

# MAINE STATE LEGISLATURE

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1964

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1944-1946

(in three volumes)

VOLUME I

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# MAINE

## DEPARTMENT OF AGRICULTURE

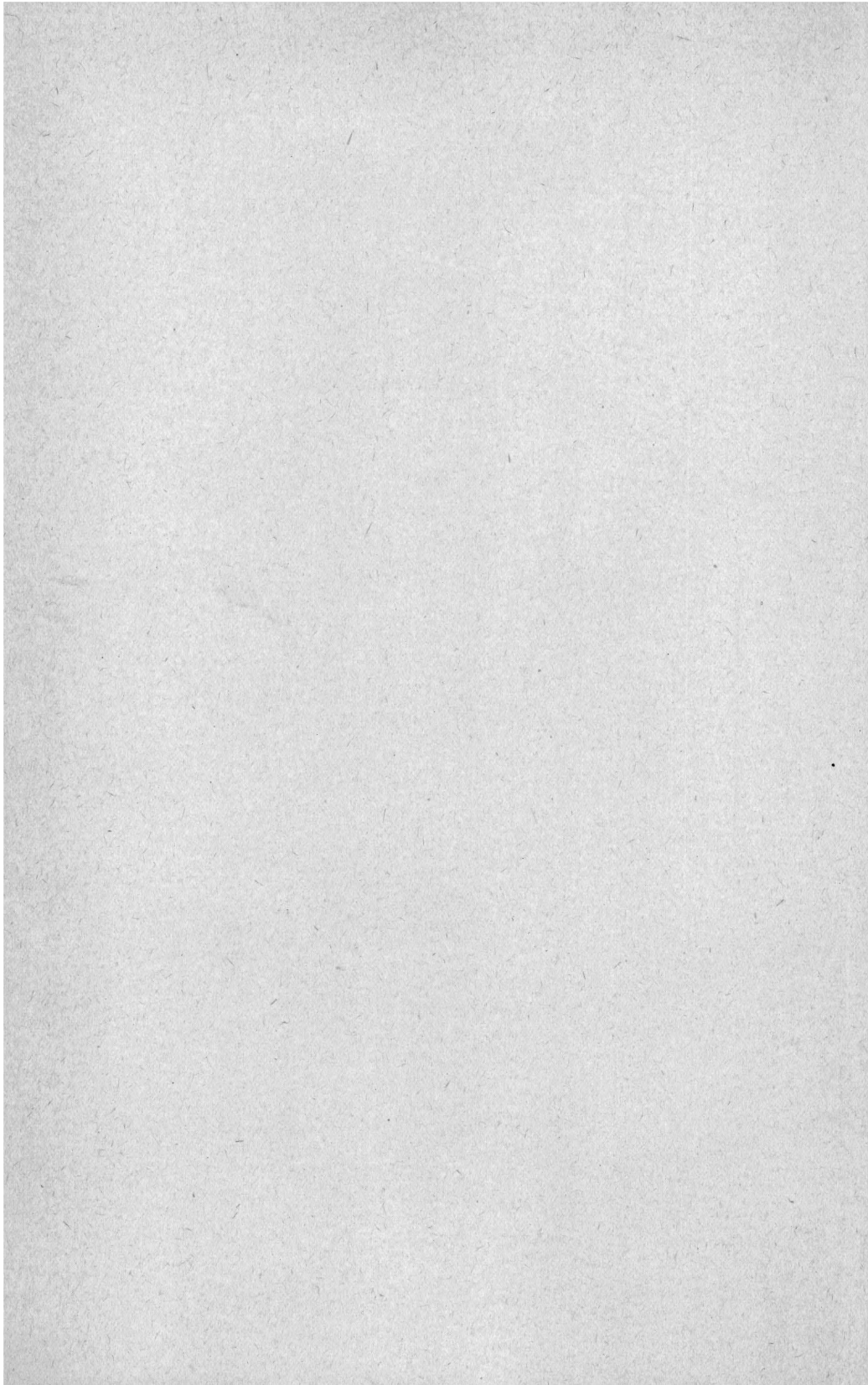
BIENNIAL REPORT

JULY 1, 1944



JUNE 30, 1946







STATE OF MAINE

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BIENNIAL REPORT

OF THE

Commissioner of Agriculture

TO

His Excellency the Governor

AND

Executive Council

---

July 1, 1944 to June 30, 1946

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

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*To His Excellency, Governor Horace A. Hildreth, and  
Executive Council:*

Sirs:

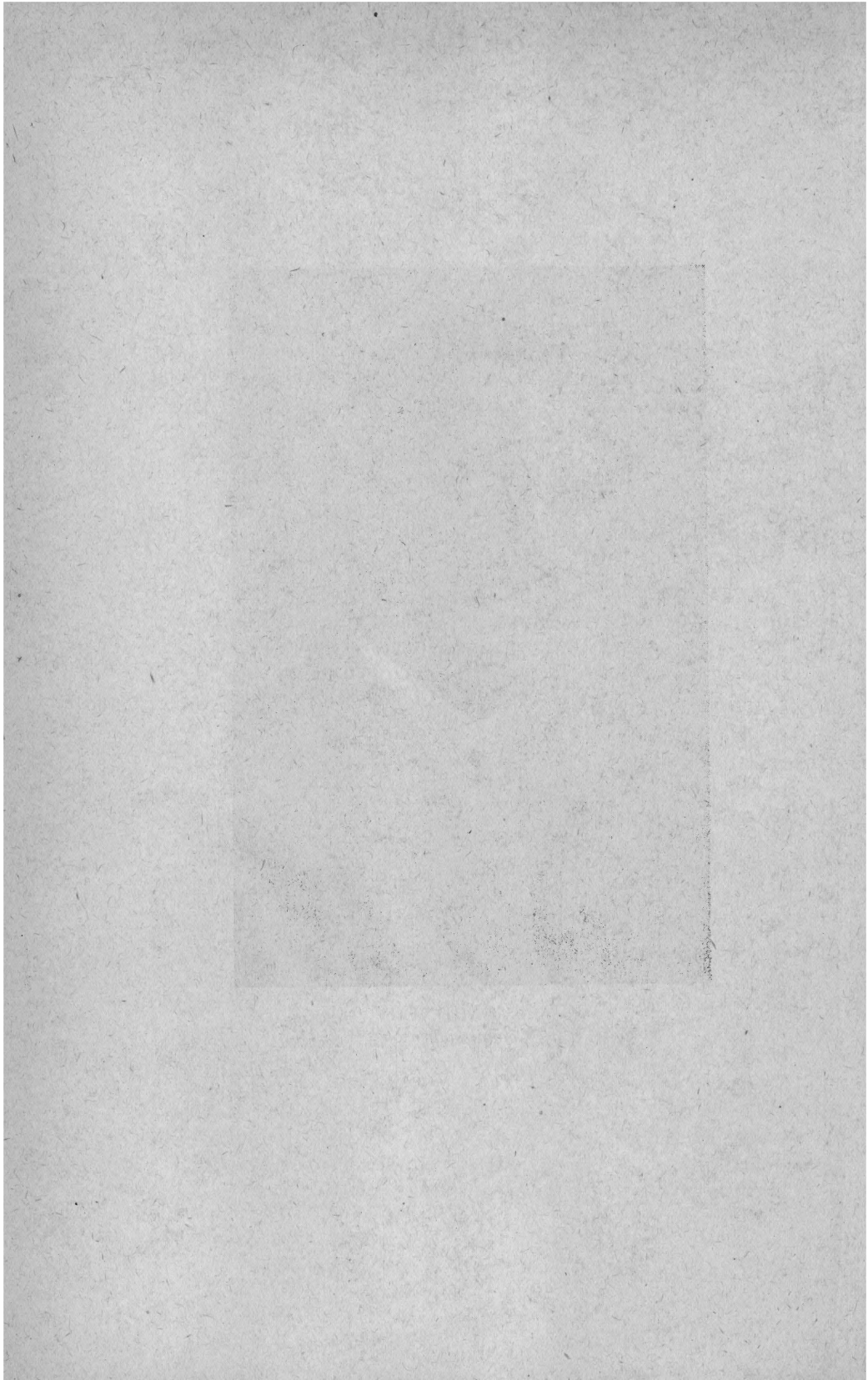
In accordance with the revised statutes, I herewith submit the biennial report of the State Department of Agriculture for the period beginning July 1, 1944, and ending June 30, 1946.

Respectfully yours,

A. K. GARDNER  
*Commissioner*



A. K. GARDNER  
*Commissioner*



## MAINE DEPARTMENT OF AGRICULTURE

*Commissioner*

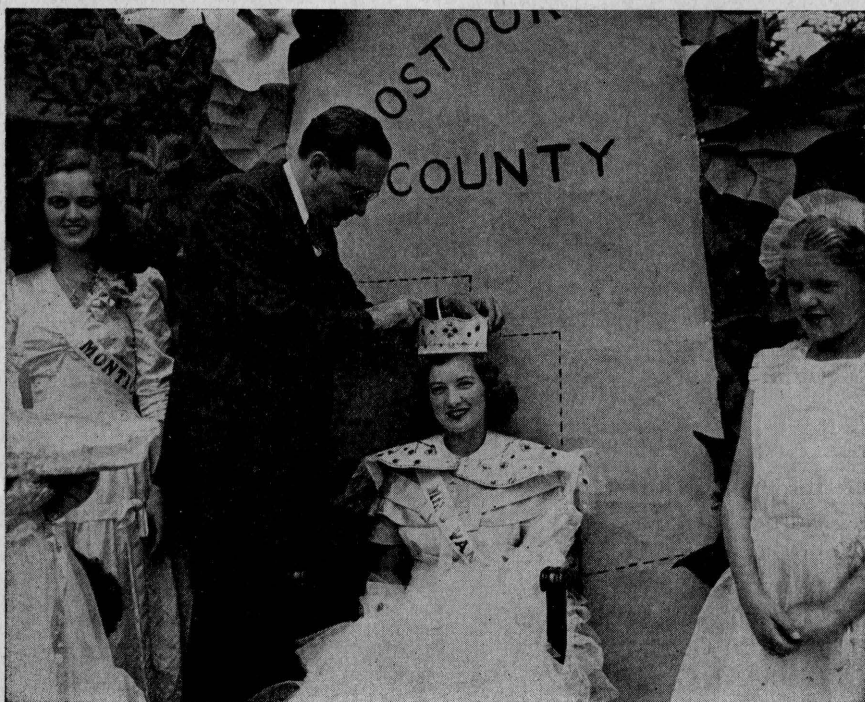
A. K. Gardner, Orono

### STAFF

<i>Chief, Division of Inspection</i>	A. M. G. Soule, Augusta
<i>Chief, Division of Plant Industry</i>	E. L. Newdick, Augusta
<i>Chief, Division of Markets</i>	C. M. White, Augusta
<i>Chief, Division of Animal Industry</i>	Francis G. Buzzell, Fryeburg
<i>Administrative Assistant</i>	H. G. Hawes, Hallowell
<i>Assistant, Division of Markets</i>	George H. Chick, Monmouth
<i>Chief Inspector, Tablestock</i>	Vernon W. Palmer, Caribou
<i>Dairy Inspector</i>	Clayton P. Osgood, Hallowell
<i>Assistant Dairy Inspector</i>	Kenneth B. Johnson, Augusta
<i>Animal Husbandry Specialist</i>	Samuel F. Dorrance, Augusta
<i>Horticulturist</i>	Stanley L. Painter, Monmouth
<i>Assistant Horticulturist</i>	Edward D. Johnson, Monmouth
<i>Deputy Sealer of Weights and Measures</i>	Gardner K. Heath, Augusta
<i>Chief Inspector, Certified Seed</i>	Everett Westin, Caribou
<i>Chief Inspector, Insect Control</i>	Nelson R. Trafton, York Harbor
<i>Office Manager</i>	Agnes M. Williams, Auburn

### CLERKS AND STENOGRAPHERS

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Norma J. Clark	Augusta
Lorena J. Coache	Augusta
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Madeline S. Quinn	Hallowell
Jacqueline A. Rancourt	Hallowell
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Governor Horace A. Hildreth crowns the 1946 potato queen,  
Miss Yvette Gagne of Van Buren.

# Report of the Commissioner of Agriculture

Covering in part the period of conversion from war to peace, the biennium beginning July 1, 1944, and ending June 30, 1946, has brought unusual problems to Maine agriculture. There has been a feed shortage, bringing serious curtailment to our growing poultry industry and some degree of liquidation to our great dairy industry. Through the last years of the war there was a reduction in the quality of certain of our products, a relaxation in the realized need for inspection service in certain commodities. This relaxation must now be relegated to the history of the emergency years, while we answer a demand for quality more insistent than any previously known.

In the fall of 1945, a wheat surplus was predicted, yet by January it had become apparent that demands abroad, plus our own domestic needs, had so exceeded those anticipated that emergency action was necessary.

The Maine Department of Agriculture, early in 1946, conducted surveys of local needs and emphasized those needs in conjunction with other governmental agencies and industry groups. Pertinent action was taken with the Council of New England Governors, with the Northeastern Conference of Commissioners and Secretaries of Agriculture, and with the Maine delegation in Congress. After a long, consistent program of work, assistance was secured but too late to fully protect our poultry and dairy industries. Because of its geographical position, the New England region was handicapped in that its needs conflicted with those of the midwest. It is obvious that we must continue our constant watch upon grain supply.

Other factors facing all agencies dealing with the production and distribution of food, including the intricacies of price control and the operation of black markets, have made the problems of agriculture extremely difficult during this biennium. For example, the importation here of large numbers of western cattle for slaughter, has introduced an added disease control problem. And due in part to the small numbers of hunters during the war, there is increasing crop and livestock damage by wild life, prin-



cipally deer, foxes, and bear. A variety of new and renewed problems have been or must be met by farmers and their agencies.

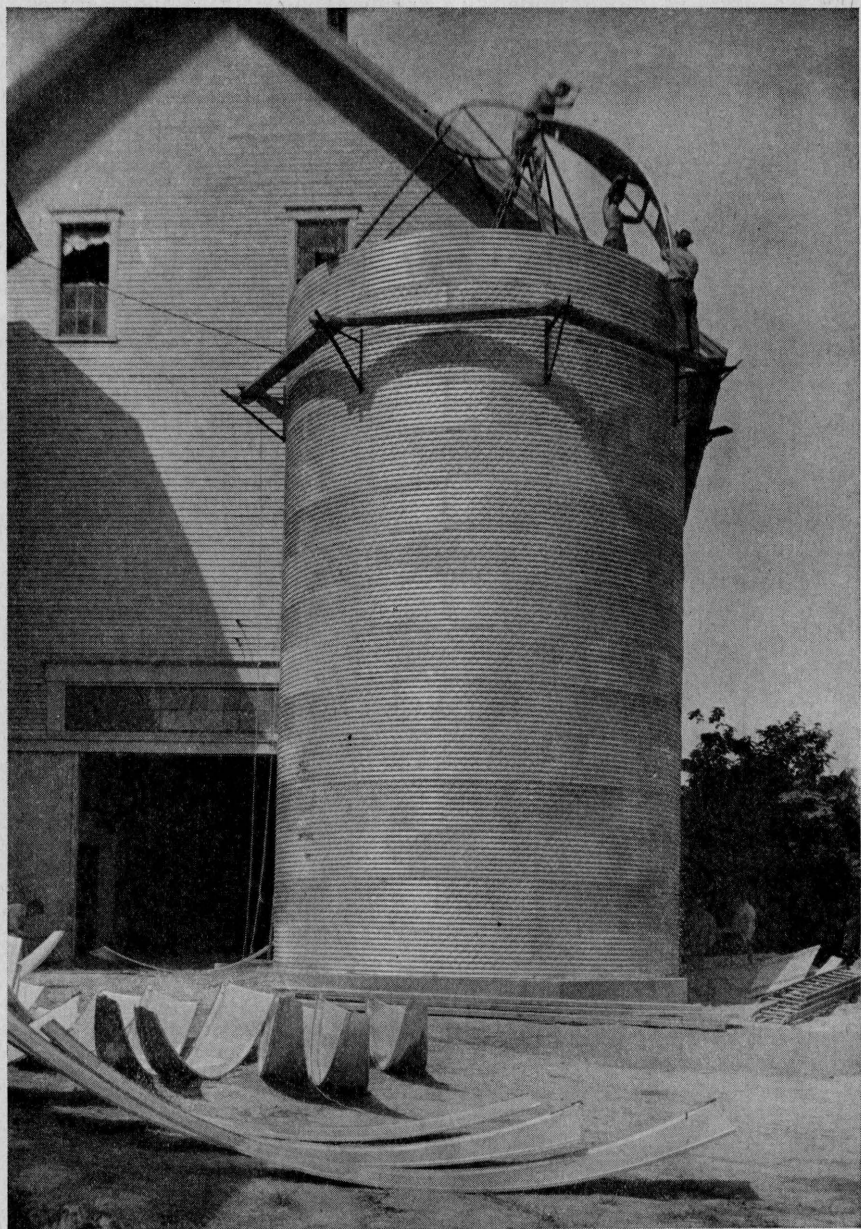
The trend toward consumer-size packages for agricultural products has recently received considerable impetus in Maine through cooperative work of industry groups and concerned agencies, including the State Department of Agriculture. Market tests have been held and some Maine apples will go to the consumer this year in packages designed to both protect and sell the fruit.

Simultaneously, there has been increased interest in the use of the Blue, White and Red State of Maine label on eggs, apples, potatoes, maple syrup, poultry meat and other canned products. A great deal of development work has been done on the new Star Grades for potatoes. These movements indicate Maine's progressive action in answer to the consumer's demand for quality.

Two Maine agricultural industries are occupied with work to increase the disposal of lower grade produce in the manufacture of by-products. Our potato growers have found a new, incomplete answer in the production of alcohol at the recently constructed distillery in Aroostook County at Caribou. The grain shortage gave this phase of their program unexpected impetus. The second industry group actively seeking new by-products for cull utilization, our orchardists, have begun an extensive investigatory program, under which the manufacture of apple juice and essence, and some other products of known value, will be stimulated.

The State Department of Agriculture, working with industry groups in such endeavors as the above, has had the assistance and active cooperation of the other State and Federal agencies and the wholesale and retail food trades. We have likewise enjoyed a superior degree of cooperation from members of the Maine delegation at Washington and from Governor Horace A. Hildreth, the Executive Council and Executive Department. The many specific problems with which we have had to deal have been materially lightened by excellent cooperation from all concerned.

Through funds of the Maine Development Commission, the Department has cooperated with the Department of Animal Husbandry at the University of Maine in the establishment of



The new hay dryer under construction at the University of Maine, a cooperative project made possible through the use of Maine Development Commission funds.

a program to determine the carrying capacity of Maine pastures, to make good stock of a better breed available to the experimental sheep flock, and in the construction of a hay dryer to make it possible to determine whether chopped hay, only partly dried in the field, can be adequately cured in special structures. Additionally with Development Commission funds, cooperative work has been carried on with the Central Maine and Androscoggin Valley artificial breeding associations. Approximately 17 per cent of the dairy cows in Maine are being artificially inseminated, with real effect upon the productive capacity of the heifers of these animals.

### **Bang's Disease**

The Bang's disease program was handicapped during the war period by the shortage of veterinarians for field work. The State found it necessary to employ local practitioners in the place of veterinarians whom the U. S. Bureau of Animal Industry was unable to supply in accordance with their initial agreement. Despite this step, taken to protect the State's investment in control work, and despite repeated appeals to the Federal bureau for assistance, the fall, winter and spring of 1945-46 saw a shortage of trained help which added to an already acute problem. This condition is not by any means restricted to Maine, several states having been forced to employ laymen for necessary field work. Some measure of relief was secured as the biennium came to a close. We are continuing to direct our efforts toward maintenance of the program originally promised us. At the request of the Department, the livestock industry has set up an advisory committee to assist the Division of Animal Industry.

The war labor shortage also introduced certain difficulties in the eradication of bovine tuberculosis and we have had occasional outbreaks of the disease. Up to the present, our eradication methods have been effective in keeping the disease to a minimum.

There is a growing interest in beef cattle in Maine, due in part at least to the development of freezers, both for community and individual use.

At the end of the biennium, we find a substantial decrease in the number of milk distributors in Maine. In the face of a great demand for fluid milk, we have had high labor costs, a shortage of grain, and resulting lowering of production.

Despite equipment shortages, there has been an increase in the number of pasteurizing plants operating in Maine.

The Division of Markets' service in reporting Portland, Bangor, Lewiston and Augusta markets is celebrating its twenty-third anniversary. Its mailing list reached a high figure of 4,400 at the end of 1945, compared to 3,750 subscribers at the end of 1944.

Cooperative work with the U. S. Crop Reporting Service toward the establishment of a blueberry production reporting service in 1946, has been undertaken.

### **State Seed Board**

The 1945 Legislature set up a revolving fund of \$100,000 to be utilized by the newly created State Seed Potato Board in promoting the production and distribution of superior strains of potato seed. The Board, consisting of David D. Daigle, Fort Kent; Guy Hewitt, Mars Hill; Elmer J. Leland, Sangerville; Andrew J. Porter, Sherman Mills; S. A. Wathen, Fort Fairfield; Edwin E. Parkhurst, Presque Isle; was appointed by Governor Hildreth upon recommendation of the former Commissioner of Agriculture, Carl R. Smith. The Commissioner of Agriculture is ex-officio chairman of this Board.

Early in the deliberations, it became apparent that the fund established was not adequate to warrant the purchase and operation of a seed farm by the Board. Instead, a contract was made with Parsons & Allen to grow approximately 100 acres of Irish Cobblers, Green Mountains, Katahdins and Sebagos at the Masardis farm.

E. L. Newdick, Chief of the Division of Plant Industry, has general supervision of the program. Wesley Porter, assisted by Edward Humphrey, has charge of the technical supervision. This year's operation will serve as a test to determine whether such a Board can accomplish the objectives as outlined. A more complete report will be submitted at a later date.

In addition to the program of actually growing seed, the Board undertook the administration of the Foundation Seed Program, formerly carried on by the Maine Agricultural Experiment Station. The two programs represent about 1,000 acres of superior seed planted and cared for under precise agreements and carefully supervised by expert potato technicians.

### **Certified Seed**

The Certified Seed Potato Program, while constantly encountering new problems, moves along reasonably well. The acreage planted trends definitely upward and interest in the purchase of seed passing inspection is maintained at a high level. The competition from other seed producing states is increasing. Naturally every step will be taken to produce better and better Certified Seed as time goes on. Perhaps DDT is the most significant factor in production at the present time, for obviously its use will increase average yields, and if, as hoped, leaf roll and hence net necrosis are eliminated, DDT effectiveness will have been demonstrated in major, as well as various, ways.

### **Super Spuds**

This biennium has seen a substantial increase in the sale of State of Maine trademarked "Super Spuds" and "Chef's Specials." The total shipped neared the 1,000 carload mark in 1945-46, more than doubling the 400 carloads of 1944-45. Shippers of these outstanding packs are beginning to realize upon their extensive preliminary work.

With current acreage, the potato tax is bringing about \$150,000 to advertising and research but there is every indication that even on this basis the present funds are inadequate, that is: inadequate to employ personnel, construct buildings and equipment to do research on handling and pre-packaging, which are longtime problems now becoming increasingly important; inadequate for promotion and advertising, if we are to do necessary work in present and additional markets.

### **Foreign Shipments**

During the 1945-46 season, the needs of Europe and Canada brought about the shipment of 3,500 carloads of Maine potatoes to Belgium, 119 carloads to France, and more than 2,000 carloads to the Canadian provinces. Large potato crops and starch diversion programs have resulted in unusual demands upon the services of our table stock potato inspectors.

## **Poultry Marketing**

A poultry marketing specialist entered the employ of the Department in November, 1945, and in subsequent months has established the framework of a state-wide market program, working along lines suggested by the Maine Poultry Advisory Committee, which was created in 1944. This new program, made possible by the action of the last Legislature in approving additional funds, has proved effective in meeting problems of conversion, despite the unusual handicaps encountered during the grain shortage. Since 1941, Maine's poultry industry has grown steadily and in its increased stature fully warrants an expanded marketing program. Our Division of Markets reports that income to poultry producers from eggs and meat amounted to nearly twenty-three million dollars in 1945.

An active industry committee has also assisted in the revision of the sixteen-year old Maine Egg Laying Test, which is under the supervision of Francis G. Buzzell, chief of the Department's Division of Animal Industry. The 1946-47 Test will include the continuance of the Standard Test, as operated to date. In addition there will be a novel production and broiler test, open to Maine breeders only, and believed to be the only test of its kind. Also open to Maine breeders only, will be a new egg laying contest called the Fair Sample Test. The aim of the new tests is to give our own breeders an opportunity to compete among themselves along lines designed to better serve Maine interests.

## **Gypsy Moth Control**

Two tests of DDT in gypsy moth control have been carried out in Maine this year. The Department purchased a new type of turbine blower, which proved the effectiveness of DDT but itself broke down before we were able to carry out our entire spraying program. An airplane was used in a cooperative test with the U. S. Department of Agriculture on a 40-acre lot of woodland between Mousam Lake and Loon Pond at Acton. Results were excellent.

The attention of the Legislature should be called to the problem presented by the increased infestation of gypsy moths. At present the Department is unable to engage in any adequate spray program, in part because of inability to obtain equipment,

and it seems desirable that study be given to the question of control, involving sums undoubtedly much larger than have been devoted to this work in the past. The chief of the Department's Division of Plant Industry, has given the subject detailed attention in his section of this report.

### **Work with Orchardists**

The seasons of 1945 and 1946 to date have been unfortunate for Maine orchardists, although considerable progressive work, designed to pay rich dividends in future years, has been accomplished. Much time has been expended in the Hardy Stock Program and the Department has cooperated with other agencies in the development of consumer packages along the most modern lines. Studies in market research and crop handling, as well as apple industry by-products, are being carried on.

The Maine Apple Committee of the Maine Pomological Society has been extremely active on behalf of the industry. Its program has included sales promotion, market research and investigation into pre-packaging and now extends to embrace the entire field of crop handling and packaging.

This Department organized the Young Orchardists' Association, which also has a progressive program. Already much has been accomplished by these younger generation farmers, none of them over forty years old.

There has been an increase in the number of bee keepers in Maine, from about 100 in 1942 to more than 900 at the present time. Inspectors have reported a reduction in the number of diseased colonies. There is need of additional inspection work, not provided for by current funds.

Enforcement of the Slaughter House Law, so-called, enacted by the 91st Legislature, has been carried on in the Division of Inspection. It is most gratifying to note the progress made. Good cooperation has been received from 85 percent of the licensees, despite the difficulties naturally encountered in a time of meat shortage. Changes in the law, to maintain complete sanitary control of poultry slaughter, are under discussion between the Department and the Industry.

The Division of Inspection notes better facilities for refrigeration and steps toward the better preparation of refrigerated



food, with the increased sale of quick-freeze products and the growing number of food lockers, five of which are now licensed under the general provisions of the food processing laws.

Commercial use of the many new drugs developed during the war has developed an interesting phase of the cooperative work with the United States Food and Drug Administration.

### Trades Show

The Department's Maine Agricultural Trades Show, suspended during the war years, was revived in the early part of this year and again served to acquaint farmers with developments in the machinery field. Every attempt was made to secure the cooperation of dealers and manufacturers who had something new and practical to offer. As in years past, the Show was held in the National Guard armory at Lewiston.

### Agricultural Societies

Changing conditions permitted the operation of additional agricultural fairs in 1944 and 1945. In the first year of the biennium, 14 were held, as compared to eight in 1943. The year 1945 found 16 fairs in operation, with every prospect that all would open their gates in 1946.

Under an amendment of Chapter 87 of the Public Laws of Maine, which became effective in 1943, state stipends were paid to fairs which would have been open except for war-time restrictions.

A summary of payments is presented as follows:

	1944	1945
No. of Agricultural Societies receiving State Aid . . . . .	26	25
Poultry Societies receiving State Aid . . . . .	2	2
Pomological Society receiving State Aid . . . . .	1	1
	<hr/>	<hr/>
	29	28

A. K. GARDNER  
*Commissioner*

# Report of Division of Animal Industry

July 1, 1944-June 30, 1946

*To Hon. A. K. Gardner, Commissioner of Agriculture:*

The production of milk, meat and eggs was maintained and in some cases increased throughout the State of Maine during the war years but since V-J Day there has been a gradual, steady decline in production on dairy and poultry farms throughout the state. In the case of dairy and beef herds, the last few months have seen an active black market which has resulted in the slaughter of many dairy cows and bred heifers, the loss of which will be felt through lack of milk production in the winter months of 1946-47, and undoubtedly will be felt throughout the next year or two. This shortage has been increased by the lack of grain and high cost and scarcity of competent farm labor, which did not become available as expected at the close of hostilities. The poultry industry has been hit hard, due primarily to the grain shortage, and to a large reduction in the number of flocks kept for hatchery egg production and commercial egg flocks, as well as a decline in the amount of hatching done within Maine.

It has been most unfortunate that these livestock and poultry reductions have occurred, in many towns adding to a complicated picture which not only involves the individual farmers, their towns and counties, but even the prosperity of the state. Many villages, and even cities, are to quite an extent dependent upon the agricultural prosperity of the surrounding communities, and the neglect or dispersal of livestock and poultry, which should be the key around which diversified farming operations are established, generally results in an abandoned farm in any such areas in this or any other state.

Although nationally the livestock population is at a high level, Maine should not curtail its livestock program. We have and will for years to come produce only a percentage of the meat and other livestock products consumed in the state. We enjoy one of the best milk cow markets in this country. The artificial breeding association should result in a much better class of livestock both for Maine farmers and for export.

The ability of our land to produce pasture and roughage should not be overlooked even in the face of a long winter feeding period. Modern machinery and equipment will give the Maine producer a better chance to compete with other areas and his production costs should not be as high as it has been in the past in comparison with the rest of the nation. Studies of grass pasture with beef cattle at present indicate that this livestock enterprise could be profitably adopted in many areas of Maine.

Freedom of disease amongst poultry, and climatic conditions, are favorable to a continued expansion in this field, and the revision of the Maine Egg Laying Test should do much to assist, particularly in broiler egg production.

### **Brucellosis (Bang's Disease)**

The Bang's disease program, which was started in its present form in 1941 in cooperation with the U. S. Bureau of Animal Industry, has been carried on as rapidly as possible during the war years but like all other activities has had its difficulties, particularly relative to the labor situation.

When this program was inaugurated, the United States Bureau of Animal Industry promised to furnish the personnel for the field work. This promise was fulfilled in a fairly satisfactory manner until the late fall of 1945, although previous to that it became necessary for the State to employ local veterinarians to do this work in order to protect the investment already made in herds throughout Maine. The veterinarians in our state have cooperated to the fullest extent allowed by their practices, not only in the control of tuberculosis and brucellosis (Bang's disease), but in other infectious and contagious diseases. Unusual cases of disease have been diagnosed by J. F. Witter, Animal Pathologist at the University of Maine diagnostic laboratory. At present the Division of Animal Industry does not support a diagnostic laboratory and any work of this type has been taken care of by Dr. Witter, but his laboratory is understaffed, although he has done the best he could under existing conditions, and is always most accommodating and cooperative. The establishment of a complete diagnostic laboratory within the state, maintained either by the Division of Animal Industry, or by some other agency, where specimens could be properly examined, would undoubtedly save the State as well as the livestock industry many dollars in disease control work.

This last fiscal year we have paid to local veterinarians about \$30,000 to keep up our work in infected herds. This condition was caused largely by the depletion of the Federal force through the early part of 1946, to the extent that we were paying for the taking of over 80% of the blood samples for several months. However, at the end of the present fiscal year the Federal force has increased from one full-time man in the field to four. This is less than one-half of what should be maintained on the Federal force. We have made every effort to try and correct this condition, but progress has been slow due to the national situation regarding veterinarians, and will undoubtedly prevail for the next two or three years. This seems to be due to the inability of the colleges to graduate veterinarians fast enough to fill the demand, and also because of the fact that for the last few years private practice has been more attractive than government positions. Efforts have been made in some states to have this work done by laymen but this suggestion has not been received favorably.

Area testing by counties was completely finished in the State of Maine in January, 1946, and at the close of the fiscal year 1945-46, we have nine modified accredited counties, as follows: Aroostook, Franklin, Hancock, Knox, Lincoln, Oxford, Piscataquis, Somerset and Washington. In order to qualify as a modified accredited area, the rate of infection cannot exceed 1% of the cattle and 5% of the herds. In the fall of 1944, Piscataquis County was area tested as an area, three years having elapsed since it became a modified accredited county. Although in this county at the time of test for remodification there were some infected herds, the number of new herds found infected over a three-year period was approximately eight out of seven hundred. This is an indication of what we may expect in areas situated such as Piscataquis County where the movement of cattle is not as great as it is in some other counties. Androscoggin, Kennebec, Penobscot, Sagadahoc, and Waldo Counties are badly in need of complete area tests, so that any new herds which have become infected since the last area test might be picked up in these counties. They would undoubtedly become modified accredited areas upon the completion of an area test soon.

The experience gained in combatting this highly infectious disease indicates that frequent testing of infected herds, and

periodical area testing of counties, is the most successful method of eradication. The experience of other states on vaccination programs indicates that the Maine plan is as sound, for our conditions, as any in use today. The national picture on brucellosis (Bang's disease) today is that all the states will adopt programs in the near future and will attempt to stamp out this disease, which is an economic as well as a health problem. Although pasteurized milk, if properly handled, renders milk from infected herds safe for human consumption, yet it does not protect the individuals who come in contact with infected cattle, and in many areas outside this state it has been found that this disease among humans is a real economic factor and a social problem.

The rules and regulations governing the interstate movement of cattle have been revised to conform to the recommendations of the United States Livestock Sanitary Association, and should result in greater protection to Maine against improper importations.

### **Tuberculosis**

Although tuberculosis has been practically eradicated from the cattle in our state, it still remains a problem in many states, even in these United States, and should not be neglected. We have had occasional outbreaks of this disease during the past two years, but have not shown as much increase as some of our neighboring states. Although most of our efforts the past few years have been on brucellosis (Bang's disease), we have tried not to neglect tuberculosis, and in the near future a few counties in Maine should be area tested for tuberculosis to make sure that we are not losing ground to this disease. The program in effect is to gradually clean up individual herds both for brucellosis (Bang's disease) and tuberculosis, and to put the responsibility of keeping them clean onto our herd owners. We have not felt that we should adopt a policy of conducting all of the testing free of charge, a policy which is being adopted in some states.

### **Miscellaneous Diseases**

Hog cholera and swine erysipelas have not shown any appreciable increase in the last two years but the fact still remains that we import far too many feeder pigs for our own good, from an economic as well as a disease control view. Several diseases not common in this area have made their appearance.

Several of the neighboring states have found that Newcastle disease in poultry has spread very rapidly along the eastern seaboard during the war years but at present this disease has not been found in the state of Maine. Anaplasmosis and blackleg, diseases commonly found in the midwestern and central states, have also found their way to the eastern section but have not presented a serious problem here. The importation of cattle for slaughter, which has gradually increased during the war, has been a continued threat to our livestock industry.

### **Proposed Legislation**

I would heartily recommend that the suggestions set forth in the report of the livestock specialist relative to dog license funds be adopted by the 93rd Maine Legislature.

In closing I wish to express my appreciation for the constant help and cooperation extended by you, and to thank the other members of the Department and all others who have contributed to the success of the work of this Division.

Respectfully submitted,

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

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### **The Maine Egg Laying Test**

*To Francis G. Buzzell, Supervisor, Maine Egg Laying Test*

Herewith is submitted a report of the activities of the Maine Egg Laying Test, covering the fiscal years July 1, 1944 to June 30, 1946.

At the close of the Fifteenth Test last year the birds had made the best average records in production ever made in any Maine Test, the average being 226 eggs, good for 234.28 points per bird. This record was surpassed by only one other Test out of the Fourteen U. S. Standard Tests. The winning pen in the Fifteenth Test was again a pen of Rhode Island Reds owned by Harco Orchards Poultry Farm of South Easton, Massachusetts, with a winning score of 3,520 eggs and 3,826.90 points. The high bird in this Test was a Rhode Island Red owned by G. B. Tread-

well of Spencer, Massachusetts. She made one of the highest records ever made at a Maine Test, which was 343 eggs and 372.25 points. This record gave her second place in all United States Standard Tests. We have another pen of Mr. Treadwell's birds in the present Test, and on June 30, 1946, this pen had one bird that was leading all birds in all U. S. Standard Egg Laying Tests.

In the 1945-46 Test, which is operating at the present time in its tenth month, the birds have done very well, considering the feed situation. We have never been out of any feed to date, but feel that the general quality of the feed has been poorer.

In 1946-47 there will be changes in the operation of the Maine Egg Laying Test, in line with the ideas of a committee of representative poultrymen. Two new contests, the Fair Sample Test and the Production and Broiler Quality Test, both open to Maine breeders only, will be run.

The Standard Test will be conducted as in the past with rules in conformity to Council of Official Egg Laying Test rules. The number of pens, however, will be limited to approximately forty pens of thirteen birds each. Entrants already entered in the present year will be given preference in the 1946-47 Test year.

The Fair Sample Test has as its objective the measuring of the performance in the laying house of a representative of the breeder's stock. A test of this nature should be of particular interest to non-pedigree breeders for it overcomes the objections of such breeders in the past that they are unable to compete on an equal basis with the breeder who has pedigree and family records to help him in his selection.

The Production and Broiler Quality Test aims to measure both the production ability of a strain of birds and the broiler qualities of the progeny. Results of this Test will be of interest both to the producer of broilers and the producer of the hatching eggs or chicks from which these broilers come. It should help Maine poultrymen recover some of the market they have been unable to hold in other states. It also will give information which should greatly assist the industry in bettering broiler stock.

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,  
*Superintendent, Maine Egg Laying Test*

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

I submit, herewith, my report for the two year period, July 1, 1944 to June 30, 1946.

The last two years have seen the ending of the war and more or less of a return to normalcy as far as our work is concerned. Within the past six months, one of our former members has returned from the armed forces and we have acquired the services of one other veteran, so that at the present time we have a staff of eight men and one laboratory technician. With this staff, we have been able to do a normal amount of work as is evidenced by the fact that over three thousand samples of milk and cream have been purchased for analysis at the Maine Agricultural Experiment Station.

There has been a further decrease in the number of milk distributors in the state. About eleven hundred distributors are now licensed as compared to twenty-five hundred a number of years ago. There has been some increase in the number of pasteurizing plants and we expect that many other dealers will begin pasteurizing as soon as the equipment is available.

Many producer dealers have gone out of business because of the acute labor condition. When we consider the conditions under which it has been necessary for milk producers and distributors to operate, I think it is no more than fair that we commend them for doing such a good job. Skilled labor simply has not been available for milk plant operation.

We have had more cases of watered milk during the past two years than during any period which I can remember. Also, we have found that milk which is purchased from producers by distributors paying on a flat price has been much lower testing than in the past. All dealers should have a Babcock tester and make

periodic tests of all milk purchased. The present butter shortage has been a contributing factor to this lower testing milk, as many producers have been making their own butter from cream skimmed off the top of the milk.

Last fall we suffered an acute milk shortage and it is expected that the same trouble will develop again in a few months. Never before have milk sales been on so high a level as during the past few years, and demand is still strong.

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

MILK SAMPLES		1944-1945		1945-1946	
Total number of samples . . . . .		1907		2993	
Butter Fat	4% and over . . . . .	1393	73.05%	2078	69.43%
	3.25% to 4% . . . . .	482	25.27%	858	28.67%
	Below standard . . . . .	32	1.68%	57	1.90%
Sediment	Clean . . . . .	548	28.74%	628	20.98%
	Satisfactory . . . . .	840	44.05%	1561	52.16%
	Unsatisfactory . . . . .	519	27.21%	804	26.86%
Standard					
Plate Count	Below 10,000 per cc . . .	290	15.21%	668	22.32%
	10,000 to 25,000 . . . .	342	17.93%	500	16.70%
	25,000 to 50,000 . . . .	197	10.33%	383	12.80%
	50,000 to 100,000 . . . .	394	20.66%	439	14.67%
	100,000 to 200,000 . . . .	273	14.32%	400	13.36%
	200,000 to 300,000 . . . .	115	6.03%	210	7.02%
	300,000 to 400,000 . . . .	64	3.36%	94	3.14%
	400,000 to 500,000 . . . .	42	2.20%	76	2.54%
Over 500,000 . . . . .	190	9.96%	223	7.45%	

Breakdown on samples of pasteurized milk figures included above

Total number of samples		433		744	
Butter Fat	4% and over . . . . .	288	66.51%	439	59.00%
	3.25% to 4% . . . . .	143	33.03%	295	39.65%
	Below standard . . . . .	2	.46%	10	1.35%
Sediment	Clean . . . . .	143	33.03%	221	29.70%
	Satisfactory . . . . .	209	48.27%	399	53.63%
	Unsatisfactory . . . . .	81	18.70%	124	16.67%
Standard					
Plate Count	Below 10,000 per cc . . .	108	24.94%	242	32.53%
	10,000 to 25,000 . . . .	79	18.24%	141	18.95%
	25,000 to 50,000 . . . .	52	12.01%	89	11.96%
	50,000 to 100,000 . . . .	74	17.09%	89	11.96%
	100,000 to 200,000 . . . .	44	10.16%	79	10.62%
	200,000 to 300,000 . . . .	19	4.40%	35	4.70%
	300,000 to 400,000 . . . .	13	3.00%	14	1.88%
	400,000 to 500,000 . . . .	8	1.85%	15	2.02%
	Over 500,000 . . . . .	36	8.31%	40	5.38%
	Underpasteurized . . . . .	13	3.00%	10	1.35%

This table shows, as I have already mentioned, that there has been a drop in the butter fat tests of milk, especially when we go back and compare our figures for 1942-43, when 78.48% of the

milk tested contained over 4% butter fat. This year we find that only 69.43% of the milk samples tested contained over 4% butter fat.

### **Quality Control Laboratory**

We have continued our quality control work in the Bang's disease laboratory, as a service to milk producers and distributors. Samples to a total of 5,871 have been analyzed for bacteria counts and 268 samples have been tested for butter fat. These represent producer samples and samples taken throughout pasteurizing plants, most of them pasteurized in our laboratory before analysis.

This work seems to be of considerable help to the dealers in getting a better quality of milk from the farm. It is particularly needed in this state because there are very few plants large enough to operate laboratories of their own, as is done by larger dealers in other states.

### **Producers' Composite Samples**

We have had one inspector working full time on the check-testing of producers' composite samples in receiving stations and milk plants during the past two years. This work seems to be of considerable importance, especially where the butter fat differential, as paid to producers who sell their milk on a weight and test basis, has been from six to eight cents per each one-tenth of a point above 3.7%.

Producer composite samples to the number of 1,815 have been tested at the end of the fifteen day periods and 5,034 composite samples have been tested after being tested by the plant operator. In addition, 1,269 composite samples were tested with the plant operators.

Our inspector has tested 20 different dump tanks to determine whether or not the milk had been properly mixed and in so doing, made butter fat tests on more than 5,000 samples of milk. One hundred fifty-two inspections have been made in the different plants and recommendations made for the improvement of plant methods.

More attention has been given by this inspector to the methods of sampling and testing of composite samples. We are now recommending that all dump tanks in plants be equipped with

an agitator so that the milk will be thoroughly mixed before sampling. Plant operators are giving much more attention to the care of composite samples than ever before which we feel aids greatly in getting the correct tests for the producers.

### **Farm Inspection**

The Legislature amended chapter 27, making it mandatory that the Commissioner of Agriculture promulgate rules and regulations governing the production, handling and distribution of milk. He has performed this duty and we now have regulations which are practically the same in every way as those used by out-of-state inspectors. We feel that this will do away with much misunderstanding regarding the correct methods of handling milk which we have had in the past. Compliance with these regulations will allow producers to move from Maine markets to Massachusetts markets and vice versa, without finding themselves confronted with different regulations.

More farm inspections are now being made. There are many improvements needed on our dairy farms but due to the fact that equipment has been so scarce and it has been so hard to get needed help, we have been unable to accomplish too much during the war. Another year or two should show a great change.

A survey shows that from 85% to 90% of all producers are now cooling their milk with electricity or gas engines. This has much to do with the high quality of milk being produced at the present time.

### **Court Cases**

Seven persons have been found guilty and fined in municipal courts for selling milk to which water had been added. Two other watered milk cases were settled after civil hearings. It is rather interesting to note that these cases, with one exception, have been of producers selling to dealers who had no facilities whatsoever for testing the milk which they were buying.

Cases such as these show the importance of having proper equipment for testing milk, or for the dealers to use equipment to which they have access. It certainly shows that the dealers should protect themselves on the quality of the milk which they buy.

We have had several court cases on improperly pasteurized milk.

At this time I wish to express my appreciation of your assistance and wise counsel during the past two years. I also wish to express the same appreciation to Commissioner Gardner.

Respectfully,

C. P. OSGOOD  
*Chief Dairy Inspector*

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

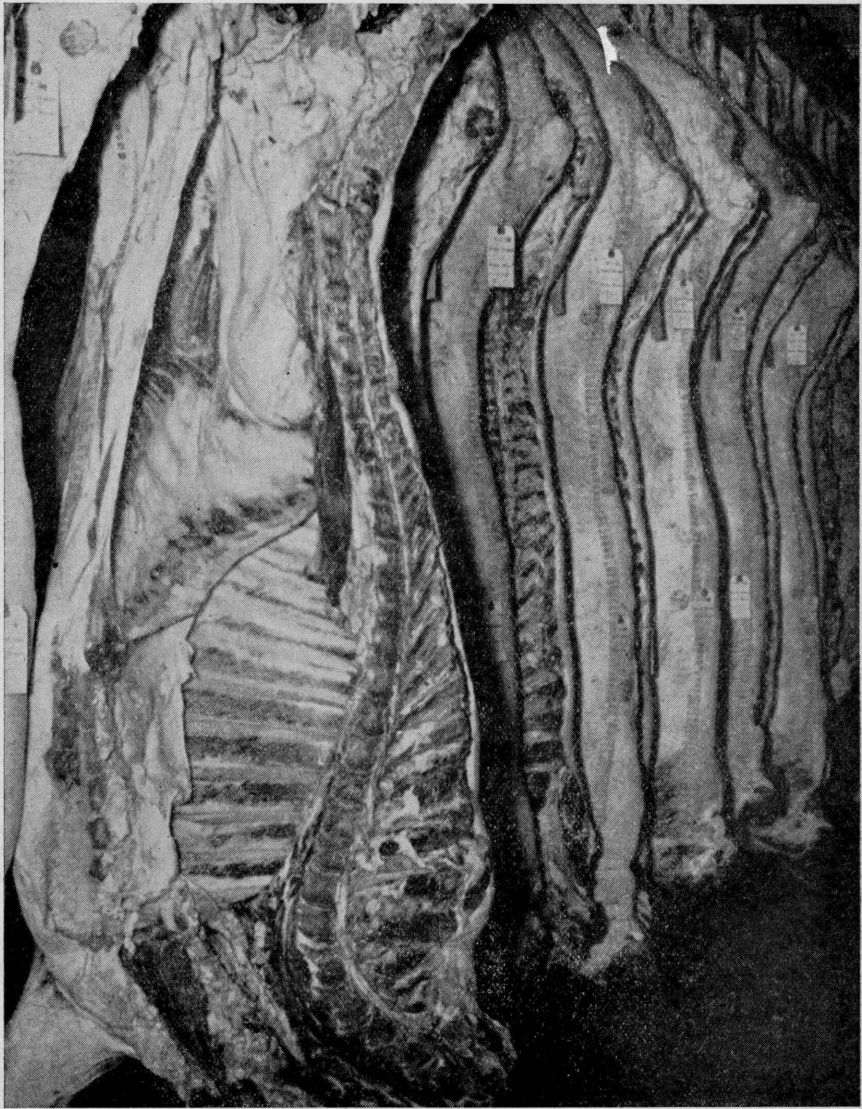
A brief summary of the activities of the Animal Husbandry Specialist is herewith submitted for the fiscal years July 1, 1944 to June 30, 1946.

### **Beef Cattle**

One of the activities new to the division is cooperating with the county agents and club leaders in the state with the objective of making baby beef projects more worth while to our boys and girls. Assistance has been given in the selection of baby beef steers and meetings have been held in different parts of the state for instruction purposes in the feeding and management of baby beef steers.

In Aroostook County, 29 steers have been enrolled in baby beef projects, this being the largest number in recent years. Monthly calls were made on the boys and girls feeding these steers to check on gains and give advice as needed. A fitting and showing demonstration was held in June, 1946, to prepare the boys and girls to fit and show their steers at the sale held annually at Presque Isle Fair. The result of the time spent on this project is shown by the added interest of the boys and girls and their parents, as well as by the showing of better quality steers.

The demand for purebred beef cattle has been quite active the past two years. Three carloads of registered Herefords were imported during this time, two of which went into Aroostook County, and one into Oxford County. A foundation herd of beef Shorthorns and one of Angus were also started in Aroostook the past year. During the past biennium, 14 registered Hereford bulls were brought into the state by different breeders to serve



Maine Baby Beef. With the end of the war and the return of normal agricultural fair activity, there is increased interest in Maine beef.

as herd sires. These are all excellent individuals and carry some of the best blood lines in the country. These importations cannot help but improve the quality of our beef cattle.

### **Sheep**

A foundation demonstration flock of 21 registered Oxfords were presented to the University of Maine by the Maine Development Commission in the spring of 1946. These sheep were selected from five of the leading Oxford flocks in the province of Ontario. The Oxfords are one of the most popular breeds of sheep in the state and a constructive breeding program carried on by the University will be a direct benefit to those interested in this breed. Feeding experiments, as well as parasite control practices, are also being carried on with this flock. In the summer of 1945 a similar project was started with the Future Farmers of Monmouth Academy. Their foundation flock consisted of 15 Dorset registered ewes and a ram.

This division cooperated last year with the Skowhegan Fair Association in putting on a State Shearing Contest. Much interest was shown at this event. This year more classes were necessary to accommodate the shearing competitors.

On April 29 and 30, 1946, we were successful in obtaining the services of a nationally known shearing expert to conduct a shearing school in the state. Two schools were held, one at Togus and one at Vassalboro. Fourteen men took part and it was one of the most successful projects undertaken. Immediate results were obtained in that the shortage of shearers was not as serious this year as in the past.

Cooperation by the Maine Sheep Breeders' Association is still continuing and has been very effective in our parasite control program by making available proper anthelmintics for this purpose.

### **Hogs**

Very little has been done to promote our hog industry. There are opportunities in this line as they have a definite place in our farm livestock picture. Altogether too many hogs are imported into the state for breeding and feeding purposes. We should have breeders of our own supplying this demand.



### **Dog Licensing**

The licensing of dogs in the state has greatly increased in the past two years. The income for the past year amounted to \$83,967, with a deficit of \$1,996 which was added to the state tax of the respective towns and cities by the State Treasurer. Stray dogs are still a serious menace to the poultry and livestock raisers, and the town officials as well as the raisers of poultry and livestock should do everything they can to cooperate with this department in disposing of this type of dog.

All claims for damage to poultry and livestock are paid from the funds received from dog licensing, which for the 1945 fiscal year totaled \$45,100, and for the 1946 fiscal year totaled \$63,-743.14. Also, all bear bounty claims are paid out of the dog licensing fund, which in 1945 fiscal year amounted to \$2,520 and in 1946 fiscal year amounted to \$10,360.

The refunding of unexpended dog license receipts at the end of the fiscal year to the towns and cities in proportion to the amount they have paid in is a requirement of the existing law. As a result we have had to operate part of the year in the red. This is due to the fact that dogs are licensed on a calendar basis (as prescribed by law) and approximately 70% of the receipts are received by the State Treasurer in the months of May and June. Funds unexpended June 30 are pro-rated as a refund to the towns and cities. This leaves approximately 30% of the dog license receipts of that year to pay bills for the first ten months of the new fiscal year. From June to October, inclusive, the majority of the livestock and poultry claims are paid. Therefore, we recommend that an appropriation be set up for this fund in the amount of \$100,000 and that all dog license receipts be credited to this appropriation.

### **Licensing Poultry Dealers**

The number of poultry dealers requesting Maine licenses has steadily increased. During the fiscal year ending 1945, there were 210 licenses issued from this department, and for the fiscal year ending 1946 there were 289 licenses issued. This law has been very helpful to both the poultrymen and the State and has eliminated much misunderstanding. In December, 1945, we received our first complaint in a number of years. A hearing was held here for violation of this law and three licenses were revoked.

### Claims for Livestock and Poultry

**Livestock Damaged by Bear.** Fiscal year ending 1945, the State paid for 664 sheep killed by bear, also 15 other animals, totaling \$7,907.38. Fiscal year ending 1946, the number of sheep killed by bear was 1,154, also 29 other animals, totaling \$15,219.

**Livestock Damaged by Dogs.** Fiscal year ending 1945, the State paid for 699 sheep killed by dogs, also 24 other animals, totaling \$7,755.43. Fiscal year ending 1946, the number of sheep killed was 653, also 45 other animals, totaling \$9,119.90.

**Poultry Damaged by Foxes, etc.** For the fiscal year ending 1945, the poultry loss numbered 24,433, totaling \$29,437.23 paid by the State, and for the fiscal year ending 1946, 28,822 poultry, totaling \$39,834.24 paid by the State.

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*

## Damage to Sheep and Other Animals Paid by State July 1, 1944--June 30, 1945

COUNTY	Sheep	Calves	Heifers	Pigs	Cows	Bulls	Total
BY BEAR —	Aroostook .....	273—\$3006.00	2—\$65.00	2— \$65.00	1— \$35.00	2—\$155.00	
	Franklin .....	125— 1703.00	2— 33.00			1— \$40.00	
	Hancock .....	2— 24.00					
	Oxford .....	20— 235.50		1— 40.00			
	Penobscot .....	116— 1105.20		1— 25.00		1— 135.00	
	Piscataquis .....	10— 71.00					
	Somerset .....	43— 381.00					
	Washington .....	53— 557.00			2— 86.68		
	642—\$7082.70	4—\$98.00	4—\$130.00	3—\$121.68	3—\$290.00	1— \$40.00	657—\$7,762.38
BY BOBCATS —	Aroostook .....	2—\$ 20.00					
	Franklin .....	1— 15.00					
		3—\$ 35.00					
BY FOXES—	Penobscot .....	19—\$ 110.00					19— \$110.00

COUNTY	Sheep	Calves	Heifers	Pigs	Goats	Steers	Horses	Total		
BY DOGS—	Androscoggin .....	15— \$143.50								
	Aroostook .....	297— 2947.43	2—\$15.00							
	Cumberland .....	53— 581.50	1— 20.00	1—\$ 40.00		2—\$ 50.00				
	Franklin .....	27— 280.00								
	Hancock .....	16— 187.00								
	Kennebec .....	15— 162.00	1— 20.00		1— \$6.00					
	Knox .....	33— 418.00								
	Lincoln .....	13— 135.50			2— 60.00	2— 15.00				
	Oxford .....	12— 80.00		1— 50.00						
	Penobscot .....	115— 1086.00		1— 10.00			2—\$100.00			
	Piscataquis .....	1— 10.00								
	Sagadahoc .....	11— 165.00								
	Somerset .....	57— 537.00					1—\$17.00			
	Washington .....	15— 172.50								
	Waldo .....	10— 90.00								
	York .....	9— 116.00		3— 200.00	4— 41.00					
		699—\$7111.43	4—\$55.00	6—\$300.00	7—\$107.00	4—\$ 65.00	2—\$100.00		1—\$17.00	723—\$ 7755.43
										1402—\$15,662.81

**Damage to Sheep and Other Animals Paid by State July 1, 1945--June 30, 1946**

COUNTY	Sheep	Calves	Heifers	Pigs	Cows	Colts	Total
BY BEAR — Aroostook . . . . .	282— \$3255.50	1— \$20.00	3— \$140.00	2— \$90.00			
Franklin . . . . .	250— 3844.00		5— 440.00		2— \$70.00		
Oxford . . . . .	25— 282.00	1— 20.00	4— 275.00			1— \$125.00	
Penobscot . . . . .	131— 1415.20	1— 35.00					
Piscataquis . . . . .	143— 1446.30			1— 20.00			
Somerset . . . . .	252— 2800.50						
Waldo . . . . .	1— 12.00			4— 190.00			
Washington . . . . .	35— 368.50	1— 25.00		4— 190.00			
York . . . . .			3— 135.00				
	1119— \$13,424.00	4— \$100.00	15— \$990.00	7— 300.00	2— \$70.00	1— \$125.00	1148— \$15009.00
BY FOXES—Penobscot . . . . .	35— \$210.00						35— \$210.00

COUNTY	Sheep	Calves	Heifers	Pigs	Cows	Bulls	Total
BY DOGS — Androscoggin . . . . .		1— \$75.00	4— \$175.00	20— \$520.00			
Aroostook . . . . .	233— \$1980.15						
Cumberland . . . . .	19— 209.00		1— 25.00		1— \$200.00	1— \$25.00	
Franklin . . . . .	28— 356.00						
Hancock . . . . .	5— 78.00						
Kennebec . . . . .	37— 357.50			1— 20.00	1— 50.00		
Knox . . . . .	20— 466.00						
Lincoln . . . . .	7— 86.00						
Oxford . . . . .	3— 28.00		2— 85.00		1— 100.00		
Penobscot . . . . .	136— 1738.00		8— 500.00		1— 100.00		
Piscataquis . . . . .	8— 105.00						
Sagadahoc . . . . .	2— 25.00						
Somerset . . . . .	18— 203.00						
Waldo . . . . .	99— 965.00						
Washington . . . . .	13— 148.50						
York . . . . .	25— 400.00		1— 50.00	2— 49.75			
	653— \$7145.15	1— \$75.00	16— \$835.00	23— \$589.75	4— \$450.00	1— \$25.00	698— \$ 9119.90
							1881— \$24,338.90

**Poultry Damage Paid by State---July 1, 1944--June 30, 1945**

COUNTY	Foxes	Dogs	Skunks	Weasels	Coons	Mink	Bobcat	Bear	Total
Androscoggin . . .	1357- \$1408.14	168- \$168.25	72- \$76.50	350- \$52.50		70- \$40.04			2017- \$1,745.43
Aroostook . . . . .	2371- 3754.43	102- 142.25	695- 679.77	39- 10.02	80-\$116.75	110- 111.65			3397- 4,814.87
Cumberland . . . . .	1084- 1200.28	629- 677.14	7- 10.50	253- 148.30	53- 53.00	91- 107.00			2117- 2,196.22
Franklin . . . . .	551- 645.21	30- 51.00	86- 87.75		30- 50.00		11-\$16.50		708- 850.46
Hancock . . . . .	219- 407.40	16- 24.00		40- 30.00	78- 98.75	33- 15.00			386- 575.15
Kennebec . . . . .	2504- 3045.49	200- 265.95	50- 56.00	20- 10.00					2774- 3,377.44
Knox . . . . .	325- 349.85	214- 116.50							539- 466.35
Lincoln . . . . .	901- 1112.80	59- 90.50	32- 16.00	6- 2.16	44- 52.50			125-\$125.00	1167- 1,398.96
Oxford . . . . .	835- 815.49	90- 137.75			68- 44.20		4- 8.00		997- 1,005.44
Penobscot . . . . .	3076- 3846.84	162- 256.10	331- 308.20	6- 4.00	103- 37.90	79- 74.00			3757- 4,527.04
Piscataquis . . . . .	576- 781.95	42- 97.00			139- 49.00	9- 18.00			766- 945.95
Sagadahoc . . . . .	631- 911.10	27- 54.00							658- 965.10
Somerset . . . . .	411- 598.00	19- 24.00	44- 14.00			32- 61.00			506- 697.00
Waldo . . . . .	970- 1195.55	155- 127.30							1125- 1,322.85
Washington . . . . .	32- 37.25	153- 226.15	67- 108.00	252- 44.00	155- 223.08	141- 64.60			800- 703.08
York . . . . .	1553- 2118.01	527- 1119.95	290- 319.00	226- 165.93	123- 123.00				2719- 3,845.89
	17396-\$22227.79	2593-\$3577.84	1674-\$1675.72	1192-\$466.91	873-\$848.18	565-\$491.29	15-\$24.50	125-\$125.00	24433-\$29,437.23

**Poultry Damage Paid by State---July 1, 1945-June 30, 1946**

COUNTY	Foxes	Dogs	Skunks	Weasels	Mink	Coons	Bobcats	Total
Androscoggin . . . . .	967- \$1471.65	154- \$238.89	52- \$74.00	2- \$4.00	4- \$8.00			1179- \$1796.54
Aroostook . . . . .	1562- 2627.30	272- 428.25	677- 803.64	305- 237.25		680- \$1026.50	9- \$18.00	3505- 5140.94
Cumberland . . . . .	1924- 2554.73	256- 501.28		14- 14.00	17- 34.00	45- 53.17		2256- 3157.18
Franklin . . . . .	570- 618.50	10- 20.00	108- 33.00	96- 48.00		146- 226.45	13- 26.25	943- 972.20
Hancock . . . . .	680- 1198.50		53- 106.00		50- 84.25	302- 308.75		1085- 1697.50
Kennebec . . . . .	723- 1051.15	131- 143.60	13- 11.05	51- 51.00				918- 1256.80
Knox . . . . .	1391- 1411.30	28- 34.16				174- 348.00		1593- 1793.46
Lincoln . . . . .	1101- 1581.10	253- 325.25		6- 9.00		311- 579.00		1671- 2494.35
Oxford . . . . .	509- 635.75	92- 111.30	20- 20.00	20- 25.27		146- 219.50	108- 100.00	895- 1111.82
Penobscot . . . . .	2656- 3745.27	72- 34.95	466- 280.00	140- 99.29		221- 318.70		3555- 4478.21
Piscataquis . . . . .	718- 934.45		69- 81.25	13- 26.00	8- 18.00	30- 47.00		838- 1106.70
Sagadahoc . . . . .	712- 1158.77	59- 99.80						771- 1258.57
Somerset . . . . .	1433- 2472.75	126- 80.50	90- 40.00		18- 21.00	35- 57.20		1702- 2671.45
Waldo . . . . .	2681- 4117.06	217- 239.10			39- 57.00			2937- 4413.16
Washington . . . . .	162- 186.30	114- 220.90	104- 110.50	9- 11.25	95- 80.75	590- 711.20		1074- 1320.90
York . . . . .	3344- 3923.76	428- 1016.70				128- 224.00		3900- 5164.46
	21133- \$29688.34	2212- \$3494.68	1652- \$1559.44	656- \$525.06	231- \$303.00	2808- \$4119.47	130- \$144.25	28822- \$39,834.24

# Report of Division of Markets

*To the Hon. A. K. Gardner, Commissioner of Agriculture:*

A year of anxiety and fear lest the war should entail public and personal loss, and a year of hope and frustration that pre-war ways of living would return! Thus, briefly, may the period July 1, 1944 to June 30, 1946 be described. The exact pattern of a mode of life is never the same from one period to another, so we have two extreme views. One that can see good only in the old pattern, another that would discard all that is passed and launch forth into untried and radical ways of living. Somewhere between these extremes is the course that will fit most situations.

Contrary to the expectations of many observers of economic developments, the close of the war did not bring immediately increased quantities of commodities for consumer use. On the contrary, the let-down from war has retarded production of manufactured articles, while the dire needs for food in war-stricken countries has depleted supplies of agricultural products to the point of scarcity. Inflationary trends set in motion by Government financial policies and labor demands have thrown out of balance the returns to portions of our people. The situation has been further aggravated by the slowness of OPA to recognize and correct inequalities. In general, the result has been a strangulation of production at a time when speeded-up production all along the line would have done more than any other one thing to have kept prices at a reasonable level and thereby checked the upward swing in commodity prices.

## **Disposal of Farm Products**

Bulging pocketbooks, at home and starving peoples abroad have taken farm products as soon as raised and asked for more. Official OPA ceiling prices have been received regardless of product quality. This situation will some day come to an end. Growers in Maine are alive to the effect this will have on their business. More and more calls are made for crop and market reports, as the start to proper marketing.

The twenty-three year old service of reporting the markets in Augusta, Bangor, Lewiston, and Portland continues to have a

steady growth. The mailing list numbered 4,400 in December, 1945, compared with 3,750 in December, 1943. The Exchange List is particularly popular and provides the means for thousands of trades in farm supplies, equipment, and livestock.

The crop reports covering the growing season and final yields are continuing in cooperation with the other New England States and the Federal Government. Demands of Federal agencies for statistics to fit their programs has reduced the service on items of interest at the State level. In particular, the annual Crop & Livestock Review material has not been available for the 1944 and 1945 crop years. A conference was held last January with Messrs. Koenig and Stevens of the U. S. Crop Reporting Service and the Marketing Officials of the New England States to restore the former service. It was agreed that costs have advanced, and the States signified a willingness to share in this increase. However, the general opinion was also expressed that increased state contributions would be warranted only if and when quantity and quality of service is restored. Maine is particularly interested in promoting crop reports on blueberries. This fruit has now become a source of sizable income to eastern and southern Maine. Tentative plans are worked out for starting crop reports on this 1946 blueberry season. It is hoped they will materialize.

### **Selling Food**

Outstanding in the Nation's selling of farm products is Maine's merchandising plan. Conceived through the meeting of many ideas of individuals, born from the disasters of hard times, it has proven its worth. The plan itself is simple and consists of four steps.

- (1). Based on uniform quality separations maintained through voluntary official inspection.
- (2). Identified by the copyrighted Blue, White, and Red, State of Maine trademark.
- (3). Merchandised through thoroughly experienced and efficient advertising counsel.
- (4). Financed by means of an industry tax on the basis of volume of commercial sales.

First applied as a well-rounded plan in 1937 to potatoes, the area of distribution has been extended as never before and the



volume increased. To meet consumer preferences, quality separations and appropriate packages have been developed as experience and research have shown the need.

The family of trademarked packages and qualities most used are (a) Super Spuds, 2 1/2 to 3 1/4 inches, U. S. Extra No. 1 in 10-lb. mesh bags with 5 packages in a Master container; (b) Chef's Specials, 3 1/4 to 4 inches, U. S. Extra No. 1 in 50-lb., three ply, Kraft paper bags; (c) Blue, White, and Red, U. S. No. 1, Size A, 2-inch minimum in 15-lb. paper bags; and (d) Blue, White, and Red U. S. No. 1, Size A in 100-lb. burlap bags. It is becoming evident that another addition to this group of trademarked potato packages may fill a consumer choice. Suggestions for this new quality pack will be presented at a public hearing early in July. The tentative thought is for a 3 star, Blue, White, and Red, 15-lb. package of U. S. No. 1 quality, 2 1/4 inch minimum and 4 inch maximum size with 80% 2 1/2 inches or larger. Progress will be watched with interest. A great deal of the credit for the vision to anticipate market preferences and create packages and qualities to meet them belongs to Sturges Dorrance, Advertising Counsel for the Maine Development Commission and the Maine Department of Agriculture.

Companion and quality guardian of all farm product merchandising plans, shipping point inspection on an optional basis has stood the tests of 25 years of service.

### **Shipping Point Inspection Service**

Since the last Biennial Report was issued, the activities of the Shipping Point Inspection of potatoes have been many. Record potato crops of fine quality have been harvested. While there was no Starch Diversion Program until April, 1945, the same number of starch factories and dehydration plants operated in the fall as in the spring of 1944. During the period of September, 1944, to March 30, 1945, over 700,000 bbls. of potatoes were made into starch, and 3500 cars were dehydrated. All dehydrated potatoes were used for shipments to armed forces. At the beginning of April, 1944, and continuing until June 1, 1944, a Starch Diversion Program was put into effect in order to keep low grade potatoes off the market and maintain support prices, which required inspections at all factories. This was on the basis

of U. S. No. 2 grade, which was the requirement to meet Diversion A Specifications, and 96,000 bbls. meeting this requirement were processed.

In the 1944-1945 season, the State of Maine Blue, White, and Red trademarked Super Spuds and Chef's Specials made real progress. It is thought by most shippers that the possibilities of this sizing have a wide field, and shipments of these were made as far west as Chicago and south to Florida.

During the year of 1944-45, 78 inspectors were used on Shipping Point Inspection, making a total of 29,416 inspections from 50,231 cars shipped.

It has been gratifying the country over to see how well the farmers cooperated with the Government in keeping up its large acreages, and in so doing great surpluses occurred. In order for the Government to maintain their support price to the farmers in other states during the early summer of 1945, many cars of potatoes were shipped from New Jersey, New York, and Long Island to Aroostook County to be ground into starch. These shipments continued until digging was under way here in Maine.

Early in September of 1945, the Government's estimate for Maine indicated another record crop. In order to maintain the support price to the farmers, another starch program was put into effect, in which all starch factories, 22 in number in the county participated, including a new one that was built at Fort Kent which began operating in February, 1946. This set-up was a bit different than in previous years. To meet Diversion A Specifications this year the requirements were U. S. No. 2, 1 7/8 inch minimum with no tolerances allowed. Potatoes falling between 1 1/2 inches and just under 1 7/8 inches were on the basis of U. S. No. 1, 1 1/2 inch minimum. The Government allowed 60c per bbl. and the individual starch company, 45c for all stock meeting A specifications.

Again in 1945-46 our shipments of Super Spuds and Chef's Specials were far beyond expectations, and more shippers are securing licenses to pack these consumer-size packages. Shipments totaled nearly 1,000 cars.

History was made again during the summer of 1945 in Aroostook County for at this time it appeared that, in order to take care of the surplus potatoes in Maine, field-run stock would be diverted to the starch factories. This field-run proposition did

not last for any length of time, for after V-E Day in Europe the food situation became very acute, and some countries looked to this country for food. Through the influence of our congressmen and senators in Washington, 3,500 cars of potatoes were shipped to Belgium and 119 cars to France. For the first time in history, our neighbor Canada across the border became short of potatoes and approximately 2,241 cars were exported to that dominion from early November, 1945, to May, 1946. Approximately 1,370,000 bbls. of potatoes, including 85,734 bbls. of field-run stock, were diverted to starch factories. Only one dehydration plant operated and that was at Fort Kent.

Early in the spring of 1946, the largest alcohol potato plant in the United States was opened at Caribou, a new industry to Aroostook County. The plant has a capacity to handle approximately 5,000 bbl. per day and uses the same grade of potatoes as the starch factories. In order to get stock to operate, the price of this quality of potatoes was raised to \$1.15 per barrel and a fleet of trucks was used to collect the low grade potatoes at farm storages and from dealers at trackside. With this new industry coming in, starch factories found it difficult to compete for potatoes, starch became very short, and outside textile industries came in and rented different starch factories. Immediately the price of starch factory potatoes was raised as high as \$2.10 per barrel, the Government still making the subsidy payment of 60c per barrel and the starch factory the balance.

The carlot shipments for this season through June 22, 1946, were 54,286 cars. It should be kept in mind that the ICC advanced the 45,000 minimum pounds loading to 50,000 pounds minimum from around December 15, 1945, until about April 15, 1946, in order to make full use of equipment. To be able to give comprehensive service, 90 inspectors were employed, 26 of these were newly trained men. The record of these loyal inspectors, supported by an equally efficient and loyal office force at Caribou, follows:

Season	No. Cars Inspected	No. Trucks Inspected	No. Warehouse Inspections	Total	Average No. Inspectors per Man per Week
1944-1945	28,740	360	316	29,416	16.4
1945-1946	30,114	523	242	30,879	17.6

The trend toward greater use of 10 and 15-lb. consumer packages was interrupted by war shortages of paper. With returning

supplies in the 1945-1946 season, this trend was resumed as indicated by the following table. The figures were furnished through the courtesy of the Bangor and Aroostook Railroad.

### Carlots by Types of Containers

Container	1942-1943	1943-1944	1944-1945	1945-1946
10 lb.....	1,055	941	737	1,306
15 lb.....	3,837	2,773	2,901	6,282
25 lb.....	14	26	.....	.....
50 lb.....	5,074	6,692	6,285	7,206
75 lb.....	.....	.....	1	.....
100-lb. sacks.....	21,762	32,848	29,292	25,852
100-lb. crates.....	.....	.....	362	1,006
120 lb.....	.....	.....	22	17
125 lb.....	.....	.....	.....	4
150 lb.....	1,513	1,393	480	397
165 lb.....	817	577	221	160
200 lb.....	.....	.....	1	.....
Bulk.....	688	4,594	932	707
Misc.....	319	161	.....	.....
Totals.....	35,079	50,005	41,238	42,933*

\*Figures available through May.

### Cannery Inspection

The trend during the war years has been for food and more food regardless of quality for the most part, with the result that grading work built up over a number of years has suffered somewhat. This is particularly true in our cannery work.

In the summer of 1944, we carried on grading work at five pea canning factories, while in the summer of 1945, these factories discontinued buying on a graded basis.

In the same summer, we inspected beans at nine factories, whereas this number was decreased to five in the summer of 1945. This was due more to a few factories losing acreage on account of the wet spring, so that when it came time to process, they were able to cut out some of their receiving stations where they ordinarily graded.

Our sweet corn inspection work has held up somewhat better than the last two mentioned. We inspected at 22 factories in the summer of 1944 and at 25 factories in 1945. Maine cannerymen are justly proud of the reputation of Maine corn, and we believe that the quality has been better maintained on corn than on some of our other canned products. With the end of the war, we are expecting that cannerymen will gradually go back to a more

careful canning program and will put a great deal more time and effort into canning quality packs than has been the case during the war period. We are ready to train men and carry on the grading as this demand develops in the post war period.

### **Apple Inspection**

In the fall of 1944, Maine had a large apple crop of nearly a million bushels; but the demand, particularly in the fall and early winter, was such that they sold readily in Maine and other eastern markets. However, in the middle of the winter the smaller sizes began to drag, with the result that the Government came in and bought apples to support the price.

During the 1944 season we made 108 inspections. In the fall of 1945, Maine harvested the smallest apple crop of which we have any record. This was due to the disastrous freezes which occurred in the spring of 1945. As a result of this short crop, almost any apple that was satisfactory for consumption would bring the ceiling price, and we did not have a single call for apple inspection during this past year.

### **Inspections for War Shipping Administration**

We have continued to do a lot of inspection work for the War Shipping Administration, although the total this last year was not quite up to the year before. The reason for continued demand for inspections is the tremendous amount of food, livestock, and materials of all kinds which are being shipped to European and other allies to help them out in their efforts to get back on their feet following the disastrous war years.

During the year July 1, 1944 to June 30, 1945, we have made 302 inspections for the War Shipping Administration. This includes fruit and vegetables, eggs, and poultry products combined. The number of inspections made during the year July 1, 1945, to June 30, 1946, was 122. This also includes fruits and vegetables, poultry, and eggs.

We also had this last year 34 hay inspections for the War Shipping Administration, in addition to those listed above. We have carried on some condition inspections, primarily in the Portland market, during the past two years. The first year we inspected five. The year ending June 30, 1946, we made 21.

The experience with this War Shipping inspection work has been very helpful to the Division in that we have been able to train several men who are now qualified to inspect a large number of products, and the skill that we have gained in carrying on this work will be very beneficial to the Division in future years.

### Fresh Egg Law

The Maine Fresh Egg Law has been in effective operation since July, 1937. Regular inspections have been made at stores and other retail outlets and most wholesale establishments. Educational work carried on under this Law in past years has resulted in a steady improvement in grading practices until at present it is possible to say that nearly all eggs offered for sale at retail are graded to conform with the Fresh Egg Law requirements.

OPA regulations listing the weight per dozen for the various sizes but showing no minimum weight per individual egg caused some confusion in many outlets, but this was easily straightened out on the first regular visit of the egg inspector.



Maine eggs join the Blue, White and Red family in 1946. Still going successfully to market under the same banner, are potatoes, canned products including seafood, and another new item, maple syrup.

As in other lines of merchandising, it is becoming increasingly evident that the buying public prefers to purchase eggs that are neatly and attractively packaged. In fact, were it not for a shortage of egg carton material, it is safe to say that practically all eggs would be sold in cartons. Sensing this trend, several larger producers and wholesalers and two large chain store outlets have made provisions to package eggs and have received instructions on candling, grading, and packaging from our egg inspectors.

The State of Maine egg carton bearing the Blue, White, and Red trademark has been in good demand, and as the regulations applying to the trademark require inspection, our egg inspectors are constantly being called upon to train applicants to candle and grade eggs under the provisions of the Fresh Egg Law. Re-checks at stated intervals are made at these establishments. Violations have been quickly corrected and prosecutions through court action have been few. For the most part, violations have been due to inexperienced help not marking containers properly, or the use of second-hand cartons where the original size and quality markings had not been removed.

Eggs from the west and midwest have been conspicuous by their absence the past few years, but at the present time shipments are being received throughout the State. With native eggs scarce and in good demand, due principally to the shortage of feed, these western eggs are being "snapped up" by many retail outlets. This spells trouble, as only under the most favorable conditions of handling and refrigeration will these eggs hold their quality, especially during the hot summer months. Our egg inspectors are checking the stores daily to prevent any stale eggs from reaching the public represented as "Fresh."

In line with our Division policy, sufficient men have received egg inspection training so that in any emergency trained men are available on short notice.

The original allocation of \$5,000 in 1937 for the enforcement of the Fresh Egg Law was sufficient to employ two men full time. Today, salaries and subsistence expenses have doubled, thus reducing the time that can be spent on enforcement work. The situation is being met by staggering this activity with other fee inspection services.

### Personnel

The rise in salaries of all classes has continued steadily since the last report. This situation has been recognized by the Personnel Bureau in approving adjustments recommended by Commissioners Smith and Gardner. The minimum wage for trainees has been raised from \$33.00 per week to \$36.00 and maximum from \$48.00 to \$54.00. It is a credit to the loyalty and confidence of our men and women in the Division that out of 105 seasonal employees, 36 have been with the service from three to twenty-four years. While the lure of high wages has made severe inroads among our experienced men, there are still many who recognize the stability of our service and remain with it. Long experience increases the efficiency and value of such men. It is a wise policy to increase their loyalty through fair salary ranges.

### Marketing Poultry Products

The 1945 Legislature recognized the increasing importance of the poultry industry in Maine and the grave problems of adjustment that must follow the close of hostilities. Wisely, provision was made for the employment of a Poultry Marketing Specialist, available July 1, 1945. In developing a positive program, the poultry industry set up an Advisory Committee to cooperate with the Division of Markets. After several conferences and much thought, Leroy C. Brown, former County Agent in York County, was employed effective November 12, 1945. In his eight months of service, Mr. Brown has laid the groundwork for an effective state-wide marketing program.

In Maine, as in the entire United States, the period 1939 to 1946 saw a tremendous expansion in poultry production. The five-year, pre-war, 1937-1941 average number of layers on January 1 was 1,770,000. On January 1, 1946, we had 2,416,000 or over a 50% increase.

The hatching egg enterprise in the state has continued to expand during the same period. The pullorum testing figures for 1939 showed 356,000 birds tested as compared with 750,000 birds tested in 1945.

The production of commercial broilers has increased from 675,000 in 1939 to 2,000,000 in 1945. Lack of red meats and the demand for poultry products has been responsible for the remark-



able increase, until the industry ranks third in importance among the other agricultural enterprises of the state. In 1945, the total income to poultry producers from meat and products sold approached \$23,000,000.

Maine has certain advantages for poultry raising which if developed warrant a continued growth. Our geographical location at the far corner of the Nation gives an advantage in freedom from disease because there is no traffic of live poultry through our State. Our climate, cold winters and cool summers, is an advantage in the control of certain parasite diseases and helps to increase growth rate of broilers and roasting chickens. Maine, with 33,040 square miles, enables us to scatter our poultry population and avoid the disease menace common in concentrated poultry areas. Too, we have plenty of cheap land to provide proper range conditions for growing stock. All the preceding advantages are particularly important in establishing a breeding flock for production of hatching eggs or baby chicks.

Because of the tremendous expansion in poultry nation-wide, it has seemed advisable to develop programs for Maine that will put us in the best competitive position as related to the other poultry producing states.

Since November, 1945, live poultry has sold as low as 18c. per pound and is now selling in the black market for as much as 12c. over ceiling. In February, large eggs sold for 32c. a dozen and are now selling for black market prices. The demand for hatching eggs has decreased to a record low for this time of year. It is unfavorable such conditions, coupled with the feed shortage, which seriously affect our poultry industry and discourages even the strongest poultrymen. With our problems clearly in mind, a program has been developed for poultry meat, hatching eggs, and market eggs.

Our program on hatching eggs is built around the principle that because of Maine's distance from the broiler area, our hatching eggs must be of superior quality in order to meet the inevitable competition. Hatching egg producers interested in the program will be allowed to enroll providing they meet inspection requirements and are producing a hatching egg that meets certain minimum established standards. Careful supervision will be necessary to have a program that is to be strong and successful.

The poultry meat program is built around quality and the possible payment of a premium for meat birds of Grade A quality

or better. Already there is some interest in a program of this nature to enroll buyers that will pay a premium. However, with price ceilings and the bulk of poultry going through black market channels, it is impossible to inaugurate this program at this time.

The table egg program is well under way. It has been recognized that our Maine markets are more stable than the Boston wholesale market. The net returns to the producer for the local markets are greater. With these facts in mind, along with the need for supplying our year-round as well as summer markets, our program as developed is to provide eggs of grade A quality or better to our local markets. Specifically, our quality table egg program calls for marketing candled, graded, Grade A eggs in a State of Maine trademarked carton. The package is marked as to size, quality, and date with the packer's name on the package. To date, ten large producers and packers are marketing eggs under this program. Over three thousand dozen eggs a week are being marketed under it. There appears to be a tremendous amount of interest in this egg marketing program.

The work of the Poultry Marketing Specialist to date covers the set-up for a continuing service to the poultry industry.

1. Commercial table eggs will be the backbone of the poultry business in Maine.
2. A ten-day period spent in the Del-Mar-Va area clearly revealed opportunities for Maine to merchandise hatching eggs and baby chicks. Maine may capitalize on this market provided she sells vigorous, quick-developing, healthy, and meat type stock.
3. A hatching egg program has been outlined with the poultrymen in an attempt to meet the demands for a superior quality chick. Included in the plan is the production and meat bird test at Highmoor. Several poultrymen have already enrolled in this program.
4. The table egg program for greater attention to local markets is already underway. Eggs candled and graded to U. S. Grade A, Large or Medium size in the State Blue, White, and Red trademarked cartons are being marketed by ten producers and packers.
5. The value of quality eggs in an identified carton has been demonstrated in cooperation with two retailers in Portland. Consumers were given free choice between run-of-the-case

eggs in plain cartons as against candled and graded eggs in State of Maine, Blue, White, and Red trademarked cartons. The trademarked eggs were generally priced 3c above the plain cartons. In a month's trial with 2,486 cartons sold, consumers picked 2 1/2 trademarked containers to 1 of the ungraded plain cartons.

### Miscellaneous

The surge of self-service stores into public favor has shown the urgent need for pre-packing fruits and vegetables. The Pomological Society, Maine Fruit Producers, Extension Service, and our Commissioner have cooperated in investigating the possibilities and limitations of such an activity for Maine. Dr. Charles W. Hauck of Ohio State University, a pioneer in the development of methods and machinery for pre-packaging fruits and vegetables, was secured for three conferences in June. With his practical experience in working out the pre-packaging procedure for ten large super markets in Columbus, the discussions were of the best. Much is yet to be learned, but the trend toward pre-packaging is unmistakable. The Maine Fruit Producers in cooperation with chain and independent stores will test the plan



A study in consumer preferences. Maine apples packed in cellophane bags and four-apple boats compete with bulk apples to show researchers exactly what the buyer wants. Consumers favored modern packaging.

on apples the coming season. The Maine Agricultural Experiment Station will conduct careful research to discover the advantages and pitfalls connected with this merchandising method.

Our cooperative organizations are all in a sound financial position. The Maine Potato Growers has expanded its activities to the implement and fertilizer field with more and better services for its members. The Maine Poultry Cooperative, in company with all legitimate handlers of poultry and eggs, felt the effects of black markets in the 1945 season. When prices hit the OPA ceilings, black marketeers entered the picture in a big way. This resulted in a sharp decline in the volume handled by the Co-op. The storm was weathered, however, and the last year has been much better. The work of this collective agency is a decidedly stabilizing force for all Maine poultrymen.

Educational work is being resumed gradually; lectures, conferences, and publicity are the most common means used. The Chief of the Division has attended 154 meetings of various types with an average attendance of 53 and a total of 8,154 at these meetings. Exhibits were made at five Maine fairs in 1945 and more will be made in 1946.

Cooperative radio broadcasts are featured with the Maine Broadcasting Company and the New England Radio News Service. This work is becoming more effective with the return of Hildreth Hawes to the work of Department publicity.

Cordial cooperative relations are maintained with the USDA in spite of numerous re-organizations of the marketing work in that Department. The Federal Supervisor of Shipping Point Inspection, G. Ray Warren, has made a distinct place for himself in Maine through long years of faithful and conscientious work. Cooperative agreements with Federal agencies which operate as successfully as that for Shipping Point Inspection are distinctly helpful and should be continued. Of great importance is the teamwork enjoyed with our Extension Service, Experiment Station, and other agricultural agencies of the State.

This report is the consolidated effort of the Chief of the Division; Geo. H. Chick, Assistant; Vernon Palmer, Supervising Potato Inspector; Leroy C. Brown, Poultry Marketing Specialist; and R. W. Stubbert, Fresh Egg Inspector.

Respectfully submitted,

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

July 15, 1946

# Report of Division of Plant Industry

To Hon. A. K. Gardner, Commissioner of Agriculture:

The following report of the work of the Division of Plant Industry is hereby submitted. By statute we are charged with the certification of seed potatoes, insect control work, nursery inspection, horticulture and bee inspection.

## Certification of Seed

The following tables indicate the volume of work which has been done during the period between July 1, 1944, and June 30, 1946.

	A. Entered	A. Passed	Cwt. Cert.	Cwt. Sold
1944-1945				
Katahdin.....	18,478	12,632	2,190,475	1,159,916
Cobbler.....	17,628	14,796	2,441,340	1,820,397½
Green Mountain.....	16,340	12,906	2,299,849	584,512
Sebago.....	7,243	5,493	916,149	454,201½
Chippewa.....	5,784	3,811	704,273	135,655
All others.....	2,634	1,791	317,338	88,848½
	<hr/>	<hr/>	<hr/>	<hr/>
	68,107	51,429	8,869,424	4,243,530½
1945-1946				
Katahdin.....	25,621	12,453	2,416,519	1,236,193½
Cobbler.....	17,111	9,534	1,663,432	1,298,374½
Green Mountain.....	14,400	8,797	1,791,999	651,374
Sebago.....	4,849	2,760	486,369	300,376½
Chippewa.....	4,753	2,711	483,011	202,542
All others.....	1,777	779	123,350	45,307½
	<hr/>	<hr/>	<hr/>	<hr/>
	68 511	37 034	6,964,680	3,734,168

An analysis of the above tables is interesting. It is noted that in each of the two seasons about the same acreage was entered for inspection but there was a great difference in the number of acres passed. In 1944 75 per cent of the acres met certification requirements, while in 1945 less than 55 per cent made the grade. This points out to all concerned the effect which high aphid populations have upon the succeeding year's work.

There has been a general increase in the sales of certified seed until the 1945-46 season. It is the usual thing to sell about 50 per cent of the certified seed with the blue tag attached. The balance moves within the state for sale to Table Stock growers who are not particularly concerned with the tag in spite of our

recommendation that everyone should use it. The drop in sales this past year can be accounted for in the Irish Cobbler variety. There were two reasons for the development of this situation. The quality that we sold in the South for planting in the spring of 1945 did not meet with the approval of the growers because of the high virus content. We shipped seed that carried, in some cases, more than 50 per cent leafroll. There is no individual to blame because there is no time during the entire season's handling of the crop when this difficulty can be detected by the inspector. The Maine seed potato industry has this continual threat hanging over it and it is a source of constant worry to those most vitally concerned. The second factor contributing to the drop in sales was that some of the midwestern states had a very large crop of certified Cobblers and offered them for sale last November and December at a price which was about what our growers were receiving for Table Stock. Our people were not interested in selling and when January came it was too late to remedy a situation which had passed. We have every reason to believe that the seed from our competitors did reasonably well in the territory where it was sold and that the Maine growers will again have to look forward to highly competitive conditions.

We again note the tremendous increase in the number of acres of Katahdins. It appears that this variety is destined to be the variety that will represent the largest acreage in the state. Its adaptability to conditions as a whole has been readily recognized and has become increasingly popular each year. The certified seed grower may well ask about the chances for selling seed when there are so many acres being grown. From observations made to date we would say that the packer of high grade Table Stock will use more and more certified seed especially in the "Super Spud" grade. We are glad to get the smaller sizes to pack as certified because our receivers like them better. Seed cutting machines have become a must on many farms and the smaller potatoes are more desirable.

The Sebago seems to be of doubtful position in our industry. The entry this spring is not as high as either of the two years covered by this report. We do not have any comment to make as to why this is true excepting that again we missed the boat on sales in Florida, which is the best market for certified Sebagoes. Our competitors took this business and whether or not we increase

our sales will probably be the guide to future Sebago entries. The Irish Cobbler is still, in spite of everything, the certified potato that we sell the most of outside the state and probably will continue to be for a few years to come.

There was a drop in sales of roughly 1,000 cars between 1944 and 1945. The shipping rush, however, came during the usual period of January, February and March and we wish some plan could be worked out to provide for better distribution of cars to stations from which certified seed is shipped.

There has been a tremendous interest in individual seed plots many of which are early harvested. This is a very healthy condition and I hope our entire potato setup will provide for a program to increase seed plots on the individual farm.

**Potato Diseases.** There has been nothing especially new develop in potato disease work. Our Experiment Station has continued its studies and is in a better position to advise us regarding production of seed than ever before. The thing that I probably should say is that there is no glamour in the particular job that they are doing. We strive to keep as near to the Station staff as possible trying to gather from them any fragments of information that will be helpful to our seed industry. They are continuing the multiplication of desirable seedlings many of which have good points such as resistance to leafroll, late blight, ring rot and allied troubles. Quality has to be considered and there has been no release made that has been proven to be better than the Katahdins so far in its all-around behavior.

In our certification work the diseases that bother us most are leafroll and ring rot. I must repeat that there has been no way for me to decide whether or not we have got to learn to live with ring rot or can eliminate it. This is a problem of the Seed Board which they are working on and it will take time to determine the outcome.

In our inspection work we are learning that Foundation growers will have to tighten up some on their plot work because spindle tuber is creeping in as well as mosaic in some of our fields. Because much of our land is in production we are having more difficulty than usual with volunteers. We are assuming that when the acreage is reduced to somewhere near a proper level that this situation will be reduced to a minimum. It has been

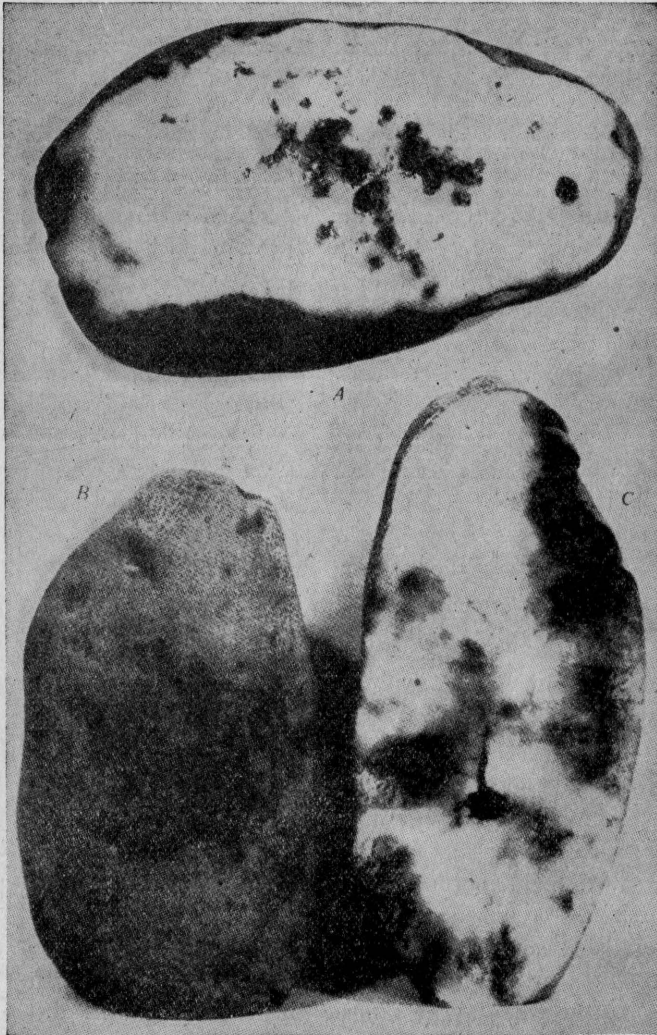
suggested that plots be planted on sod ground. It may be possible to do this within the next few years.

**Nematodes.** Last winter information came to us that the potato rot nematode (*Ditylenchus destructor*) was found on Long Island in a shipment of seed potatoes from Prince Edward Island. We immediately contacted our Experiment Station authorities who knew about nematodes but not this particular one. The fact remains that in 1944 this Division cooperated with the U. S. Department of Agriculture in a nematode survey in Maine. Many of the more common nematodes were located at that time and it was agreed that 70 per cent of the fields in Piscataquis and Penobscot counties were infested with Root Knot nematode and probably 15 per cent of the fields in Aroostook county. There was no evidence whatsoever of damage to the yield. Dr. Chitwood, who made the Aroostook county survey, states that Root Knot nematode can complete its life cycle but this appears to be near the northern limit of its range. It is apparent that none of the nematodes that we have are of a type to be troublesome.

The potato rot nematode, however, is a different matter. This nematode lives over in the soil for many years and is therefore of great concern to us because of the large money value of our potato crop. We were told that only seven cars were found to be infected upon arrival on Long Island. We have every evidence that Canadian authorities are very much disturbed and have been very cooperative with the U. S. Department of Agriculture officials. Through that Department we were able to get the certificate numbers of the growers whose farms were found to be infected in Canada. Upon receipt of this information we advised, through the press, all people who had received shipments of seed from Prince Edward Island to send their tags to this office for checking. We got only about 100 tags which, we think, is 20 per cent of the total shipments to Maine from that source. We had no tags from the infected fields but we did receive a shipment of potatoes in Van Buren from an infected farm but from a field which was not known to be infected. This is too close for comfort and puts it squarely up to our office as to procedure. The facts simply stated are that we buy seed from Prince Edward Island every year; that no one knows whether



or not we have the potato rot nematode in our state. We should consider for our protection whether or not we are to have receiving point inspection in our state for potatoes from Prince Edward Island after September 1, 1946. We have been in contact with Dr. Steiner who is regarded as the leading nematologist in the U. S. Department of Agriculture and must make a decision soon.



Potatoes infected with Potato Rot Nematode

A conference was recently called with railroad officials at which time the mechanics of establishing a receiving point inspection service was discussed. Representatives of the Canadian National Railroad were present and promised their cooperation in a move on our part to protect ourselves.

Idaho describes this injury by saying that the first symptoms observed on the tubers resemble pin-point holes with depressed margins. This gradually enlarges as adjacent tissues are invaded by the rapidly multiplying nematodes, the tissues dry out and the skin checks in ragged cracks. Dry, gray, starchy pockets are found when the tuber is cut or peeled and in these infected areas all stages of the worms from eggs to adults are to be found. Toward the end of the storage season the lesions include the entire tuber. Affected tubers may look something like ring rot and confusion is likely to occur unless careful examination is made and checked under the microscope by some qualified person.

We will keep in touch with all the authorities and try to do the thing which will protect our potato business.

**Florida Test.** The interest in the Florida Test continues to increase. Last winter nearly 85 acres of ground was necessary to plant the number of samples that were sent in. The Experiment Station handled the job in its usual efficient manner and gave us much encouragement when the reports were received. As a result of this information more good seed changed hands than usual within the state. This has resulted in an entry of more than 77,000 acres for inspection which will begin July 1. We predict that a higher percentage than usual will pass the field inspection this particular year. Of the total acreage 36,000 are Katahdins followed by Cobblers which have had a constant entry of about 17,000 for the past two or three seasons. From time to time it is suggested that we test more of our potatoes in Florida before offering them for sale. We can't test them all but it may be necessary to put the Green Mountain in the same group that we have the Chippewa and require a Florida Test which should be announced in the spring of 1947.

There has been the usual criticism of the Florida Test but after checking the situation carefully, I am of the opinion that the test is just as good as the sample that is taken and it is too bad when folks do not take the samples right because it results in

unjust criticism of the test as a whole. There is no way for the Experiment Station to determine whether or not the sample was taken correctly. The only thing that they can do is to read the disease content in the sample that is sent and that is all that they can be held responsible for. Taking samples from the part of the field where plants die early does not result in getting a representative sample. Eight fields on one farm were dug and the potatoes were stored as all coming from one field. The sample was sent to Florida from the first field dug. It may have been ten days or two weeks between the start and finish of digging. This all resulted in a poor sample. The Florida Test got the criticism but the farmer was to blame. Unless growers collect these samples as they are told, the time will soon arrive when in addition to the Florida Test buyers will have to select the man with whom they want to do business.

**State Seed Potato Board.** The last Legislature passed an act setting up a Seed Potato Board. Officially it is Chapter 153 of the Public Laws of 1945. The first section states that, "There is hereby established in the Department of Agriculture of this State a Seed Potato Board which shall consist of seven members. The State Commissioner of Agriculture shall be a member of the Board and its chairman. The remaining six members shall be appointed by the Governor with the advice and consent of the council."

The organization meeting of the Board was held April 5, 1945, and the following members were present and sworn in by Governor Hildreth: Carl R. Smith Augusta, Chairman; S. A. Wathen, Fort Fairfield; Guy Hewitt, Mars Hill; David Daigle, Fort Kent; Andrew Porter, Sherman Mills; Elmer J. Leland, Sangerville. Edwin E. Parkhurst of Presque Isle was present on invitation of Governor and Council. Mr. Parkhurst was later confirmed as a member of the Board. Dr. Fred Griffiee and Dr. Geddes Simpson of the Maine Agricultural Experiment Station were present in an advisory capacity and took part in discussing the problems facing the Board. Milton Allen, Agricultural Secretary of the New England Council had previously been invited to meet with us. At subsequent meetings Mr. Wesley F. Porter of Presque Isle was hired as Program Director, Mr. Edward C. Humphrey of Presque Isle as his Assistant and E. L. Newdick of Augusta was elected Secretary of the Board.

The Aroostook County Farm Bureau under the leadership of President Hussey really sponsored the measure for the setting up of such a Board. The act was broad in its scope and gave the Board power and authority to produce or cause to be produced such acreages of Foundation Seed potatoes as it may from time to time determine for distribution and sale to the potato growers of this state. There was appropriated the sum of \$100,000 from the unappropriated surplus of the general fund to carry out the terms and purposes of the act. The general thinking of the Board was that a Feeder Farm so-called which should provide for a flow of disease-free seed into the potato industry through Foundation growers should be established. The problem has been studied in all its phases and as a brief summary of what has been accomplished the past 15 months we would suggest that we have not acquired a Feeder Farm because a farm such as we desire cannot be purchased and established for the \$100,000 mentioned in the bill, especially with the restrictions placed upon the use of the money. This matter must be corrected at a subsequent session of the Legislature. The Board has, however, taken over the Foundation Seed program from the Experiment Station; has taken steps to increase the acreage in the Foundation program; has contracted for 8,000 to 10,000 barrels of superior Foundation Seed and will try to establish a program for distributing this seed which will result in an increase of the seed rather than having the good seed lose its identity as it has in the past. There will be criticism of the Board because it does not move faster but its problem is to be concerned only with the best seed that can be produced, free from ring rot and practically free from virus diseases. To provide for distribution of the same where it will do the most good and at the same time proceed economically and return to the State as much of the money as it possibly can and do the job. The men on the Board are all seed men. They are all seed minded and if they cannot formulate a plan which will result in the shipment of better seed out of Maine, I do not at the moment think of anyone more qualified to do the job. There have been numerous meetings held. The members get no salary and for the most part have not bothered to even file an expense account.

The Board is hopeful that the general use of DDT may result in a reduction in the aphid population which indirectly would

result in a lower virus count. We know that more DDT will be used this summer than ever before but the disease count results cannot be known until the Florida Test or perhaps not until another crop season. It is the considered opinion of the Seed Board that they will not spend money for the sake of spending it but will have to be shown a definite program that will bring results. There are those who question whether or not the Board can be helpful. Our answer is that the industry may be confident that the situation is being carefully analyzed for opportunities.

**Dumping of Waste Potatoes.** Chapter 27, Section 128 was amended by the last Legislature so that upon complaint the Department would be obliged to notify the offending person, firm, or corporation to take care of the dump, and on his failure to act, the Department will take measures to destroy the waste and the expense of such action must be borne by the offending person.

No appropriation was made to carry out the act which makes the program inoperative. We have not had a bad late blight year since the law was put on the books, and therefore, have not had a real test. I would like to suggest that until provision is made for certain areas within a town where potatoes may be dumped that such a law is almost impossible to enforce.

The County Agents have done a good job through education by calling attention to dump piles indicating that practically all of the late blight may be traced to these sources. There are many people who think the industry as a whole is not concerned enough with this matter and that as soon as we have been hurt it will become of more importance. No other single trouble can cost us so much money in so short a time as late blight, and some day we may develop a program that will be more helpful.

**Summary.** It is becoming more necessary that we make an increased effort to get someone to represent us in the areas where we are selling seed potatoes. We are leaving the way open for unfavorable criticism from competitors and no one is concerned but a representative from Maine to tell the truth about our product and to correct any misapprehension that may exist regarding Maine seed. We have not been able up to this time to find the man but hope that we may be successful soon.

Suggest special consideration be given to thinking about putting Green Mountains in the Florida Test following the 1947 crop.

This Division is far from being satisfied with the type of seed that we are putting out but perhaps it is well that we realize the situation and strive by every means available to improve our setup and do the job better each year.

### **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 European Corn Borer. Because of what appears to be unusual interest and new legislation, we are calling your attention to the following two rather important topics.

**Turbine Blower.** The last Annual Report of the Bureau of Entomology and Plant Quarantine on gypsy moth work describes a new method of spraying and dusting. This gave in detail the development of a method for the dispersal of insecticide mixtures by a blower. It was learned that mixtures more than 100 times stronger than those ordinarily used in spraying could be applied by a new method developed by the United States Department of Agriculture in cooperation with State agencies. The mixtures were dispersed by a blower in a form of finely atomized material that covers large spaces with small volumes of liquid.

This Department was particularly concerned because the gypsy moth infestation in southern and western Maine has increased tremendously and our people are looking for any new method of control that presents itself.

With this thought in mind we ordered a Turbine Blower and gave it a good test in several different areas, the town of York, at Kennebunk Pond, Long Beach, Sebago Lake, town of Raymond, Camp Hinds, and a few other places. The machine was designed to atomize and distribute a highly toxic spray concentrate and we used DDT in the form of Gesarol S-30 manufactured by the Geigy Company, pioneers in DDT sales in this country. The principle of the machine is sound, but apparently it was put on the market before it was ready. After using it 38 hours of actual spraying we had to give up for the current season. Spraying at the rate of 1 pound of DDT to the acre, and in some cases

less, we had fine control of gypsy moth larvae that were feeding. The total over-all weight of the machine was around 1000 pounds because we had a 24 H.P. water-cooled engine. It is our belief that this atomizer is going to replace the oldtime spraying machines, and as soon as the design has been corrected to withstand the heavy work which is imposed upon the equipment it will be successful. We recommend to municipalities, park commissions, and townspeople who are contemplating the purchase of equipment for insect control in their respective areas that they investigate the Turbine sprayer.

It is a question whether or not the state can be expected to carry out insect control on private property wherever located. There are those who indicate that because there are so many private properties where nothing is done that it should be the function of the state. Time is the essence of control and each community, by owning its own equipment, can do the job best when it ought to be done. We are not sure that we could set up a control program which would be effective if sufficient money were made available. There is a vast difference between extermination and control. The state government tires of continually appropriating money for control but is very quick to help when extermination can be accomplished. It is probably the function of our office to present this picture to the next Legislature in order that they may get competent testimony from many witnesses regarding the situation. All those who have written this Department about the difficulty they are meeting in and about their homes should be given an opportunity to be heard and let the Legislature decide on the policy to be pursued.

Because of the breakdown of the equipment we were unable to keep our cooperative agreement with many towns this year, a situation which we regret but couldn't foresee. Many towns would like to make cooperative agreements with the state but it is a question whether or not the state ought to be in this type of work or should we remain as we are now, in a position to seek out and disseminate the best information there is available on control methods to point out where the largest infestations exist, and to be generally helpful to those who ask for our counsel and advice.

**European Corn Borer.** For many years this Division has tried to enforce fall plowing and clean-up work as a means to

control the European Corn Borer. A few years ago it seemed as though some measure of success had been obtained, but during the war there was a let-down; first because manpower was not available; and second, the question arose as to the advisability of the state accepting police duty for a long-time period in the control of the borer. Our thinking was to eventually drop the program for the reasons stated. However, in 1945 the Legislature passed an act imposing a tax on sweet corn, this money to be used for the suppression of the borer. A tax was levied and imposed at the rate of 30 cents per ton on all sweet corn in the husk grown under contract in the state in the year of 1945 for commercial canning and freezing. This made available a sum of about \$9,000 which was spent for labor to enforce fall plowing. A committee was established to determine the amount of tax to be levied each year after 1945. The result of last year's work has yet to be determined, but it is our belief that the borer is widespread throughout our corn growing area and that some means other than fall plowing will have to be employed in order to get the best results.

At the request of the Corn Borer Committee of the Maine Cannery Association a sum of money not to exceed \$3,000 out of next year's commitments has been set aside for research work by the Maine Agricultural Experiment Station. It is hoped that a machine and material will be developed so that a spray program will show a reduction in the borer population. The Commissioner of Agriculture has ample authority to enact rules and regulations for the control of the borer but it is not a popular law. Farmers do not like to be told when they must plow or how they must plow. Our inspectors are not too welcome on many farms, and in 27 cases we had to resort to court proceedings to get the job done.

In addition to our home situation we have felt obliged to quarantine Carroll County, New Hampshire, against bringing corn into Maine except under permit. We didn't get complete cooperation in that area and have refused to accept corn from 68 acres of land in Conway, New Hampshire. This has caused a bad feeling with our sister State, and it is likely that by the time the next Legislature meets we will have sufficient information to ask for a change in the Law. It would almost seem as though we would have to depend upon insecticide control in the field



and factory methods to handle this problem rather than fall plowing and cleanup which is difficult to enforce and in many cases not good soil conservation practice.

**Varied Activities.** In addition to the regular duties the Division has tried to be helpful in matters of Grange, Service Club meetings, radio programs, attendance at fairs, working with Garden Clubs and in general meet the demands of the public as they came. The Agricultural Trades Show reopened last January after being closed for five years; was, we believe, a successful event and we hope for its continuance in 1947.

Our employees have been loyal, we believe, and for the most part have turned in a good day's work which is essential to the efficiency of an organization.

Again I want to thank the Division of Markets for cooperating with us in the matter of manpower exchange because they have been very helpful to us. It is difficult to exchange men and it is only with a thorough understanding that it can be profitably and quickly done.

I wish to thank you for the support which you have given me in helping to solve problems incidental to the work of my Division. I still maintain that the job is too big for one man and it is very helpful to have your understanding of potatoes to guide me. I wish to express my thanks to all of my associates, to the Extension Service and all those interested in Maine Agriculture.

Respectfully submitted,

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

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*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, 1944, to July 1, 1946.

The Bureau is charged with the inspection of all nursery stock offered for sale in this state whether grown here or imported from outside the state, and is also charged with the inspection of all bees in the state to prevent the spread of bee diseases.

The shortage of nursery stock has continued and has further reduced the number of inspections required during the previous

two years to maintain good quality stock that was disease free. We were forced to maintain an especially strict inspection of strawberry plants because of the appearance of a disease known as Red Stele, which affects only strawberry plants. Although Red Stele has been known for 15 years in other sections of the country, it was unknown here until the spring of 1945. This disease is soil borne and with proper weather conditions can destroy entire plantings of berries. Strict fall and spring inspections have eliminated diseased beds from certification.

Table No. 1 gives the number of nursery licenses issued in 1944 and 1945 along with the number issued to July 1, 1946.

**Table No. 1**

**Nursery Licenses Issued**

<i>Year</i>	<i>Fee</i>	<i>No Fee</i>	<i>Total</i>
1944	441	190	631
1945	434	190	624
1946 (to July 1)	425	169	594

(This table shows a steady decline in the number of licenses issued and a marked decline from the 1941 figure of 715 licenses. The decline is due to war conditions which have caused a shortage of nursery stock and have forced a number of persons out of business.)

**Table No. 2**

**Distribution of Nurseryman's Licenses**

Florists and Nurserymen . . . . .	250
Outdoor Flower Growers . . . . .	196
Stores Selling Plants . . . . .	99
Fruit Plant Growers . . . . .	30
Nursery Agents . . . . .	49
	<hr/>
Total Licenses Issued in 1945 . . . . .	624

(In Table No. 2 an attempt is made to break down the licenses issued into various classes. The ratio remains about constant from year to year.)

The total figure for area under glass remains at about the same figure as it was two years ago. The construction of many new units of moderate size offset the discontinuance of a number of older establishments including the largest range in the state, Strout's of Biddeford, established in 1895 and closed in the fall of 1945. During its period of existence Strout's was widely known as an originator of many new varieties of carnations, the outstanding introduction being "Maine Sunshine," which for many years was the standard yellow variety in the country.

Table No. 3 gives the summary of our bee inspection work over the past four years. Without some explanation this table appears to show no great progress; however, consideration of several factors shows that marked improvement has been made.

When our work first started our list of beekeepers in Maine numbered less than 100. Today our list has increased to over 900 beekeepers. Needless to say, with such a large area as the State of Maine and with only one inspector except for six weeks during the summer of 1945 when two inspectors were employed, progress has been very slow. We now have covered the entire state and some sections have been inspected twice.

**Table No. 3**  
**Bee Inspection**

<i>Year</i>	<i>Number Calls</i>	<i>No. Colonies Inspected</i>	<i>No. Colonies Diseased.</i>	<i>Percent Diseased</i>
1942	149	1334	47	3.5
1943	169	1615	30	2.0
1944	191	1333	47	3.5
1945	291	2261	33	1.4

In 1942 and in 1944 new territory was inspected but in 1943 and 1945 a large percentage of territory that was previously inspected was included and a very marked reduction of diseased colonies was noted. For example, York County serves very well. In the summer of 1942 this county was inspected and 5.3% disease was found. In 1943, no inspection was made of this area as an attempt was made by our limited force to include additional area. Inspection was made of this area in 1944 and very little reduction was noted over the previous work. The number

of infected colonies remained at 5%. This inspection was followed by a special inspection in 1945 and the percentage of infected colonies had fallen to 1.5%, or, translated in other terms, only four colonies of diseased bees out of 272 examined. These four colonies were all found in one apiary.

I believe that if funds were made available to provide for at least two inspectors, we could maintain a better service and keep disease to a very small percentage.

These recommendations are made because bees can be inspected only four or five months out of the year. Bees are kept over the entire area of Maine, making it necessary to travel long distances between calls.



Rockwood Berry of Livermore Falls, President of the new Young Orchardists' Association, sponsored by the Maine Department of Agriculture, instructs the 1946 Apple Annie in the art of grading Maine apples.

## Work with Fruit Growers

We continued our support of the State Apple Tree Pool, locating and inspecting all the stock bought by the growers through this source of supply for planting in the spring of 1945. At the request of the fruit growers, we took over the entire operation of the Pool and conducted it for the 1946 planting season.

The entire staff has spent a great deal of time in the development of the Hardy Stock Program. We have assisted in planting and operating the nursery, in top working orchards already planted to these stocks, and in the training of crews to carry on the top working of other orchards planted throughout the state. In the spring of 1946 we assumed the operational management of the nursery up to budding time.

We have been very active in the development of a new consumer apple package. In cooperation with other agencies, a new package containing six apples and over-wrapped with cellophane was developed and put on the market in 1945. Further studies will be conducted along this line in order that the apples grown in this state will reach our consumers in the best condition possible.

We have been instrumental in the forming of a new fruit growers organization known as the Young Orchardists' Association. The requirements for membership in this organization are two: namely, a person must be actually engaged in the orchard business and he must be not over 40 years of age. The present membership is between 35 and 40 and all offices are held by persons who have no interest other than orcharding.

The past two years have been difficult ones for the fruit growers. In 1945 unseasonal weather in March forced the orchards into early bloom resulting in the almost complete loss of the apple crop by late freezes. The loss of crop was followed by weather in which it was extremely difficult to control scab; and due to inadequate spray programs, many orchards were practically defoliated and others lost their leaves completely. This season, due to weather conditions, we are facing a more difficult period of scab control than last year, which at the present time promises to be a factor in reducing the crop.

### The Maine Leaf

The monthly release of the newsletter, "The Maine Leaf," has been continued by the Assistant Horticulturist and serves as a medium for the dissemination of pertinent information concern-

ing various problems in production, disease and insect control, and marketing. At the same time it serves as a means of contact between members of the trade.

The Assistant Horticulturist has continued to give demonstrations in the preparation of Christmas decorations and in the care of house plants as requested by the Farm Bureaus and Garden Clubs. The demonstrations in Christmas decorations were given to teach methods in preparing evergreens, not only for the home but for market as an added income to many farms. Twenty-two such demonstrations were conducted each fall.

These meetings have been in addition to many talks on the radio, as well as at Granges, Garden Clubs, Fruit Growers meetings, and to other organizations by the Horticulturist and his Assistant.

Assistance has been given to many Victory Gardeners in the production of vegetables and the control of insects and diseases attacking such gardens.

We have continued our assistance to those individuals and organizations who wished to improve their home grounds, parks, public buildings, or war memorials. 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  
*State Horticulturist*

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

I herewith submit a summary of the work carried on by the gypsy and brown-tail moth and European Corn Borer Control Division from July 1, 1944, to July 1, 1946.

**European Corn Borer.** During July and the first fifteen days of August of each year a survey of early market garden corn

was made in York, Cumberland, Androscoggin, and Oxford Counties to determine the degree and spread of the European corn borer in early corn. Hundreds of corn fields were surveyed and reports tabulated and are on file at the Augusta office. While making this survey our inspectors tried to impress on the corn growers the importance of cutting out and burning infested corn stalks while the borers are in their early stage, also the importance of clean plowing in the fall and cutting and burning of weeds along hedgerows and in barnyards. Corn which was on sale at roadside stands and in markets was examined and market men were instructed to pick out and burn all corn ears showing infestation. Several hundred dozen ears of infested corn from outside the state was seized and destroyed and those responsible for transporting it were warned that a second offence meant court action.

**Canning Corn.** During the canning seasons thirty-six corn shops were engaged in canning corn. In 1944, 13,108 acres of canning corn was grown and in 1945, 12,645 acres. Starting about the fifteenth of August each year, our inspectors made a survey of hundreds of acres of this corn to determine the degree of infestation and spread of the borer. Survey records were tabulated and are on file at the Augusta office. While making this survey our inspectors contacted the growers and gave them the same instructions in regard to control methods as was given the early market garden corn growers.

During the season of 1944, 277 acres and the season of 1945, 279 acres of this corn was grown over in the state of New Hampshire. Every acre of this corn had to be gone over twice each year. Growers were instructed and had to cut out infested corn plants before a permit was issued to allow them to bring the corn into the State of Maine. By following this method we feel that the New Hampshire grown corn is practically as free from borers as is the Maine grown corn.

**Fall Plowing.** Due to the shortage of labor, gasoline and automobile tires during the season of 1944, we were forced to curtail our fall plowing campaign which we usually start about the middle of October. This season only six towns in Somerset County, in what we considered the most heavily infested area in the state, were worked. We accomplished a fairly good clean-

up in those towns and only had ten court cases. These were settled by the respondents paying a small fine and costs of court.

In 1945 we carried on a very extensive fall plowing campaign which covered practically all of the canning corn areas. On this work we hired local men wherever possible and we feel that very satisfactory results were obtained. Only twenty-seven cases were brought into court.

**Gypsy moth.** Starting July 1, 1944, at the request of the U. S. D. A., a survey was made of thirty-four towns in York, Cumberland, Oxford, Androscoggin, Sagadahoc and Lincoln Counties to get the acreage and degree of defoliation in woodland caused by the gypsy moth. A total of 21,221 acres showed defoliation of from twenty-five to one hundred per cent.

During 1945 eighty-six towns were surveyed in the same counties. In them 210,881 acres of woodland showed defoliation of from twenty-five to one hundred per cent.

In the fall of each year, a rapid survey was made in the vicinity of boys and girls camps and summer colonies located near lakes and ponds in the heavily infested areas, to determine just where we could do the most good and benefit the greatest number of people by creosoting gypsy moth egg masses during the winter months. Areas were selected and during the winter of 1945 200,824 were treated. In the winter of 1946, 165,817 egg masses were treated.

**Brown-tail moth.** During the winter of 1945, a survey was made of 71 towns and cities to determine the degree of infestation and spread of the brown-tail moth. In 1946, 100 towns were covered in a survey of cities and towns all the way from the New Hampshire state line to Bar Harbor. Heads of city governments and town selectmen were advised as to the infestation in their towns and cities and control methods were suggested.

**Spraying.** As our old state owned spray machines have worn out and been sold for junk we have been forced, during the past few years, to hire commercial machines to carry on our spray program. The season of 1945 only two commercial machines were available for hire so we were only able to do a limited amount of spraying. Cooperative spray agreements were made with twenty towns, villages and associations of owners of summer



camp and cottages in the heavily gypsy moth infested areas. Arsenate of lead spray solution totaling 354,525 gallons was put out in these areas. Applications were received from many more towns but due to lack of spray equipment we were unable to take care of them.

**Airplane Spraying with DDT.** A forty acre plot of woodland heavily infested with gypsy moth was selected in the town of Acton to be sprayed by airplane in cooperation with the U. S. D. A. The U. S. D. A. furnished the plane and pilot and we furnished forty gallons of twelve per cent DDT oil solution. On the morning of June 17 the plane came down from Greenfield, Massachusetts, and did the job, which took exactly ten minutes. Two days later I went over the entire area and the only living caterpillars found were along the outside edge of the sprayed area.

Respectfully submitted,

N. R. TRAFTON

*Field Agent*

# Report of Division of Inspection

*To Hon. A. K. Gardner, Commissioner of Agriculture:*

I respectfully submit my report covering the work of the Division of Inspection from July 1, 1944, to June 30, 1946.

The work of the Division of Inspection consists in the enforcement of 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 and 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 of seed collected by inspectors together with samples from dealers may be found in Official Inspections No. 186.

	1945	1946
Number of samples collected . . . . .	150	137

**Feeding Stuffs Inspection**

	1945	1946
Number of samples collected from July 1, 1944 to June 30, 1945 . . . . .	516	
Number of samples collected from July 1, 1945 to June 30, 1946 . . . . .		423
Number of brands registered . . . . .	1,098	1,002
Number of hearings arranged . . . . .	137	116

The analyses of the samples taken is to be found in Official Inspections No. 196.

**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 . . . . .	232	242
Number of brands registered . . . . .	192	198
Number of hearings arranged . . . . .	18	21

The analyses of the samples collected is to be found in Official Inspections No. 197.

**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 brands registered . . . . .	613	776
Number of samples collected . . . . .	102	54
Number of hearings arranged . . . . .	37	11

The analyses of the samples taken for this period can be found in Official Inspections No. 198.

### 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 . . . . .	355	517
Number of hearings arranged . . . . .	51	47
Number of non-alcoholic beverage licenses issued . . . . .	248	262
Number of slaughterhouse licenses issued . . . . .	245	267
Number of shellfish certificates issued . . . . .	16	53
Number of sardine licenses issued . . . . .	28	28
Number of sardine licenses issued for herring in round cans . . . . .	9	9

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, slaughterhouses, bottling establishments, canning plants and all places where food is manufactured or offered for sale.

### 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. In keeping with our agreement with the United States Public Health Service, samples of shellfish both shucked and shellstock have been taken each month and bacteriological examinations have been made and reports forwarded to the United States Public Health Service.

### Sardines

The sardine pack for 1944 was 3,238,939, and for 1945 it was 2,584,940. The number of factories licensed in 1944 was 37 and for 1945, there were 37. Some of the factories that are packing sardines, also pack herring in round cans.



Despite a fertilizer shortage, Maine potato growers planted a potential record crop in 1946. (Photo *Bangor Daily News*)

### **Blueberries**

Blueberry factories licensed in 1944 numbered 10, and in 1945 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.

We have been able 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 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. Under the Slaughterhouse 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, six prosecutions have been made.

### **Conclusion**

Please accept my thanks for your advice, and wise counsel in the administration of the affairs assigned me.

Respectfully submitted,

A. M. G. SOULE

*Chief, Division of Inspection*

*To Hon. Albert K. Gardner, Commissioner of Agriculture:*

I respectfully submit, herewith, my report covering the work of the Bureau of Weights and Measures from July 1, 1944, to June 30, 1946.

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.

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.

There are at the present time 231 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 assistance in the administration of the duties assigned to me.

Respectfully submitted,

G. K. HEATH  
*Deputy State Sealer*

STATE REPORT OF WEIGHTS AND MEASURES FOR THE YEAR 1944

Counties	NUMBER TESTED AND SEALED											NUMBER CONDEMNED													
	Scales	Weights	Dry Measures	Liquid Measures	Yard Sticks	Gasoline Pumps	Milk Jars	Kerosene Pumps	Molasses Pumps	Taxi Meters	Measuregraphs	Vehicle Tanks	Scales	Weights	Dry Measures	Liquid Measures	Yard Sticks	Gasoline Pumps	Milk Jars	Kerosene Pumps	Molasses Pumps	Taxi Meters	Measuregraphs	Vehicle Tanks	
Androscoggin . . . . .	915	233		134	6	300		42	1			22	19					7							
Aroostook . . . . .	586	41	21	49		206	7	17					57					2							
Cumberland . . . . .	1644	631	14	69	54	658		54	9	184	3	151	57	6	1	7	5	2					3	1	
Franklin . . . . .	277	131		30	1	137	6	45					2	2											
Hancock . . . . .	524	217	10	69	10	235	200	68	4				3	3											
Kennebec . . . . .	588	1630	3	174		268		22	17			12	12	5	1										
Knox . . . . .	494	260	166	41	22	159	441	50	1			14	14	5		4	2	10	17	5				1	
Lincoln . . . . .	249	275		5	6	119		31					4	2											
Oxford . . . . .	627	408		10	3	220		59	19	2			17	15			3								
Penobscot . . . . .	890	404	10	40	1	365	5475	246	12		21	3	10												
Piscataquis . . . . .	173	300	5	21	3	70		28				3		1				1							
Sagadahoc . . . . .	236					93		19																	
Somerset . . . . .	460	268	73	28	17	192		59	1	4		1	1	9			6	2				1			
Waldo . . . . .	39	40		16		25		13																	
Washington . . . . .	229	297	3	19	14	96	16	43	14		2	1													
York . . . . .	705	125	14	174	33	315		60	7		6	32	6	2	3			7							
Totals . . . . .	8636	5260	324	879	170	3458	6145	926	96	190	32	280	138	52	2	20	11	40	20	7		1	3	2	



## STATE REPORT OF WEIGHTS AND MEASURES FOR THE YEAR 1945

Counties	NUMBER TESTED AND SEALED											NUMBER CONDEMNED													
	Scales	Weights	Dry Measures	Liquid Measures	Yard Sticks	Gasoline Pumps	Milk Jars	Kerosene Pumps	Molasses Pumps	Taxi Meters	Measuregraphs	Vehicle Tanks	Scales	Weights	Dry Measures	Liquid Measures	Yard Sticks	Gasoline Pumps	Milk Jars	Kerosene Pumps	Molasses Pumps	Taxi Meters	Measuregraphs	Vehicle Tanks	
Androscoggin . . . . .	762	215		156	3	277		141			3	17	10	5	1	1	10								
Aroostook . . . . .	724	159		1	3	242		59				3	1	1			1								
Cumberland . . . . .	1884	538	152	160	150	942		200			4	276	59	15	40	13	35	70		3	3			9	
Franklin . . . . .	287	290		1	2	162		22	218			2	2												
Hancock . . . . .	338	170	10	130	9	174	10	45	3			2	2	2											
Kennebec . . . . .	659	240		83	1	296		47	11			25	2	2	3	1									
Knox . . . . .	273	140		75	5	162		20				2	2												
Lincoln . . . . .	344	256		18	7	137		19				2	4	6											
Oxford . . . . .	395	557		23		332	6100	53		2	72	2	2						1						
Penobscot . . . . .	908	144	7	31	1	423		85	14			2	2												
Piscataquis . . . . .	81	35	2	15	2	13		1	3																
Sagadahoc . . . . .	229					75		8																	
Somerset . . . . .	310	156		25	9	224		46			3	4	2			16		2							
Waldo . . . . .	132	34	2	51	2	93		37																	
Washington . . . . .	198	154		16		57		41			6	1													
York . . . . .	379	159		292		256		42			29	2				1									
<b>Totals . . . . .</b>	<b>7903</b>	<b>3247</b>	<b>184</b>	<b>1077</b>	<b>194</b>	<b>3819</b>	<b>6590</b>	<b>837</b>	<b>109</b>	<b>220</b>	<b>9</b>	<b>448</b>	<b>99</b>	<b>31</b>	<b>41</b>	<b>17</b>	<b>62</b>	<b>81</b>	<b>3</b>	<b>3</b>	<b>3</b>			<b>9</b>	