1	\$ 50.00	1	\$ 15.00				
Aroostook	320	3,255.00		1	60.00							
Cumberland	26	276.50		1	15.00	2	\$375.00	13	244.00			
Franklin	64	657.00										
Hancock	7	102.00										
Kennebec	16	210.00			1	105.48	2	20.00				
Knox	13	266.00										
Lincoln	23	239.50										
Oxford	8	110.00		1	6.00							
Penobscot	230	2,734.30	1	75.00								
Piscataquis	1	15.00										
Somerset	92	971.00	3	110.00								
Sagadahoc	6	90.00										
Waldo	53	524.50		4	175.00							
Washington	31	280.50										
York	1	15.00										
Total	908	\$9,936.30	6	\$275.00	8	\$306.00	3	\$480.48	16	\$279.00	941	\$11,276.78

BEAR DAMAGE TO SHEEP AND OTHER ANIMALS PAID BY STATE

July 1, 1943 to July 1, 1944

<i>County</i>	<i>Sheep</i>	<i>Heifers</i>	<i>Calves</i>	<i>Cows</i>	<i>Pigs</i>	<i>Total</i>	
Aroostook	311	\$ 3,274.50	1 \$ 50.00	6 \$310.00	2 \$340.00	1 \$ 46.25	
Franklin	122	1,679.00					
Hancock	1	8.00					
Oxford	32	1,044.00	4 330.00				
Penobscot	238	2,285.20	1 40.00	2 35.00			
Piscataquis	64	575.00	2 85.00		1 45.00		
Somerset	163	1,990.50					
Waldo	8	100.00					
Washington	39	422.00	4 295.00	1 25.00	4 130.00		
	978	\$11,378.20	12 \$800.00	9 \$370.00	2 \$340.00	6 \$221.25	
Aroostook	3	\$ 23.00	By Bobcats				
Franklin	9	103.00					
Somerset	1	10.00					
Penobscot	11	123.00	By Coyotes				
Aroostook	2	10.00	By Foxes				
Penobscot	15	75.00					
Piscataquis	1	5.00					
Somerset	12	70.00	By Mink				
	1,032	\$11,797.20	12 \$800.00	9 \$370.00	2 \$340.00	6 \$221.25	1,061 \$13,528.45

POULTRY DAMAGE PAID BY STATE

Ju'y 1, 1943 to July 1, 1944

County	Foxes	Dogs		Skunks		Weasels		Coons		Boheats		Mink		Muskrat	Coyotes		Bear				
Androscoggin	1,837	\$1,970.29	194	\$275.75		40	\$18.00														
Aroostook	3,258	3,927.18	198	235.50	1,373	1,163.45	143	71.80	216	\$236.50	58	\$82.00	156	140.10	14	\$21.00					
Cumberland	1,479	1,658.99	565	731.85									20	33.60							
Franklin	559	624.35			187	124.25	40	20.00	34	40.00											
Hancock	331	390.49	10	20.00	72	66.00			240	386.95			5	10.00							
Kennebec	1,633	2,043.87	569	571.83	100	48.70	30	21.00					82	78.80							
Knox	555	686.21	17	20.00																	
Lincoln	575	799.80	61	75.45			11	11.00	290	418.25											
Oxford	827	892.60	172	91.20			49	46.30	119	86.20											
Penobscot	6,891	4,927.12	453	421.39	391	308.00	65	19.00	299	287.33			11	16.50							
Piscataquis	123	196.65	126	37.80	33	46.00	230	79.04	105	105.20											
Sagadahoc	808	1,092.66	284	199.50	18	18.00															
Somerset	2,099	2,720.50	103	123.75	265	140.45			56	56.00											
Waldo	1,549	1,965.44	10	20.00	63	81.50			290	431.60	70	17.50	16	20.00		85	70.00				
Washington	1,855	196.20	125	125.15	99	72.15	24	38.00	290	401.90						44	\$53.05				
York	1,625	2,192.24	539	793.60					267												
	24,334	26,284.59	3,426	3,742.77	2,601	2,073.50	632	324.14	1,916	2,449.93	128	99.50	290	299.00	14	21.00	85	70.00	44	53.05	
Total, 33,470		\$35,417.48																			

DOG DAMAGE TO SHEEP AND OTHER ANIMALS PAID BY STATE

July 1, 1942 to July 1, 1943

<i>County</i>	<i>Sheep</i>	<i>Heifers</i>	<i>Calves</i>	<i>Cows</i>	<i>Goats</i>	<i>Pigs</i>	<i>Bulls</i>	<i>Total</i>	
And.	9	\$ 52.00						9 \$ 52.00	
Aroos.	395	3,769.50	2 \$85.00					397 3,854.50	
Cumb.	23	196.00		1 \$100.00	5 \$140.00			29 436.00	
Frank.	46	609.10						46 609.10	
Han.	30	296.00						30 296.00	
Ken.	113	1,127.50				1 \$12.00		114 1,139.50	
Knox	6	46.00						6 46.00	
Linc.	17	180.00						17 180.00	
Oxford	21	199.00						21 199.00	
Pen.	220	2,207.80	1 \$ 40.00	1 10.00				222 2,257.80	
Pisc.	7	83.00						7 83.00	
Som.	18	425.33	1 65.00	1 85.00				20 575.33	
Waldo	28	256.50						28 256.50	
Wash.	32	286.00						32 286.00	
York	1	9.50					1 \$25.00	2 34.50	
Total	966	\$9,743.23	2 \$105.00	2 \$85.00	3 \$195.00	5 \$140.00	1 \$12.00	1 \$25.00	980 \$10,305.23

DEPARTMENT OF AGRICULTURE

BEAR DAMAGE TO SHEEP AND OTHER ANIMALS PAID BY STATE

July 1, 1942 to July 1, 1943

<i>County</i>	<i>Sheep</i>		<i>Heifers</i>		<i>Calves</i>		<i>Cows</i>		<i>Pigs</i>		<i>Total</i>	
Aroostook	138	\$1,298.00	1	\$ 25.00	2	\$ 40.00					141	\$1,363.00
Franklin	34	349.00									34	349.00
Oxford	8	97.00	1	50.00							9	147.00
Penobscot	24	210.00					2	\$90.00			26	300.00
Piscataquis	55	447.00	1	50.00	4	85.00			1	\$30.00	61	612.00
Somerset	48	306.00									48	306.00
Washington	81	650.00									81	650.00
Total	388	\$3,357.00	3	\$125.00	6	\$125.00	2	\$90.00	1	\$30.00	400	\$3,727.00

Penobscot	1 sheep	\$15.00	killed by Bobcats	
Somerset	2 sheep	12.00	killed by Bobcats	
Somerset	2 calves	16.00	killed by Bobcats	
		<u>\$43.00</u>		43.00
				<u>\$3,770.00</u>

POULTRY DAMAGE PAID BY STATE

July 1, 1942 to July 1, 1943

DEPARTMENT OF AGRICULTURE

County	Foxes		Dogs		Skunks		Mink		Bobcats		Weasels		Coons		Total	
Androscoggin..	1,155	\$1,141.56	134	\$142.05	7	\$7.00									1,296	\$1,290.61
Aroostook.....	2,789	2,870.00	198	107.52	575	429.55	11	\$20.00	35	\$15.00	211	\$109.50	287	\$219.55	4,106	\$3,771.12
Cumberland....	597	735.81	223	314.10	72	108.85					198	32.17			1,095	1,190.93
Franklin.....	309	312.55	126	105.75							47	29.10			482	447.40
Hancock.....	333	337.50	6	15.00	60	30.00					8	12.00	17	30.75	424	425.25
Kennebec.....	895	1,051.79	339	533.50	18	16.80	60	36.00			5	6.75			1,317	1,644.84
Knox.....	1,319	1,557.72	1	15.00			40	20.00					1	1.25	1,361	1,593.97
Lincoln.....	433	380.25	214	246.00	26	19.50							144	86.40	817	732.15
Oxford.....	379	404.51	89	69.95	17	3.00			86	74.00					571	551.46
Penobscot....	1,742	2,132.60	153	138.25	180	153.23	8	16.00			140	36.50			2,223	2,476.58
Piscataquis..	440	497.65			93	46.10									533	543.75
Sagadahoc....	779	681.95	53	70.50	14	24.50									846	776.95
Somerset.....	1,526	1,698.35	13	28.75	38	42.50	53	41.00	4	6.00	400	101.14			2,034	1,917.74
Waldo.....	1,241	1,171.92	56	19.60			18	54.40							1,315	1,245.92
Washington...	126	139.05	58	71.70	112	119.10	11	16.50					58	45.25	360	391.60
York.....	1,974	2,226.42	251	321.45									61	76.25	2,286	2,624.12
Total.....	16,037	17,339.63	1,919	2,199.12	1,212	1,000.13	201	203.90	125	95.00	1,009	327.16	563	459.45	21,066	21,624.39

Report of Division of Inspection

To Hon. Carl R. Smith, Commissioner of Agriculture:

I respectfully submit my report covering the work of the Division of Inspection from July 1, 1942 to June 30, 1944.

The work of the Division of Inspection consists in the enforcement of the laws regulating the sale of agricultural seed, commercial feeding stuffs, commercial fertilizer, drugs, foods, insecticides, and the enforcement of the weights and measures law; also, the certain registration, certification and licensing attendant to the regulations of the quality and purity of certain commodities. In carrying out the statutory requirements, this Division attends to the annual registration of all commercial feeding stuffs, commercial fertilizers, fungicides and insecticides, and for each brand issues annually, a Certificate of Registration; the annual licensing of bottling establishments; the annual licensing of all sardine factories and the licensing of canning factories engaged in canning other commodities that voluntarily apply for full-time inspection; the certification (and the licensing being done by the Department of Sea and Shore Fisheries) of all establishments shipping shellfish beyond the borders of the State; and the annual licensing of all establishments wherein animals or fowl are slaughtered for human consumption; special items in the enforcement of the food law which amounts to true labeling or branding as the grading and packing of apples, and the branding law covering the grading and packing of potatoes. These are among the more important items which constitute the work of this Division.

Seed Inspection

The analyses of the samples collected by inspectors together with samples from dealers may be found in Official Inspections No. 186.

	1943	1944
Number of samples collected	163	181

Feeding Stuffs Inspection

	1943	1944
Number of samples collected from July 1, 1942 to June 30, 1943	589	
Number of samples collected from July 1, 1943 to June 30, 1944		329
Number of brands registered	1,024	894
Number of hearings arranged	55	124

The analyses of the samples taken is to be found in Official Inspections No. 184.

Fertilizer Inspection

In the period covered by this report, samples of practically every registered brand of fertilizer were collected and analyzed. The endeavor was made to obtain all possible samples from the farmers.

Number of samples collected	176	205
Number of brands registered	203	174
Number of hearings arranged	29	13

The analyses of the samples collected is to be found in Official Inspections No. 189.

Fungicide and Insecticide Inspection

The fungicides and insecticides ordinarily employed for repelling and mitigating the attack of insect pests have been collected and analyzed.

Number of samples collected	47	42
Number of brands registered	451	441
Number of hearings arranged	25	16

The analyses of the samples taken for 1942-43 can be found in Official Inspections No. 186.

Food Inspection

A summary showing the collection of samples is submitted herewith, although it is only fair to say that the collection of these samples represents only in a small way

the great amount of work which is done by those of this Division who carry out the inspection of food and utensils.

Number of samples collected	248	279
Number of hearings arranged	22	55
Number of non-alcoholic beverage licenses issued	223	212
Number of sardine licenses issued	29	28
Number of sardine licenses issued for herring in round cans	7	6

The work of food inspection has been conducted as usual by the collection of samples, by hearings and by visiting and inspecting hotels, restaurants, grocery stores, markets, slaughter houses, bottling establishments, canning plants and all places where food is manufactured or offered for sale.

Drug Inspection

	1943	1944
Number of samples collected	256	55
Number of hearings arranged	8	26

* The collection of samples is made by an inspector who is a registered druggist. The analyses of the samples of Foods and Drugs collected have been published in Official Inspections No. 187.

Federal Agencies

In safeguarding the food supply for the people of the State of Maine, the Division of Inspection enjoys the aid and cooperation of the various agencies charged with similar duties. We are fortunate in enjoying the full cooperation of the United States Food and Drug Administration which through their office in Boston have some representative in Maine fulfilling this cooperation practically all of the time, a service which we greatly appreciate.

Shellfish

By legislative authority, the Commissioner of Sea and Shore Fisheries and the Commissioner of Agriculture are assigned the duty of investigating and inspecting clam,

quahaugs, and mussel flats on the coast of Maine. This is in keeping with the program recommended by the United States Public Health Service regulating the quality and purity of all shellfish shipped in interstate commerce. This cooperative arrangement has been most satisfactory, and a re-survey having been made, on March 10, 1943 a proclamation was issued by the Commissioner of Sea and Shore Fisheries and the Commissioner of Agriculture proclaiming that there are 58 closed areas from which the digging and shipping of clams, quahaugs and mussels is prohibited. In keeping with our agreement with the United States Public Health Service, samples of shellfish both shucked and shell-stock have been taken each month and bacteriological examinations have been made and reports made to the United States Public Health Service.

Sardines

The 1942 pack mentioned in the last report was 2,785,964 and the report for 1943 was 2,296,459. The number of factories licensed in 1942 was 33 and in 1943 there were 36. As mentioned in our report of 1941, some of the factories that are packing sardines have also packed herring in round cans.

Blueberries

Blueberry factories licensed in 1942 numbered 11, and in 1943 there were 12. Owing to labor conditions, it has been necessary to employ female inspectors for blueberry fly and factory work. In general, they have proved very satisfactory. Owing to the difficulty in securing part-time inspectors and chemists, we have been unable to maintain, as in previous years, our field stations at Rockport, Cherryfield, and Harrington, where we have made examinations for arsenical dusting or spraying. We have been able, however, to make the necessary examinations for infestation of berries in the field, and whenever contamination of arsenical dusting or spraying was suspected, samples of berries



Blueberry Harvest Time

have been sent to the laboratory of the Maine Agricultural Experiment Station at Orono for determinations.

Branding Law

In the enforcement of the branding law, the results have been most gratifying and satisfactory. The violations have not been as numerous as in previous years, and on the whole those who have elected to ship potatoes under the branding law have cooperated with this Division most definitely.

Slaughterhouse Law

The Ninety-First Legislature passed a law "An Act Relating to Slaughterhouses" known as Chapter 351 of the Public Laws of 1943. The Commissioner of Agriculture named as the chief executive in the law, assigned the duty of enforcement to the Division of Inspection. Under the terms of the Statute this law became effective July 9, and on July 10, rules and regulations as authorized by the Statute were made and published. These rules and regulations very definitely govern the operation, sanitation and maintenance of licensed slaughterhouses, and for the year 1943, and up to the present time we have endeavored to carry out the provisions of the Act. We feel that considerable progress has been made. In 1943 there were 172 slaughterhouse licenses issued. Under this law, several new establishments have been built and maintained in accord with the regulations, and numerous old establishments have been renovated and repaired to meet the requirements of the law. Especially gratifying has been the notable improvement in the establishments maintained for slaughtering poultry. In the general enforcement of sanitary requirements in slaughterhouses and in cases of infractions of the law providing for the marketing of meat and meat products fit for food, eleven prosecutions have been made, and there are now pending four cases for appeal to the higher court.

Conclusion

In the administration of the affairs assigned me, and in the performance of the duties attendant with the administration of these affairs, I have always appreciated your advice, assistance, and wise counsel which you have most graciously given, for all of which please accept my thanks.

Respectfully submitted,

A. M. G. SOULE,
Chief, Division of Inspection

To Hon. Carl R. Smith, Commissioner of Agriculture:

I respectfully submit, herewith, my report covering the work of the Bureau of Weights and Measures from July 1, 1942 to June 30, 1944.

This work consists of testing of the new equipment purchased by the various towns for the use of their local sealers; visiting the local sealers and assisting them in their work, re-weighing package goods, testing heavy duty scales, oil pumps, bottles, gasoline pumps and vehicle tanks.

During the last two years some new equipment has been purchased by the various towns but at the present time, it is almost impossible to purchase new equipment as very little has been manufactured for over two years. Even sealer's supplies, such as lead seals, have been limited as to the amount available for each order.

Many requests have been received for testing of fuel oil meters which had not been tested by the local sealers in the smaller towns for lack of proper equipment—the 100 gallon test tank. Up to the time the manufacture of this tank was discontinued, due to the war, it had been added to the equipment of the following places: Biddeford, Saco, Portland, Auburn, Lewiston, Augusta, Waterville, Bangor and Brewer. Without this proper testing unit, these fuel oil meters cannot be checked as the flow is so fast that the usual 5 gallon test cannot be used. This Bureau, by not having a 100 gallon test tank as part of its equipment, is unable to assist the local sealers in the testing of fuel oil meters.

Package goods have been re-weighed and checked. This last year, some short weight was found in the 15 pound peck as well as the 50 pound bags of potatoes. Upon investigation of these complaints, it was found that these shortages were caused by both defective scales and careless filling of the bags.

Many heavy duty scales have been tested upon request from the local sealers, especially where they lacked the proper equipment. Oil pumps, bottles, and gasoline pumps have been checked and tested and the Bureau has assisted in the testing and sealing of several vehicle tanks.

On account of the restricted travel program, I have not been able, as in the past, to visit all the sealers. As soon as the rationing of gasoline is ended, much time should be spent with the sealers of the various cities and towns.

There are at the present time 240 sealers of Weights and Measures who are serving in the various cities and towns of the state. In many cases, one sealer is appointed to serve in several towns. The sealers are required, by law, to make an annual report of their work to this Bureau and a summary of their work by counties is hereby appended.

I wish to express my appreciation for your wise counsel and assistance in the administration of the duties assigned me.

Respectfully submitted,

G. K. HEATH,
Deputy State Sealer

STATE REPORT OF WEIGHTS AND MEASURES FOR THE YEAR 1942

STATE OF MAINE

Counties	Number Tested and Sealed											Number Condemned													
	Scales	Weights	Dry Measures	Liquid Measures	Yark Sticks	Gasoline Pumps	Milk Jars	Kerosene Pumps	Molasses Pumps	Taxi Meters	Measuregraphs	Vehicle Tanks	Scales	Weights	Dry Measures	Liquid Measures	Yark Sticks	Gasoline Pumps	Milk Jars	Kerosene Pumps	Molasses Pumps	Taxi Meters	Measuregraphs	Vehicle Tanks	
Androscoggin	1,138	391	14	145	1	454	0	96	5	0	4	21	46	9	0	0	0	20	0	0	0	0	0	0	0
Aroostook	797	397	11	38	10	460	0	165	0	0	0	0	19	5	0	0	0	0	0	0	0	0	0	0	0
Cumberland	2,328	937	10	100	114	1,107	17	198	14	76	5	146	71	8	0	1	0	17	0	0	0	0	0	0	0
Franklin	186	164	0	31	1	186	25	11	11	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
Hancock	565	275	16	129	25	353	330	63	20	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
Kennebec	1,245	460	0	98	8	564	0	72	17	0	0	21	14	4	0	0	0	16	0	0	0	0	0	0	0
Knox	658	316	22	291	25	300	680	61	14	0	0	10	0	0	0	6	0	0	0	0	0	0	0	0	0
Lincoln	972	462	1	35	15	208	24	30	4	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Oxford	709	487	15	54	32	397	170	86	15	0	0	0	0	34	0	19	10	14	10	0	0	0	0	0	0
Penobscot	1,264	1,048	19	32	10	591	603	192	43	0	32	62	0	0	0	0	0	0	0	0	0	0	0	0	0
Piscataquis	201	236	11	18	4	150	0	31	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Sagadahoc	245	0	0	0	0	133	0	29	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Somerset	567	381	2	63	15	365	3	60	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Waldo	213	364	10	7	7	131	0	40	10	0	0	0	0	1	0	0	0	21	0	3	0	0	1	0	
Washington	373	265	25	68	5	255	0	93	33	0	0	4	0	10	0	0	0	1	0	0	0	0	0	0	
York	738	112	6	285	2	376	0	64	3	0	1	26	0	2	0	0	0	0	0	0	0	0	0	0	
Totals	11,599	6,295	154	1,447	274	6,035	1,857	1,291	196	76	48	351	212	86	5	29	12	105	10	20	0	1	1	2	

STATE REPORT OF WEIGHTS AND MEASURES FOR THE YEAR 1943

Counties	Number Tested and Sealed											Number Condemned													
	Scales	Weights	Dry Measures	Liquid Measures	Yark Stick	Gasoline Pumps	Milk Jars	Kerosene Pumps	Molasses Pumps	Taxi Meters	Measurgraphs	Vehicle Tanks	Scales	Weights	Dry Measures	Liquid Measures	Yark Sticks	Gasoline Pumps	Milk Jars	Kerosene Pumps	Molasses Pumps	Taxi Meters	Measurgraphs	Vehicle Tanks	
Androscoggin	1,111	291	0	172	2	426	0	59	6	0	3	28	50	9	0	1	0	16	0	3	0	0	0	0	5
Aroostook	896	236	9	9	11	354	0	116	9	0	0	1	12	5	0	0	0	4	0	0	0	0	0	0	0
Cumberland	1,705	880	18	73	38	705	0	133	6	127	0	191	51	15	0	0	0	7	0	9	0	9	0	0	0
Franklin	292	421	9	40	10	119	12	37	3	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Hancock	514	294	9	87	13	262	146	53	13	0	0	10	2	0	0	0	0	1	0	0	0	0	0	0	0
Kennebec	1,171	1,209	41	233	75	494	0	104	21	0	0	29	6	21	7	3	3	5	0	0	0	0	1	2	0
Knox	535	372	20	273	22	183	500	39	12	0	0	4	2	5	0	3	0	0	8	0	0	0	0	0	0
Lincoln	327	294	0	2	7	165	0	43	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Oxford	639	522	13	80	34	309	105	82	21	0	1	13	35	29	2	7	7	9	12	1	1	0	0	0	0
Penobscot	1,078	960	11	42	6	472	585	135	27	2	18	62	4	5	0	0	0	3	0	0	0	0	0	0	0
Piscataquis	185	202	5	15	3	104	0	27	4	0	0	5	1	2	0	0	0	0	0	0	0	0	0	0	0
Sagadahoc	219	0	0	0	0	79	0	12	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Somerset	516	277	7	40	14	242	2	66	2	0	0	11	7	9	0	0	0	13	1	4	0	0	0	0	0
Waldo	225	366	4	33	7	118	0	40	13	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Washington	343	272	8	24	5	165	20	57	27	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
York	734	47	9	312	23	293	564	66	3	0	0	31	7	2	0	0	0	4	0	0	1	0	0	0	0
Totals	10,490	6,643	163	1,435	275	4,495	1,934	1,069	178	129	31	391	178	104	2	13	10	62	21	22	1	9	1	10	0

DEPARTMENT OF AGRICULTURE

Report of Division of Markets

To the Hon. Carl R. Smith, Commissioner of Agriculture:

The work of the Division of Markets in improving the existing methods of marketing farm products and purchasing farm supplies during the period July 1st, 1942 to June 30, 1944, covers a full two-year period during which our country was engaged in the greatest war of all time. Rationing, price ceilings, support prices and accumulation of stock piles for military needs has created entirely different conditions than those under which the products of our Maine farms are usually marketed.

In most instances the problem has not been one of finding markets but rather of delivering sufficient farm products to satisfy the enormous demands of civilian and military needs. With industry employed at full capacity, consumers have had plenty of money with which to purchase food products. Under such circumstances, farm products have found a ready market and generally at good prices.

Dissemination of Information

Twenty-one years ago, the Division of Markets began the publication of a mimeographed sheet giving the prices of farm products at retail stores in Portland, Lewiston, Augusta and Bangor. Also included were special quotations from Boston on the products which Maine farmers dispose of in that area. This sheet grew very gradually until it reached a total of 2700 subscribers in 1938. Owing to the cost of postage and material, it became apparent that funds were not sufficient to carry the total cost, and an annual subscription rate of 25c was made. This reduced the mailing list to approximately 1700. The distribution of this market report remained practically stationary at that figure until 1942. That year marked the beginning of

scarcity of farm implements, livestock and other farm supplies. A few years prior an "Exchange Sheet" had been added. With the organization of the OPA, information relative to price ceilings on our farm commodities was published from time to time. This combination of an "Exchange Sheet" and current information on markets and price ceilings seems to have met a real need of our producers because the mailing list has now reached a total of 3750 subscribers.

Emergency Activities

The increase of Naval and Merchant Marine activities in Portland Harbor created a large business in provisioning these vessels. More and more, the War Shipping Administration found it necessary to know the quality and condition of the supplies going on ship-board. For lack of personnel, the Federal inspection service at Boston was unable to provide this service when needed. This Division in cooperation with the Office of Distribution of the U. S. Department of Agriculture trained two of our regular men to inspect eggs, poultry, butter, cheese and miscellaneous fruits and vegetables—in addition to their regular Federal-State inspections on apples, potatoes, cabbage and squash which service they had been rendering for several years. The arrangements have proven helpful to the U. S. Department of Agriculture and the War Shipping Administration and has enabled the Division of Markets to develop experts in the inspection of these commodities. This especially will be very valuable in the development of a marketing program during the post-war period. This feature of the work of the Division did not get well underway until the latter part of 1943. Since that time, seventy-one inspections have been made on eggs, chiefly carlots. Thirty-seven have been made on butter, thirty-five on poultry and twenty-nine on cheese. This makes 172 inspections in all. At the present moment, our inspector is working on 15 carlots of eggs for the Procurement and Price Support Division of the War Food Administration, U. S. Department of Agriculture.

Members of the Division have served on the County War Board, the Advisory Committee of ODT and at meetings of the State War Board for establishing annual goals for the cannery crops.

The effect of restrictions incident to the war effort have been varied and often times puzzling. Owing to the great number of varieties of apples and a corresponding variation in quality, the OPA established a flat ceiling price for all varieties. The 1943 crop for the nation as a whole was short. This combination resulted in apples generally hitting the ceiling, and when this occurred the grower received the ceiling price for orchard-run of apples. This practically eliminated any effort at grading the apples, and the consumer was unable to secure the quality or often times the variety most preferred. Contrariwise there was overproduction of potatoes with an oversupply in all terminal markets. This situation was met by the Federal Government with a support price and several different types of purchase programs including outright purchases of No. 1 potatoes, purchase for starch diversion and manufacture of commercial alcohol. Also, a large volume of commodity loans were made. In all instances, the purchases or loans were made on the basis of official grades so that the importance of grading the potatoes was greatly emphasized. Under the war emergency, there can be no question but what price controls were absolutely necessary. If the producer is to be limited thus in the prices which he may receive in times of shortage, it holds equally true that he must be guaranteed a minimum price to cover production costs in time of surplus crops. This policy, however, as indicated above may require the use of well-defined standards of quality during surplus periods which are entirely ignored in times of shortages.

Standardization

Shipping point inspection appears to not only stand the test of war-time emergency, but to have proven itself one of the most useful services in times of heavy demands for

food products of all kinds. Prior to the out-break of the War, practically the only egg inspections made were in the enforcement of the Maine Fresh Egg Law, but with the coming of the Government goals for increased production of eggs and poultry, the growers responded to the urgent request of the Government for increased production. The ceilings first established for these products were satisfactory, and the price of grain remained low long enough so that in the latter part of 1943 and the first five months of 1944 egg production actually reached the stage of over-production. As a result, the Federal Government put its support price program into effect and purchased large quantities of eggs. The extent of the increase in the poultry industry may be measured to a degree by the number of carlots purchased in Maine under this one program. Formerly, the shipment of a straight carlot out of Maine was practically an unknown event, but under this program eighteen carlots were bought by the Government and Federal-State inspected by the Division of Markets.

There being a surplus production of apples in 1942, a purchase program was inaugurated by the FDA. That with commercial inspection brought the total to 156 carlots inspected. The 1943 crop being a short one and as indicated before sold at ceiling price, inspections dropped to 53 carlots. Again this emphasizes the value of maintaining a well-organized and efficient group of expert fruit and vegetable inspectors. Under the support program, a few carlots of cabbage were inspected.

A definite aim in the crop seasons of 1942 and 1943 was to secure ample supplies of all kinds of canned foods. This was necessary in order to provide the greatest possible amount of food in the least perishable form for shipment to our armed forces abroad and to care for the people in liberated areas. The usual needs of our civilian trade were heavily curtailed. Under these conditions, the competition among the canners was not for markets in which to sell their processed product but rather in securing acreage from the farmers to fill their needs for raw products. Consequently, the need for grading the raw product as delivered at the canneries was less acute. In 1943, as a result, the

number of factories using the grading service on beans dropped to eight, while the service was maintained at the same number of factories for peas and in the case of sweet corn it increased to twenty-three factories. The applications thus far received for grading service for the 1944 crop, indicates an increase in the number of factories using the service for both beans and corn. This reflects the feeling that hostilities may be concluded before the 1944 pack is disposed of. Should this occur and force more of the canned foods on the civilian market, the opinion is that the housewife will demand more attention to a quality product and the cannery which can deliver the greatest proportion of fancy goods will stand to reap a better price than those with only standard quality to offer.

Shipping point inspection of potatoes during the period covered by this report marks another milestone in the Division of Markets program. History was made throughout this period. Weather conditions during the growing and harvesting season of 1942 were as nearly perfect as it was possible to imagine. From the 156,000 acres of potatoes, a 42,120,000 bushel crop of the finest quality that perhaps Maine has ever produced was marketed. Consumption of the national crop was so rapid that on May 15th, 1943, the government issued an order freezing all potatoes offered for sale at point of origin. This was to make sure that our armed forces both at home and abroad would be adequately supplied with this staple food. The order was not abrogated until the 1942 crop had been entirely marketed and ample supplies were coming in from the 1943 early areas.

The 1943 crop was a different story. The government asked for increased acreage the country over. In response to this appeal, farmers throughout the country planted with a full determination to grow what the government asked. Favorable growing conditions resulted in an all-time high both in acreage and production. Before the summer of 1943 was over even the summer crop states were oversupplying the market, and the government began shipping their potatoes into Maine for conversion into starch. Eleven factories were put into operation for this purpose. These early potatoes were not disposed of before it became ap-

parent that Maine with an all-time high of 212,000 acres was coming through with a record production which the December estimate showed to be 73,485,000 bushels. During the late harvest period "the rains came." This complicated the harvest and approximately 5,000 acres were left undug, a condition which has never occurred before in this State. Every available storage space and warehouse, sheds, barns, cellars, private dwellings and church basements were filled to over-flowing. Pits were dug for winter storage, but few were filled.

In order to avoid complete loss by freezing, the farmers appealed to the government to take the surplus off their hands. The Commodity Credit Corporation came to the rescue and over 2,000 cars were shipped field-run to receiving markets and out-of-state storage houses. During the shipping season, the following government agencies conducted purchase and loan programs to dispose of the surplus and support the floor prices: Agricultural Adjustment Agency, Commodity Credit Corporation, War Food Administration and the Agricultural Conservation Associations in Aroostook, Androscoggin, Oxford, Penobscot and Piscataquis Counties.

By-product disposal of many thousands of bushels has been a feature of the season's operations. Seven dehydration plants and twenty-two starch factories were running during practically all of the shipping season. A few of the starch factories were still running at the close of the fiscal year, June 30, 1944, which is very unusual as it is ordinarily considered impractical to manufacture starch after the first of June as the temperature is too warm to produce a quality product.

Out of this record-breaking crop, and in addition to the quantities of potatoes consumed by by-product factories, 62,671 carlots have been shipped breaking all previous records. It should also be borne in mind that the minimum loadings as prescribed by the I. C. C. has been 45,000 pounds per car as against the minimum loading of 40,000 pounds per car in pre-war days. The number of inspections made at shipping point by the Division of Markets amounted to 33,720 which broke all previous inspection records. Just

what this means may be indicated by the following table which includes the two preceding seasons for sake of comparison.

<i>Season</i>	<i>No. Cars Inspected</i>	<i>No. Trucks Inspected</i>	<i>No. Warehouse Inspections</i>	<i>Total</i>	<i>Av. No. Insp. per Man per Week</i>
*1942-1943	22,121	440	170	22,731	15.7
1943-1944	32,564	134	1,022	33,720	19.6

* There were also 15 State inspections not included in above.

In order to accomplish this record-breaking number of inspections, the problem of personnel has been a hard one to crack. In addition to the trained men who have been with the Division for several years, it was necessary in the 1943 season to train 48 new inspectors. Seventeen of these inspectors failed to stay long enough with the service to be of any appreciable value. In fact, some of them did not complete the training period. This was a reflection of the upward spiral in wages and the manpower shortage. Personnel troubles were particularly acute in the Aroostook area and may be attributed in part at least to the Federal activities at the Presque Isle air base and in Central Maine to the competition from shipyards which resulted in the raising of pay to farm labor during the harvest season to \$36.00-\$50.00 weekly plus rent, milk and a vegetable garden. This compared to a probable maximum farm labor wage of \$20.00-\$30.00 in 1941. As a result of this situation, plus the fact that inspections were largely increased, the minimum wages for inspectors has been raised from \$18.00-\$33.00 weekly, and the maximum has been raised from \$36.00-\$48.00 weekly. One hundred and five inspectors have been employed for varying lengths of time during the inspection season for tablestock, in the starch factories and in dehydrating plants. To care for the typing necessary on so many certificates, nine full-time clerks were employed during the heavy shipping season in the branch office at Caribou, and six were employed temporarily and on a piece basis.

Emphasis should be given to the soundness of the potato merchandising program which Maine has developed since 1937, when the potato industry tax came into effect and

Brooke, Smith, French and Dorrance were employed as merchandising counsel to work in cooperation with the Maine Development Commission and Maine Potato Advisory Committee. This program attracted such nation-wide attention that when the huge crop of 1943 was shown to be larger than could be consumed readily, the War Food Administration called in Sturges Dorrance, the merchandising counsel of the Maine Development Commission and cooperatively a nation-wide campaign was developed to promote increased consumption of potatoes. This should be a fact never to be forgotten, that a sound merchandising program for farm products is just as essential to the welfare of Maine agriculture as a merchandising and sales program is to the manufacturer of automobiles or any other industrial product.

The types of containers used to ship potatoes to market during the last two-year period has been governed largely by the material available. If the trend toward shipment of more consumer-size packages may seem to have been interrupted, this may be attributed more to the container situation than to the desire of the housewife for a more convenient package. Following is the record of type of containers used in the last biennium.

Carlots by Types of Containers

	1942-1943	1943-1944
10 lbs.	1,055	941
15 lbs.	3,837	2,773
25 lbs.	14	26
50 lbs.	5,074	6,692
100 lbs.	21,762	32,848
150 lbs.	1,513	1,393
165 lbs.	817	577
Bulk	688	4,594
Misc.	319	161
Total	35,079	50,005

Fresh Egg Law

For seven years, the Maine Fresh Egg Law has been effective in this State. Regular inspections have been made at the stores, and the work carried on largely as an educa-

tional feature. The scarcity of eggs during the first seventeen months of the period covered by this report in combination with price ceilings tended to cause an up-grading of sizes in some instances. In December, 1943, however, supplies began to exceed demand and markets became oversupplied with all kinds of eggs. In January, the situation became acute and the government instituted a buying program. However, the supplies were so abundant and the cold storage space so overloaded that it was impossible to give proper storage conditions for many of these eggs. The result was that the quality of eggs reaching the consumer during the spring and summer of 1944 was much lower than for many years. Storekeepers have been bothered with both a lack of help and especially in the quality of help which they have been able to secure. So, with an oversupply of eggs and inefficient help, the results in some cases have been disastrous. Our fresh egg inspectors have cooperated with these storekeepers in teaching their help to locate the poor eggs. In some instances, eggs have been dumped owing to deterioration. Unfortunately, the increased costs of living with necessary adjustments in salary have exhausted the \$5,000.00 annual appropriation for this purpose before the year is completed. The fresh egg men, however, have been assigned to work on war emergency duties which have enabled us to retain their expert services.

Miscellaneous

The long-time service of crop reporting, the annual Crop & Livestock Review, accumulation of figures on blueberries, and other statistical work is maintained as best we can under present conditions. The blueberry industry produced an all-time record crop in 1943 amounting to 414,000 bushels. Government set-aside orders with ceiling prices at satisfactory levels made an all-time high record for financial returns to the blueberry growers. Just how post-war conditions will affect the marketing of this crop is difficult to estimate. That there will be radical adjustments, goes without saying. In anticipation of such a situation, the Division of Markets in cooperation with a packer in the blueberry area and the

Standardization Division of the U. S. D. A. have developed tentative standards for frozen blueberries which will be tried out experimentally during the summer of 1944. This is but an advanced attempt to secure information and to make trial marketings of frozen blueberries in consumer packages. That a quality program will be necessary when blueberries again must seek their outlet in consumer fields can hardly be doubted.

The producer cooperatives within the State are showing a healthy growth and are rapidly developing strong financial and sales policies. The Maine Potato Growers' Association has continued its program in a highly satisfactory manner. Over ten thousand carlots of potatoes were marketed from the 1943 crop, a new department of farm supplies has been added and the seed department enlarged. In order to carry on these activities, the Association now occupies a brand-new building in West Presque Isle with convenient and commodious offices and warehouses. The Maine Poultry Cooperative will complete the 1943-1944 fiscal year with the largest volume of eggs ever handled for its producer members. The organization has purchased a large warehouse in Gardiner where the eggs are assembled for shipment to Boston, empty cases stored, and as soon as market conditions will warrant it is proposed to establish a candling and packaging department in order to supply Maine retailers with strictly fresh, home-produced eggs regularly. The services of the Division in assisting the organization of cooperative and trade groups for the betterment of agriculture is available and used as occasion requires. During the year, assistance was given in organizing the Pine State Feed Dealers and Manufacturers Association. This brings the grain retailers into a closely knit organization for better service to our dairymen and poultrymen in securing their grain supplies.

Letters and interviews are being constantly used to contact buyers of our various products with either the growers or processors of the same. Due to the scarcity of sugar, by-product manufacturers have been obliged to seek other sources of basic materials. A contact was made with a manufacturer of dextrose, formerly secured from corn, so

that several carloads of starch have been sold for this purpose.

The educational work of the Division has not been as extensive as in some years owing to the urgent need of routine work. However, the Chief of the Division has attended 111 different meetings and conferences with an average attendance of 48—or a total of 5,358 people—in the two-year period. Increasing interests in rural problems is being shown by our churches throughout the State. A three-lecture course was given at a summer school of ministers and the problems of rural life were discussed with a special committee of another church group. Educational exhibits have arrived at almost the disappearing point with only minor exhibits being made at two of our fairs. Applications have been received from four different fairs for the 1944 season.

An average of five broadcasts each year have been made over WBZ and WNAC in which the use of Maine products for food has been emphasized.

Within this period active working relationships have been continued with the Maine State Grange. The Department of Agriculture has been invited to participate in this work of crystallizing the rural problems which confront the post-war period. It is hoped that a constructive program will be developed and the interests of agriculture not only protected but enhanced.

Several conferences with the Bureau of Taxation have been held relating to the extensive tax study which that Bureau is now making which covers the entire State starting with the rural areas. It is hoped that this study will primarily provide the information on which a more just tax program may be developed for the State. Incidentally, the returns from the towns may be made more valuable as a supplement to the present crop and livestock reporting service which now forms the basis of estimating the annual output of agricultural products.

In order to keep informed of the changing conditions in the marketing of farm products, members of the Division have attended four conferences in Washington, several in New York, have been in attendance at the annual meeting

of the Cooperative Fresh Fruit and Vegetable Association, and at the National League of Wholesale Fresh Fruit and Vegetable Distributors at Cincinnati, Ohio. In connection with the latter, the fruit and vegetable terminal markets at



**Fruits and Vegetables at Their Best—
Producer to Consumer**

Cleveland, Pittsburgh and Harrisburg were visited. In the latter cities, Maine potatoes have gained a real place in the minds of the consumers and are used as a yardstick to measure the quality of potatoes from other areas.

This Division has maintained very cordial relations with the Federal Department of Agriculture and has received many helpful services from them. Through this cooperative effort, the interpretation of grades and methods of in-

spection have been kept uniform with practices used throughout the country. This makes the service of greater value to those using it. More and more it is being observed that the tremendous expansion of various bureaus with additions of new ones has created duplications in the Federal Department that makes it difficult to locate responsible officials with whom to carry on cooperative work. In spite of this duplication in governmental offices, there is still a trend in the general policy of federal agencies to dictate to, and in some instances take over, the direction of activities in the State. This centralization of authority tends to complicate, slow down, and make less effective the services to which the agricultural interests of the State are entitled.

In February of both 1943 and 1944, a series of meetings in cooperation with the Container Bureau of the American Association of Railways was conducted in Aroostook and Penobscot Counties. Each series consisted of eight meetings at which moving pictures were shown by the Container Bureau illustrating faulty loading causes, breakage, and loss in transport. Better methods of loading were also shown which would reduce this loss. As a result of these meetings, the Container Bureau has already started taking a series of pictures in Maine showing the potato industry from the time the seed is planted until the packaged potatoes are delivered in the consuming market. This picture will be of great educational value in showing the better methods of grading, packing, and loading this our largest vegetable crop.

Conclusion

This report includes a two-year period in which the routine work of the Division of Markets has been complicated by war conditions and the activities increased far beyond any similar period in the history of the Division. Many of the workers of the Division have entered the armed service and others have left the Division to seek higher paying positions. It is to the credit of those loyal members of the force who have worked not only their regular hours but many, many extra hours in order that the work of the Division

might be thoroughly and efficiently performed. These are the type of men and women of whom Maine is justly proud, and it is with great satisfaction that I take this occasion to express a personal appreciation of the loyalty and hard work which the men and women of the Division have contributed throughout the period. Many other State and Federal departments and agencies have been helpful, and we express our thanks to them all.

Respectfully submitted,

C. M. WHITE, *Chief,*
Division of Markets

Report of Division of Plant Industry

To Hon. Carl R. Smith, Commissioner of Agriculture:

The Division of Plant Industry is charged with the certification of seed potatoes, insect control work, nursery inspection, horticulture and bee inspection.

Certification of Seed

The tables indicate the volume of work which has been done during the period between July 1, 1942 and June 30, 1944.

1942-43	A. Entered	A. Passed	Cwt. Cert.	Cwt. Sold
Green Mountain	7,636	5,468	1,172,994	694,915
Irish Cobbler	10,414	8,692	1,709,542	1,273,677
Katahdin	11,088	7,664	1,460,375	765,022
Chippewa	3,398	2,526	535,575	328,125
Sebago	4,309	2,526	543,911	266,328
All others	2,160	1,495	282,780	119,020½
	39,005	28,371	5,705,177	3,447,087½
1943-44				
Green Mountain	9,951	6,468	1,587,369	775,037
Irish Cobbler	13,728	8,625	2,276,868	1,760,121
Katahdin	16,371	10,052	2,424,542	940,533
Chippewa	4,053	1,496	392,251	194,541
Sebago	6,877	3,597	871,913	354,499
All others	2,034	1,212	287,798	101,859
	53,014	31,450	7,840,741	4,126,590

Due, no doubt, to the support program which the government has maintained for the potato crop throughout the country there has been a decided increase in the amount of work necessary to carry on this project. In 1943 the acreage was the highest that had ever been entered up to that time but in 1944 came the all-time high of 68,000 acres; one acre out of each three planted in the State.

This report covering two years deals with two crops that were about as far apart in quality as could be. The 1942 crop was not large. It was dug under favorable conditions,

clean and bright, and was very easy to ship. In 1943 the State produced the highest per acre yield ever and following the freeze, October 9th and 10th, we shipped the poorest quality that we ever moved. Our growers were laboring under the handicap of no help and what help they did have was inexperienced. The crop was so large that storage space was scarce and much of it was frosted in barns, garages and other outbuildings. The end of this shipping season brought relief to the industry as a whole.

From the standpoint of certified seed the quality was good as far as virus diseases were concerned. In July and early August of the previous year the aphid population was low which was reflected in the seed production for that year. A combination of circumstances led up to Maine's 68,000 acre entry in 1944. The contributing factors were a low aphid count during the previous season, a large amount of foundation stock available, as evidenced by the Florida Test, as well as the financial ability of our farmers to buy at high prices, the available seed for planting in the spring of 1944.

As an improvement in our work we have added a new regulation requiring that all Chippewas must be Florida tested and passed. The test reading for leafroll must be 20% or under before the blue tag of the Department can be attached.

An analysis of the figures will indicate two outstanding things—the rise and fall of the aphid population and the planting of more Katahdin acreage each year. The first item is the all important one and those who are watching the situation closely can see definitely that early harvest is becoming much more a part of the program than ever before. Until such time as our breeders and research workers can say something different we may have to resort to early harvest to maintain our position in the seed potato industry of the country. The grower who pulled tops on 30 acres in 1943 and had at one time 42 grownups and children working in his field provided something new to be talked about. He got about half a crop or 70 barrels per acre; sold them at \$8.00 per barrel and did a real job from the standpoint of seed improvement. This caused a lot of comment

but yesterday's comment may be tomorrow's common practice.

Potato Diseases. We are still very much dependent upon the Experiment Station for our information. The staff of entomologists has been strengthened and we are told now at the proper time just when we should expect winged aphid and something about their flight habits. This is very helpful in determining the date at which early harvest should be started. We are also told that the peach aphid population builds up faster on Chippewas while the buckthorn probably builds up faster on the Green Mountains.

A great deal of time is being spent trying to develop new material for killing tops. This will be very helpful to our seed growers and we hope that a cheap material will soon be made available.

Ring Rot. We are definitely told that seed plot methods are effective in the control of ring rot if one starts with seed stock which does not have the disease. It is very difficult, however, to determine the presence or absence of this trouble when the amount is very small. We have not yet been hurt quite enough so that we are alive to this very important problem. As soon as we are, no doubt, a program will be developed which will help to correct it. We are sure that proper sanitation will take care of it because it has been done on so many farms.

The zero tolerance is still helpful but so far we have not been able to get an answer which would tell us whether or not we have got to learn to live with ring rot. An organized campaign and perhaps quarantine regulations will be necessary. Personally I have been very much interested in some work which the Station has done on resistant varieties. Dr. Bonde has some selections which are very promising.

Leafroll. The work of Dr. Folsom at Highmoor Farm gives encouraging facts to those of us who are particularly concerned with net necrosis. In 1944 some of the more promising of these lots will be transferred to Aroostook Farm so that there may be an increase in these strains. It will be possible to either use some of the lots for breeding or for maintaining as a new variety. We are still very much concerned with this disease which in high aphid years causes

us so much trouble in our Green Mountain and Irish Cobbler varieties.

Florida Test. This particular job which started as a small item has grown to large proportions. In the past fiscal year there were about 700 samples tested. We can only repeat that we do not think this test should be regarded for its commercial value other than to tell the certified seed grower what he should plant the following spring. The Experiment Station has tried through education to tell each person entering a sample just how it should be taken; just how many acres it can represent; the proper size of tuber to select; in fact all information worth while. Many growers have believed that eventually the Florida Test would be the answer to indicate the amount of disease in all of the seed we sell. This office believes that early harvest offers a much better program for a longtime pull. It would be almost impossible to own a farm big enough in Florida to test the progeny of 40,000 acres and get the information in time to be of real value.

During the fiscal year just closed, 8,500 cars of certified U. S. No. 1 were shipped to market. The fall sales were very heavy due, no doubt, to the method in which the final sales in the spring of the year were made. For the first time we inspected so-called War Approved seed. This grade was established at the suggestion of the U. S. Department of Agriculture as a war measure and it was hoped to make available the highest of those that failed to certify. Our office was concerned only with Irish Cobblers and Bliss of which 550 cars were shipped. We did not have good luck handling this grade and discontinued it in the spring of 1944.

To be helpful we did grant certification on small size certified for the first time and placed the green tag on potatoes from $1\frac{1}{4}$ inch to 2 inches. We moved 150 cars under this tag. It was not a good season to set up this grade because of the extremely large yield per acre. The small tubers did not represent more than 3% of the total yield whereas in an average year there would be 8%.

It is outstanding to note that OPA has established a price of \$1.00 per cwt. for certified seed over table stock thus

giving proper recognition to certified seed after many years of work by state agencies. Maine is very much interested because we have had about 50% of the certified seed business. We want to keep away from the establishing of lower grades such as War Approved and devote our entire time to certified because the size of the job demands that we do this.

Summary. It has been difficult to get men to do our inspection work. We have, however, received help from the Division of Markets. They have loaned us some of the strongest of their personnel thus making it possible to get our work done. We have taken on two additional men who have had previous experience and hope to get our field work done in spite of the size of the problem presented.

This Division realizes that the Maine certified seed industry is a big problem. There are many phases and if anyone has suggestions to make we will be only too glad to have them because of the amount of money involved and the responsibility that is carried by each one of our inspectors.

Insect Control

This section of our report will have to do with the work of the gypsy and brown-tail moth, the Japanese beetle and the European corn borer.

Gypsy and Brown-tail Moth. The defoliation in the summer of 1942 was mild compared with the two previous years. It is apparent from all the information available that there was considerable winter injury during the 1941-1942 season and that both the gypsy and brown-tail moth would be at a low ebb for the 1942-1943 period. In the fall of 1942 there were a few isolated gypsy moth colonies in which the egg masses were creosoted by our small crew. A total of 172,700 egg clusters were painted in the northern part of Cumberland County principally in the Sebago Lake area. Egg masses were also treated in Sanford, Springvale, Alfred, Kennebunk Pond and North Waterboro. In many cases this work was done in connection with Boys' and Girls' camps. A survey of practically all of the brown-tail moth infested area was made and the information given to the municipal

officers pointing out the degree of infestation and recommending control measures. In the spring of 1943 a limited spray program was carried on in 20 towns with a total of 420,000 gallons of spray being used. In the summer of 1943 two of our men worked with Mr. H. N. Bartley who has charge of the Japanese beetle work in New England for the U. S. Department of Agriculture. This was a joint project having to do with accredited nurseries. This is a requirement for the shipment of nursery stock out of quarantined areas.

Again in the fall a survey of the gypsy moth infested area was made. The infestation was smaller than usual but the egg clusters in many camp sites were painted. In addition to the gypsy moth work a total of 114,000 brown-tail moth webs were cut in the towns of Harpswell and Friendship. Brown-tail moth surveys were made in 90 towns and location and degree of infestation passed on to the town officials. During the spring of 1944 a limited spray program was carried on in 13 towns. During this two years the two State-owned spraying machines broke down and were sold as useless. Both the gypsy and brown-tail moths are apparently on the increase after having two quiet years. A recommendation as to good insect control work is practically useless during the time that the young men are in the Army.

I would suggest that legislation be prepared providing for a commission which would have authority to promulgate regulations in time of need. The time may come during the post war period when, as a matter of employment, insect control will be quite important and some group with authority should be recognized. If it became necessary to quarantine towns in an attempt to clean up ring rot in seed potatoes some regulation would be necessary also.

It is very difficult for the State to determine a policy to pursue when thinking of insect pests—how much responsibility belongs to the State and how much money is available for such a purpose. At the present time the appropriation is large enough for us to keep well informed as to just what the situation is and to help in cases where the infestations are bothersome. To do a cleanup job would require a large

appropriation and should not be attempted until younger men are available.

European Corn Borer. The European corn borer has spread over a wide area. We are firmly convinced that fall plowing properly done will show good results. Shallow plowing will not do it but deep plowing plus proper disposition of weeds will provide a condition so that corn can be grown in any given area. It is only when a poor plowing job leaves part of the stalk on top of the ground that there is really any danger. Borers which work their way to the surface cannot survive unless there is some material on the surface in which to hide. Borers plowed under in the spring may find shelter and succeed in reaching the egg laying stage because they are not so likely to perish as they are in the fall.

The moths generally emerge the last of June and the period extends about two weeks. Our farmers have not been hurt enough yet so that there is a general demand for a corn borer cleanup. The demand will come when the percentage of ears rejected at the factory becomes so great that the farmer will experience a definite loss.

Dr. Hawkins of the Experiment Station is doing quite a bit of research work on the borer. He has cage material for life history studies and more material will be gathered for this season's work. It is hoped that the amount of damage and the percentage of infestation may be definitely determined. The effect of cleanup, especially the plowing under of corn stalks and refuse, will be further studied and infestation of early planted corn compared to late planted will be incorporated in the program.

Varied Activities. The appropriation given us by the last Legislature for bee work has been allocated to be spent in the months which would seem to give us an opportunity to best study European and American foulbrood. The services of Mr. Paul Caine, President of the Maine Beekeepers' Association, have been available to us at least part time and we think he has done a good job at a minimum of expense. We hope the beekeepers will check with this office regarding the situation in their counties because full information is

available. The sugar regulations made by OPA helped us greatly in our registration.

Our horticultural section has devoted a great deal of time to studying young trees grown from hardy stock. Apparently there is a large amount of interest and steps should be taken to be sure we are on the right track and to make more of this type of tree available if these are really what our apple men want.

We have not attended as many meetings as usual owing to travel restrictions. We have tried to maintain our radio schedules and have discontinued many out of State trips because the time is not available to take them. A large increase in the amount of seed potato work leads me to say that during this war period we have not been doing as good a job as we would like to do. The shortage of manpower and a tremendous increase in acreage have made it impossible for us to do many of the things that we know should have been done. The instant that men are available we shall take them on and strengthen our position in the seed industry.

I want to express my thanks for the many, many times you have helped me with my potato problems. I confess that this thing is too big for one man and needs the combined efforts of all of us. I want to thank the Division of Markets for the men they have let us have in our time of trouble. I wish to thank all of my associates for the time and effort they have put in on the job and hope for continued pleasant relations.

Respectfully submitted,

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

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

I herewith submit a brief report of the Bureau of Horticulture covering the period from July 1, 1942 to July 1, 1944.



Quality Apples on the Increase in Maine

The routine work of the Bureau has been carried on in accordance with the Statutes for the past two years. There have been fewer inspections made in the enforcement of Chapter 43, Sec. 1-12, as amended by Chapter 118, Sec. 1, P. L. 1933, and Chapter 116, P. L. 1941. Because of the shortage of nursery stock brought about by the lack of labor and other war conditions, fewer inspections have been required to maintain the quality of stock sold through our retail outlets. This shortage was especially noticeable during the seasons of highest demand, such as Easter, Mother's Day, and Memorial Day.

Table No. 1 gives the number of licenses issued under the above acts. These figures are based on the calendar year as all licenses expire Dec. 31st of each year.

Table No. 1
Nursery Licenses Issued

<i>Year</i>	<i>Fee Licenses</i>	<i>No Fee Licenses</i>	<i>Total</i>
1942	518	197	715
1943	462	223	685
1944 (to July 1)	412	186	598

It is rather difficult to break down the distribution of Nurseryman's licenses into the various groups handling nursery stock because of the constant change of handlers resulting from the amount of stock available and seasonal distribution.

Table No. 2
Distribution of Nurseryman's Licenses

Florists and Nurserymen	240
Outdoor Flower Growers	190
Stores Selling Plants	161
Fruit Plant Growers	34
Nursery Agents	48
Total Licenses issued in 1943	673

Table No. 2 gives a breakdown of the total number of licenses issued as of March 23, 1943. These figures will remain rather constant from year to year with very little variation of the several classifications.

Table No. 3
Total Area Under Glass
(In square feet)

Number of Greenhouses	142
Number of Retail Shops	29
Number of Towns	67
Number of Square Feet	1,058,000
Average number of Square Feet to each Establishment	7,500*
(*Equivalent to house 37.5x200)	

One branch of the so-called nursery industry in Maine which does not vary as greatly as some other branches is that area devoted to the production of plants under glass and the distribution of these products.

Table No. 4
Ten Leading Towns in Maine
 (area under glass)

Yarmouth	129,000
Biddeford	127,000
South Portland	86,050
Cumberland Center	75,000
Lewiston	74,500
Portland	65,200
Gorham	40,000
Bar Harbor	35,700
Bath	31,000
Bangor	29,000

Tables Nos. 3, 4 and 5 give the relative size and location of this industry in Maine.

Table No. 5
Distribution of Greenhouses in Maine
 (by counties)

<i>County</i>	<i>Greenhouses</i>	<i>Area (in 000 sq. ft.)</i>
Androscoggin	10 7.02%	97 9.45%
Aroostook	3 2.12%	19 1.85%
Cumberland	39 27.41%	445 43.25%
Franklin	3 2.12%	3 0.29%
Hancock	6 4.22%	42 4.09%
Kennebec	20 14.04%	60 5.84%
Knox	5 3.52%	11 1.07%
Lincoln	4 2.82%	7 0.63%
Oxford	3 2.12%	21 2.05%
Penobscot	12 8.43%	34 3.31%
Piscataquis	4 2.82%	8 0.78%
Sagadahoc	2 1.41%	31 3.01%
Somerset	4 2.82%	27 2.63%
Waldo	3 2.12%	15 1.46%
Washington	2 1.41%	7 0.68%
York	22 15.60%	201 19.56%

Since July 1, 1942 we have been very active among the beekeepers of Maine in answer to a request made by the Maine Beekeepers' Association for assistance in helping to eradicate diseases among the apiaries of the state and to promote better practices within the industry.

It was thought that the first step in this work should be a survey to determine the size of the industry and to what extent bee diseases existed in this state. Following the recommendation of outstanding men in the bee industry of Maine, Mr. Paul Caine of Winthrop was hired to do the survey work. This survey was conducted as though a regular

inspection were being made. The counties of York, Cumberland, Oxford, Sagadahoc, Androscoggin, and parts of Kennebec and Franklin were surveyed. Table No. 6 gives the results of this survey.

Table No. 6
Bee Inspection 1942

<i>Counties Surveyed</i>	<i>Number Calls</i>	<i>Number Colonies</i>	<i>Percent Diseased</i>	<i>Number Colonies Diseased</i>
Androscoggin	24	172	2.9%	5
Cumberland	41	251	9.5%	24
Franklin	7	137	.0%	0
Kennebec	35	461	.2%	1
Lincoln	1	2	.0%	0
Oxford	9	29	20.7%	6
Somerset	2	78	.0%	0
York	32	204	5.3%	11
	149	1,334	3.5%	47

During the winter of 1942-43 the Legislature passed a new bee law and made available \$1000 a year for 2 years to carry out the enforcement of the act. Since the southern end of Maine had been inspected it was deemed wise to continue our efforts in another section of Maine. All the area west of the Penobscot River that had not been previously inspected was done at this time. The results of the summer's work will be found in Table No. 7.

Table No. 7
Bee Inspection 1943

<i>Counties Surveyed</i>	<i>Number Calls</i>	<i>Number Colonies</i>	<i>Percent Diseased</i>	<i>Number Colonies Diseased</i>
Androscoggin	2	7	.0%	0
Cumberland	1	3	.0%	0
Hancock	1	9	.0%	0
Kennebec	24	363	.0%	0
Knox	18	142	5.0%	7
Lincoln	11	66	.0%	0
Penobscot	43	443	3.0%	13
Piscataquis	26	207	.0%	0
Somerset	26	236	2.0%	4
Waldo	17	139	4.0%	6
	169	1,615	2.0%	30

In order to have a clearer picture of the disease situation Table No. 6 and Table No. 7 should be studied along with Figure No. 1; for in our inspection work we found that the disease was concentrated in a few small areas in each County and was not a light infestation over the entire County as the figures in Table No. 6 and Table No. 7 might indicate.

Our inspections this spring have been in the heavily infested areas with the most encouraging results. Of 472 hives of bees inspected so far this year, only 4 have been found diseased.

Along with the inspection work, we are distributing as an experiment among the apiaries known to have or had diseases, queen bees that have been reared because of their ability to withstand disease and to produce brood that is disease resistant.

We have continued our support of the State Apple Tree Pool by locating and inspecting all the stock bought by the growers through this source of supply. Due to increased price and scarcity of stock the number of trees purchased dropped in the spring of 1944.

Our cooperative work in Hardy Stocks is gaining in popularity. The Growers Hardy Stock Nursery has formulated plans for purchasing land for the purpose of growing increased numbers of Hardy Stock, hoping to have available for distribution at least 20,000 trees per year in the near future.

A great deal of time has been spent in rodent control in orchards and also in distributing information on the repair of the damage done by these pests. Due to early snows and lack of labor, orchards were not sufficiently well pruned last fall and considerable damage resulted. We have therefore spent more time in helping the fruit growers repair this damage.

A new circular known as the "Maine Leaf" is being published once a month and distributed to the florists of Maine. This publication is in the form of a newsletter with timely subjects and information.

The Assistant Horticulturist has continued, due to the great demand, his demonstrations in the making of Christmas decorations and the care of house plants. In addition

OUTLINE MAP OF MAINE

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SCALE OF MILES
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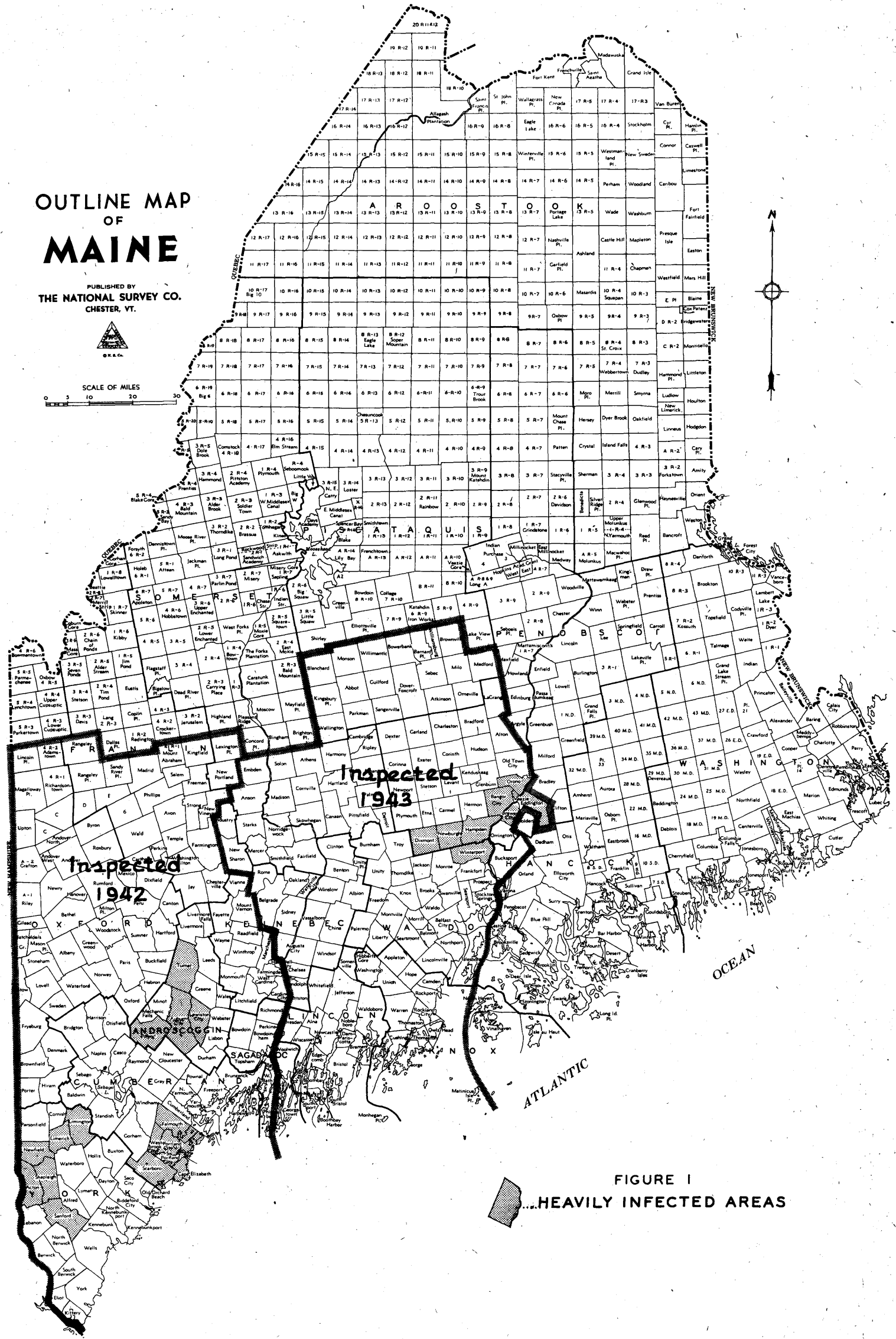


FIGURE I
...HEAVILY INFECTED AREAS

he has assisted Victory gardeners with their problems. These meetings have been in addition to many talks on the radio, to granges, garden clubs, fruit growers' meetings, and to other organizations made by the Horticulturist and his Assistant.

We have continued our assistance to those individuals and organizations who have wished to improve their home grounds, parks, or public buildings. This has been done through lectures and personal visits giving advice on the proper use and care of plants for landscaping such properties.

The Bureau has identified and offered proper treatment for hundreds of insects and disease troubles to those who have sent samples and requested aid.

I wish to take this opportunity to express my deep appreciation for your kind assistance and wise counsel in helping me execute the duties assigned to me.

Respectfully submitted,

STANLEY L. PAINTER, *Horticulturist*