

# MAINE STATE LEGISLATURE

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MAINE PUBLIC DOCUMENTS

July 1, 1936 - June 30, 1938

*Agriculture of Maine*

TWENTY-EIGHTH REPORT

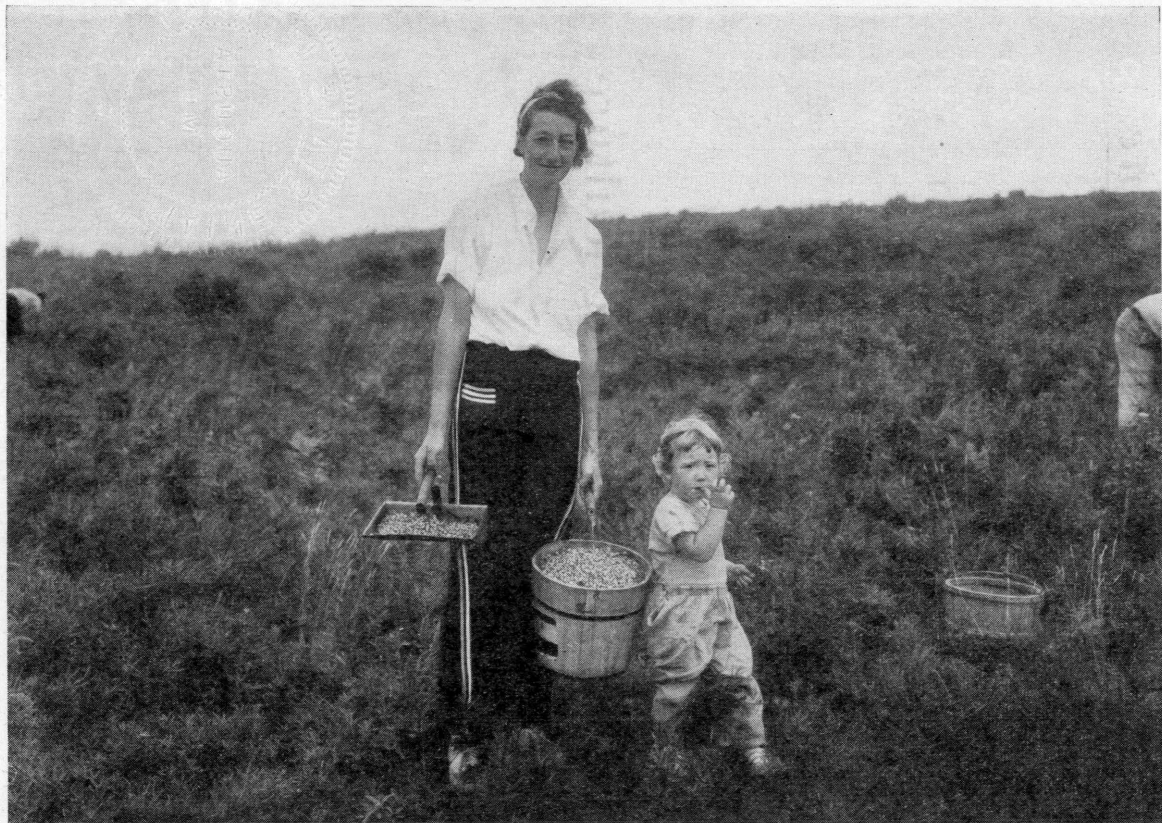
OF THE

Commissioner of Agriculture

OF THE

STATE OF MAINE

July 1, 1936 to June 30, 1938



*Blueberry Time in Maine*

183887

## LETTER OF TRANSMITTAL

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Office of the Commissioner

Maine Department of Agriculture, Augusta, Maine

July 1, 1938

*To His Excellency, Governor Lewis O. Barrows  
and Council:*

*Sirs:*

I have the honor to transmit, herewith, the biennial report of the Maine Department of Agriculture covering the period from July 1, 1936 to June 30, 1938. This material includes the reports of the various divisions of the Department for the same period, and of some sub-divisions or bureaus.

I trust it may merit your approval.

Respectfully submitted,

FRANK P. WASHBURN, *Commissioner*  
*Department of Agriculture*

# MAINE DEPARTMENT OF AGRICULTURE

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*Commissioner*  
*Deputy Commissioner*

F. P. Washburn, Perry  
*Vacant*

## Staff

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<i>Chief, Division of Plant Industry</i>	E. L. Newdick, Augusta
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<i>Assistant Horticulturist</i>	Edward D. Johnson, Monmouth
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<i>Field Agent, Gypsy Moth Work</i>	M. H. McIntire, So. Berwick
<i>Field Agent, Seed Certification</i>	C. A. Stetson, Caribou
<i>Field Agent, Corn Borer</i>	Nelson R. Trafton

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## Activities of the Department of Agriculture 1937-1938

In presenting a report of the activities of the Department of Agriculture for the biennium just completed, some general statements are essential to a complete understanding of the purposes and work of the Department as of June 30, 1938.

Due regard for reasonable economy in the expenditure of funds entrusted to us by Legislative action, precludes the publication of lengthy reports and bulletins. By common consent, if not from necessity, ours has become a regulatory and service Department offering assistance and counsel to farmers through the reasonable administration of laws enacted for their protection and by personal advice and direction in the solution of their problems and emergencies. We are no longer considered an educational organization, and for obvious reasons the publication of educational material is, and should be, left with the College of Agriculture and Extension Service, and to the Agricultural Press of the State.

Without undue self-exaltation, we may say that the Department has in the two years covered in this report, established its highest record of service to the citizens of Maine. The enactment of new laws, the needs of the agricultural industry itself, and the demands of our farmers, as more and more of them come to realize and appreciate the facilities and purposes of the Department, have been our constant incentive. The training and experience of men and women making up our organization have enabled us to meet most of the demands made upon us without greatly increased appropriations, and we believe economically and efficiently.

The service of the Department of Agriculture to the people of Maine is along many lines, so many in fact, that very few of those who are served and who must ultimately pay the costs, know or realize what efforts are daily expended in their behalf by this and by other branches of the State Government, and what additional assistance and security might be theirs through a closer understanding and more frequent use of the machinery here set up for their good. The first few pages of this report may, therefore, be dedicated to the task of bringing about a more complete understanding of what a Department of Agriculture is and what it may reasonably be expected to accomplish.

## Division of Inspections

Discussing first one activity with which all the people of our State are concerned. The Maine Department of Agriculture protects the public health through enforcement of a wisely written and well tested code of pure food laws covering the manufacture, processing and sale of food products. Our canning industry, which has probably its greatest development still ahead, asks and receives increased attention as years go on in the way of inspection and self-imposed regulation. Here we have in our midst one of the most outstanding examples of an industry honestly seeking and finding the answers to its own problems. Our Legislature has provided the authority, the Canners pay the principal costs, while the Department of Agriculture absorbs the overhead of supervision. With the addition of advertising features soon to come, we have the making of a well grounded program under which Maine canned foods will be known and treasured around the world. Merchants and consumers alike in our State are protected by fair and impartial enforcement of laws relating to adulterated and falsely marked goods, thus eliminating much unfair competition. Hundreds of thousands of summer visitors, and citizens as well, are assured of honest measures and weights and the accurate gauging of gasoline pumps. Farmers profit directly through analysis of hundreds of fertilizer, grain and feed samples, and there is a course always open to those who may have cause to question the purity of seeds or drugs offered them in trade by any store or out-of-state concern.

Early in the current year our sardine packers voluntarily called for stricter enforcement of the sardine packing law. This we are attempting to provide but are faced with the smallest pack in the history of the industry with a correspondingly small income to work with. This situation is mentioned here because it so clearly shows the wisdom of the so called "carrying account" to finance functions of this kind. Had it not been for the surplus carried over from preceding years to the credit of this account, the entire program of sardine inspection, which the packers seem to value and appreciate fully, would have of necessity, been abandoned. With the Maine pack coming steadily to the front in quality, and some foreign goods apparently suffering deterioration in their efforts to meet our prices,



we now lack only a sufficient supply of fish to assure a future for this industry.

### **Division of Animal Industry**

A most important line of work in our Department, and one most difficult of successful performance within the funds heretofore provided, is the control and eradication of disease among domestic animals and other duties assigned by statute to our Division of Animal Industry. The steadily dwindling remnant of our sheep population must be saved, some 5,000 milk producers and dealers supplying our own local markets must be helped and advised as well as regulated, and it appears to be the desire of the Legislature that the Egg Laying Contest plant at Highmoor be continued in operation. These latter projects are of comparatively easy accomplishment, but in the important matter of Bang's Disease control we face a situation which will require Legislative consideration. Scarcely had the herds of our dairymen been cleared of bovine tuberculosis with a percentage of infection reduced from five percent at the beginning of the eradication program to eleven hundredths of one percent at the present time, and at a total cost of nearly \$1,000,000.00, when there came an insistent call for a similar drive against this newer, and as many believe, more serious disorder. Our laws provide for compensation to owners of condemned cattle, and we face this obligation with insufficient funds and have, ever since the enactment of the law. To be mortgaging future allotments to pay current bills, or worse yet to lay the State and the Department liable to just criticism by refusing to test in any or all cases, thus assuming responsibility for extended outbreaks, has been the highly embarrassing alternative we have had before us. The true conditions will be placed before the Legislature. The Bang's Disease Law should be supported or repealed.

### **Division of Markets**

The study and administration of Marketing Laws has become a fine art. Starting in 1921 when our Division of Markets was created with the simple direction that it should "Investigate the existing methods and costs of marketing farm products and purchasing farm supplies, and to secure improvement therein," this activity now reaches out to cover the broad fields of selec-

tion, packaging, branding, advertising, and even consumer preference and quality breakdown in transit. Two important enactments in recent sessions, The Branding Law and the Potato Tax for advertising purposes, have added materially to the work of this Department. Of last season's potato shipments, 28,000 cars or 57 percent, called for inspection and we have rendered every possible assistance to those directly engaged in carrying out the State's advertising program. Research features contemplated in the Act have been turned over largely to the Maine Experiment Station, and I believe wisely, because there can be no valid reason for creating or subsidizing a new Research Agency when our own Station at Orono stands well equipped and ready for the task. In the collection of this Advertising Tax, \$112,615.39 to date from the 1937 crop, the State Assessors' Office has performed an outstanding piece of work with a minimum expense. Already other commodity groups, notably sweet corn and blueberry packers, are looking toward the advertising medium as a solution of their problems. Already some of the "Straws in the Wind" written into my report and suggestions two years ago, have been blown or are whipping themselves into place and are beginning to show the way of Maine's course in the future. Wisely, I am sure, have we shunned the policy of condemnation of the other fellow's product and confined our propaganda to the encouragement of increased consumption of quality goods, which we know to be of helpful, economic value to the consumer, and to recommending that buyers demand graded and packaged goods. Upon this program we are perfectly willing to see the products of Maine's farms staked, to stand or fall, upon their merits.

Early in the past winter it became necessary, as we in the Department saw it, to somewhat modify the specifications under which a certain quality of potatoes could be moved out of the State. This was done with regret but in the firm belief that any potatoes, or other farm products which are good for food, safe and usable, should be allowed a way to market when the producer desires to sell them and the consumer to buy. So to fit seasonal conditions "Maine Utility" became a proper designation for potatoes containing a limited percentage of net necrosis, and other defects. I believe this provision was a wise one, that it provided many unfortunate growers with a market and that

it forestalled considerable friction and antagonism in the working out of Branding Law administration.

### **Division of Plant Industry**

The major part of the program of our State for insect control is placed by Law with the Plant Industry Division of this Department. These have been years of heavy infestation by Gypsy Moth and we have turned every available resource to the relief of cities and towns and summer camps, and institutions likely to be most seriously devastated. A W.P.A. grant was offered in the Spring just passed, but before arrangements and stipulations could be fully settled the season of emergence had arrived. It appears that the State will have to strengthen its protective measures in those counties where the moths thrive most dangerously, and at the same time strive to exclude them from counties not yet heavily infested. Against the flight and spread of Gypsy and Browntail Moth, Japanese Beetle, and some other insects, the ordinary property owner is helpless. Here the State must intervene if any effective results are to be realized. The European Corn Borer situation, however, suggests a different conclusion. In this case control methods are simple, inexpensive, fairly effective, and within the range of good farm practice. Fall plowing of all corn lands and the cleaning up of all waste, will undoubtedly keep the menace down within safe limits. It will probably be reasonable to ask the Legislature for increased support for moth control and to recommend some reduction in the appropriation allocated to Corn Borer.

Our schedule of assignments places with the Division of Plant Industry the promotion and regulation of Certified Potato Seed growing. Maine has gained, and still holds, premier place among all states and provinces in this important branch of the potato business. However, competition is fierce and increasingly so. New diseases and disorders are constantly appearing. It has been found necessary to strengthen and tighten our requirements, often to the dismay of growers and shippers. What has been done was in the firm belief that Maine had to be out in front in constantly improving its quality and building its reputation in order to maintain its place as a source of seed for other potato growing areas.

## Public Meetings

We have realized that the objectives of the Department could best be reached through cooperation with many groups. Therefore, our representatives have met frequently with business men, service clubs, farm bureaus, Granges and farmer organizations. Much credit for success attained is due to the ready and hearty support offered and given by these various groups. Approximately 225 meetings per year have been held with an attendance of 16,000. Radio privileges have been freely extended to the Department, mostly without charge or compensation. We are allowed two weekly spots on all Maine stations and an average of one appearance per week on more extended hook-ups. To the Colonial Network from Boston, to WLBZ Bangor, WCSH at Portland, WRDO Augusta, WAGM at Presque Isle, our appreciation is given. For cheerful and sincere advice and cooperation from the College of Agriculture and Extension Service, I offer my personal and official thanks. To the Press of the State which has opened its columns to us on countless occasions, and received in return only a very limited allotment of paid advertising, I am also grateful.

## Fairs

The attendance figures at our Maine Agricultural Fairs for the past four years will speak for themselves. They are here presented:

Number of Agricultural Societies receiving State Aid, 1934.....	30
Number of Agricultural Societies receiving State Aid, 1935.....	31
Number of Agricultural Societies receiving State Aid, 1936.....	31
Number of Agricultural Societies receiving State Aid, 1937.....	33
Total attendance reported by these Societies, 1934.....	233,070
Total attendance reported by these Societies, 1935.....	263,008
Total attendance reported by these Societies, 1936.....	286,264
Total attendance reported by these Societies, 1937.....	322,276

From this it would appear that the introduction of Pari Mutuel betting did, indeed, bring about the promised result of increased attendance, but unfortunately this improvement does not seem to have extended beyond the betting booths. There is general and lamentable lack of interest in the agricultural features of our Fairs and many honest well-wishers are wonder-

ing if the allotment of public funds to our agricultural societies brings any commensurate benefit to agriculture.

### **Milk Control**

This Department has rendered every possible support and service to the Milk Control Board in its efforts to stabilize local milk markets of the State and to secure better returns to producers who are making milk for those markets. In this respect we have probably gone as far as the Law intended or our duty to the State as Dairy Inspectors, allows. We have recognized the importance of milk control, the undeniable fact that the Board has through its regulations and price schedules, saved the producers hundreds of thousands of dollars that would otherwise have been lost through needless and unfair competition, and that a very high percentage of producers are loyal supporters of the Control Act. A very few, selfishly intent upon temporary advantages to themselves, constantly menace the program of Control. If there is any consideration the Legislature can give to the strengthening of this Law or any decision or opinion it can pass along to the Board as to its validity and constitutionality, here will be, as I see it, the greatest service it can render to the Maine Dairy Industry at the forthcoming session.

### **Conclusion**

This report would be incomplete without some words of appreciation of the cordial and helpful consideration uniformly given me throughout the two years by Governors Barrows and Brann and their Executive Councils. The affairs of this Department have had courteous attention and all worthy requests have been granted, and many helpful and appropriate suggestions made. To my own associates in the Department I can offer only thanks, well knowing that some of them are still working under a salary schedule that is antiquated and unfair, but that they are, nevertheless, faithful.

## Report of Division of Animal Industry

*To Hon. Frank P. Washburn, Commissioner of Agriculture:*

I herewith present the report of this Division for the two yearly periods July 1, 1936 to July 1, 1937 and from July 1, 1937 to July 1, 1938, covering the various activities included in this Division.

A report of Clayton P. Osgood at the head of the Bureau of Dairy Inspection and Charles H. Crawford, Sheep Specialist, both connected with this Division, are herewith appended, their work being reviewed in detail in these reports.

### Bang's Disease

In this report I am placing this cattle disease first as it is to-day uppermost in the minds of cattle owners and consumers of dairy products. For many years this disease was kept in the dark, so to speak. If it appeared in a herd the owner did everything possible to prevent the fact from being known, and about the only thing done to get rid of it was to sell animals as soon as possible after the abortion to the first cattle dealer that came along, provided he had not made a sale to someone in the neighborhood before that time. I am not saying this was true with all cattle owners but was done in many cases. During the past few years conditions and sentiment have undergone a very decided change. Because of the fact that health authorities have definitely proven that the organism causing undulant fever in humans is the same as Bang's disease, and also because of the fact that all cattle that are shipped out of the State have to show a negative test at a State-approved laboratory, this disease has been brought into the open and to-day we have to confront it as the major animal disease problem.

The present Bang's disease law was passed at the special session of the Legislature in November, 1934, and because of an emergency clause it immediately became operative, and at once we began cooperating with the Federal Bureau in this work. From that time to the first of November of this year there have been tested at the State laboratory 130,684 blood samples, and 10,180 have shown a positive reaction, this being 7.8%. Of course, this does not mean that this number of cattle has been

tested because most herds have been tested more than once, and many have been tested several times. Neither does this percentage indicate the extent of this disease. Segregating the first test on all herds the percentage is approximately 14% but this, too, is misleading as most of the herd owners signing up have done so because they realized the disease was present. Not until we can give a certain area a complete test of all cattle can we show the definite percentage of this disease, and of course, towns or counties would also vary. I believe a 100% test would show a percentage ranging between 10% and 12%.

The work of Bang's disease eradication is being seriously handicapped by lack of funds to pay claims for indemnity. For the fiscal year closing June 30, 1938, in spite of the fact that new agreements were refused after April it was necessary to pay Bang's disease indemnity claims amounting to \$17,411.48 out of the present year's appropriation. This left very little with which to pay further claims and the latter part of July new applications for the test were again refused. The fact that all other States to which Maine ships cattle now require a negative blood test, and the fact that when the Bureau of Health reports an undulant fever case we have to follow up and test the herd or herds from which dairy products originate, make a certain volume of work that has to be done. So far the State has not condemned the reactors found on tests for interstate shipment because there has not been money to pay indemnities. On this class the Federal Bureau does not pay anything. I am recommending that in such cases the State pay what the Federal Government would pay in addition to the State limit of \$20.00 on a grade and \$50.00 on a purebred, thus putting the dealer on the same level as the herd owner in the matter of indemnities. Under this plan the dealer would very seldom get the full value for the animals condemned but he could stand the loss and the animal would not be sold to spread the disease in someone's herd.

There is no question but what the Bang's disease situation is the most serious cattle disease problem that ever faced the State.

### **Bovine Tuberculosis**

This disease that for many years was the center of attention in animal diseases not only in Maine but in other States as well has now ceased to be a serious menace. At the present time

California is the only State not classified as a modified accredited area. Maine was the second State to receive this honor, and while for many years during the peak of our efforts to control this disease the expenditures toward this end were from seventy-five to one hundred and twenty-five thousand dollars annually, to-day the indemnity claims amount to four to seven thousand dollars annually, and the percentage of disease is growing less all the time.

The State retains two veterinarians on this work and the Federal Bureau maintains a similar number. Very likely it will be many years before we can claim complete eradication of this disease but we certainly have it well under control. A table appended to this report will give further details.

### **Glanders**

As in years past numerous cases of suspected glanders have been reported to this office during this period. Investigations, and if deemed advisable, tests by the ophthalmic mallein method have been made. One case in Penobscot County was found during the past year. This animal was appraised, killed, buried and the stable properly cleaned and disinfected under a competent veterinarian.

### **Hog Cholera**

During the past two years there has been a slightly less number of outbreaks of this disease. The cases reported have been largely in Aroostook County. For several years now the State has required that all swine brought into Maine be accompanied by a permit and health certificate from an approved veterinarian and this appears to have reduced the number of cases reported.

### **Maine Egg Laying Contest**

Interest in the Contest has been on the increase the past few years and this year the space was over-subscribed some weeks before the opening date with several placed on the waiting list in case there were cancellations. On account of storm damage the latter part of September several entries from Massachusetts breeders were cancelled. All these were filled from the reserve list with one exception and this party did not notify us that they



were unable to send their entry until it was so late that others were not interested in putting in a pen with that handicap.

The past year a pen of Rhode Island Reds owned by Rufus W. Lathrop of Gardiner finished in first place while Clement Brothers of Winterport, R. D. Higgins of Dennysville, Lord Brothers of Kezar Falls, G. E. Coleman, Jr. of Brunswick and Foster Jameson of Waldoboro were included in the twenty highest pens in the Contest. We have demonstrated that Maine bred birds can hold their place with those from any other section of the country, a fact that would never have been known if the Maine Contest had not been built. It can prove a great benefit to Maine poultry breeders if they will only use it. Different people react to the results shown by their Contest pens. If a poor showing is made it may not, of course, be entirely the fault of the birds but some owners blame the Contest management, while others blame their birds. In the latter class several have cleaned out their stock and started anew with another foundation and after a year or two of this breeding have again returned to the Contest with a pen that made a most creditable showing. The owner in such cases gives the Contest credit for showing him that an improvement could be made, and when made showed greater profit.

### **Licensing Poultry Dealers**

During the past two years the number of licenses issued has remained about the same. A few have had their licenses cancelled while others have been made to rectify mistakes, and in other cases make full payment when part was left unpaid, intentional or otherwise. It is impossible to estimate the true value of this licensing law but it does help in restraining dishonest practices by some dealers. The additions made to this law by the last Legislature requiring special permit for night transportation and requiring buyers of dressed poultry to report the purchase of the same to the Chief of State Police together with the tattooing of poultry recommended and fostered by the Maine Poultry Improvement Association has reduced poultry stealing to the lowest minimum for a great many years.

### **Poultry Killed by Dogs and Wild Animals**

For the year ending July 1, 1937 the amount paid for poultry

killed by dogs and wild animals shows a decrease of \$885.78 over the previous year. There were 18,820 head of poultry killed. This includes all classes — chicks, fowl, turkeys, geese and ducks. The amount paid was \$13,999.02, an average of 74 cents each.

The following list gives the number killed by the principal animals guilty and the amount paid:

Foxes killed	12,984 birds for which the State paid	\$10,458.29
Dogs killed	2,301 birds for which the State paid	1,766.49
Skunks killed	1,909 birds for which the State paid	842.21
Other animals specified in the law killed	1,626 birds for which the State paid	932.03

For the year ending July 1, 1938 there was a further reduction in poultry claims paid over the previous year of \$3,512.14, the total number killed being 13,535 for which the State paid \$10,486.88, or an average for all birds killed of 77 cents. Following are the details:

Foxes killed	9,499 birds for which the State paid	7,745.44
Dogs killed	1,473 birds for which the State paid	1,562.93
Skunks killed	1,205 birds for which the State paid	661.77
Other animals specified in the law killed	1,358 birds for which the State paid	516.74

Foxes continue to be the principal offenders, and while the State during the past two years has paid \$18,203.73 for 22,483 head of poultry, yet I am certain that these figures do not represent half the actual loss to the poultrymen of the State. Nearly all small losses are never reported and on many of the larger ones it is impossible to establish proof that foxes were responsible for the total loss. The poultry industry stands third in the list of agricultural interests of Maine, and foxes are by far the greatest menace to that industry.

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The following tabulation gives a detailed report of the activities of this Division covering the livestock sanitary work during the past two fiscal years:

## July 1, 1936 to July 1, 1937

	<i>Cattle</i>	<i>Reactors</i>
Tested by cooperative and accredited veterinarians for tuberculosis.....	76,107	93
Tested for interstate shipment — Tuberculosis.....	7,113	1
Percentage of reacting cattle — Tuberculosis.....		.11%
Amount paid for reacting cattle — Tuberculosis.....		\$4,225.15
Amount received and turned in to Treasury for salvage — Tuberculosis.....		2,053.72
Number of cattle brought in on permit from other States and Canada.....		655
Number of cattle permits issued.....		124
Number of horses brought in on permit.....		3,541
Number of horse permits issued.....		232
Number of swine brought in on permit.....		1,913
Number of swine permits issued.....		651
Number of cooperative tests and retests for Bang's disease		26,123
Number of cattle reacted — Cooperative tests and retests for Bang's disease.....		1,212
Percentage of reactors — Cooperative tests and retests for Bang's disease.....		4.6%
Number of cattle tested for Bang's disease — Private tests		3,923
Number of cattle reacted — Bang's disease — Private tests.....		378
Percentage of reactors — Bang's disease — Private tests.....		9.6%

## July 1, 1937 to July 1, 1938

	<i>Cattle</i>	<i>Reactors</i>
Tested by cooperative and accredited veterinarians for tuberculosis.....	76,819	179
Tested for interstate shipment — Tuberculosis.....	6,939	2
Percentage of reacting cattle — Tuberculosis.....		.23%
Amount paid for reacting cattle — Tuberculosis.....		\$8,749.69
Amount received and turned in to Treasury for salvage — Tuberculosis.....		4,369.53
Number of cattle brought in on permit from other States and Canada.....		987
Number of cattle permits issued.....		187
Number of horses brought in on permit.....		2,173
Number of horse permits issued.....		129
Number of swine brought in on permit.....		1,005
Number of swine permits issued.....		383
Number of cooperative tests and retests for Bang's disease		36,732
Number of cattle reacted — Cooperative tests and retests for Bang's disease.....		2,016
Percentage of reactors — Cooperative tests and retests for Bang's disease.....		5.5%
Number of cattle tested for Bang's disease — Private tests		5,665

Number of cattle reacted — Bang's disease — Private tests .....	493
Percentage of reactors — Bang's disease — Private tests	8.7%

Respectfully submitted,

H. M. TUCKER,

*Chief, Division of Animal Industry*

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*To H. M. Tucker, Chief of the Division of Animal Industry:*

I am submitting, herewith, a brief summary of the work of the Dairy Division for the two-year period, July 1, 1936 to June 30, 1938.

The regular work of the Division has been carried on much the same as in previous years with most of the time being used for the regular inspection of dairies and the collecting of samples of milk and cream for analysis.

A law establishing standards for the production and processing of grade A milk, pasteurized milk and Grade A pasteurized milk, passed by the 88th Legislature, has added considerably to the work of this Division — more particularly that part of the law which applies to pasteurized milk.

At the present time there are seventy-five of these plants which must be inspected regularly. And due to the fact that there is a considerable trend on the part of the consumer today to demand pasteurized milk, it is expected that this number will increase steadily as time goes on. Nearly thirty percent of the market milk in Maine today is pasteurized. Most of this, however, is found in the larger cities and towns of the state.

Only three persons have availed themselves of the opportunity to produce and distribute grade A raw milk. This law has corrected a situation, however, which has long existed, that being the promiscuous labelling of milk as grade A by individuals when it was found upon investigation that this so-called grade A milk in some instances did not come up to the standard of the regular market milk sold in the state. This law protects the man who wishes to use the grade A label and produce milk of a superior quality and permits him to advertise it as such.

Twelve plants have been licensed to pasteurize grade A milk. The licensing of these plants for grade A pasteurized milk has also entailed the necessity of issuing permits to grade A producers for these plants.

To facilitate the work of enforcing the law governing grade A milk, pasteurized milk and grade A pasteurized milk, the Commissioner of Agriculture has promulgated rules and regulations for the handling and processing of this milk, as well as production, and with a very few exceptions, we have met with the best of cooperation from milk plant operators, and have nearly one hundred percent compliance with the law and regulations after a year of operation.

The following table shows the progress that is being made in the improvement of the quality of market milk sold in Maine. Approximately the same number of samples have been analyzed during the past two years as for the previous two year period. By referring to the table, it is possible to compare closely, the results of the analyses of these samples. One thing to be noted is that the drive for clean milk has shown a remarkable increase in the number of clean samples. There has also been an improvement in the bacteria content of the milk.

		1934-1936		1936-1938	
Total number of samples .....		6102		6302	
Butter Fat	4% and over.....	3834	63.85%	4605	73.09%
	3.25% to 4%.....	1946	30.85%	1483	23.51%
	*Below standard	322	5.3 %	214	3.4 %
*Some of these may have been below standard in total solids only.					
Sediment	Clean.....	659	10.25%	1934	30.7 %
	Satisfactory.....	4544	75.10%	3681	58.4 %
	Dirty.....	899	14.65%	687	10.9 %
Bacteria per c.c.	Below 10,000.....	1492	24.55%	1952	30.94%
	10,000 to 25,000	1240	20.4 %	1362	21.62%
	25,000 to 50,000...	965	15.75%	985	15.64%
	50,000 to 100,000...	785	12.7 %	757	12.02%
	100,000 to 200,000...	531	8.7 %	489	7.76%
	200,000 to 300,000...	296	5. %	210	3.34%
	300,000 to 400,000...	162	2.4 %	98	1.56%
400,000 to 500,000...	92	1.5 %	80	1.27%	
Over 500,000.....	539	9.0 %	369	5.85%	

About the same amount of work has been done in the creameries on the check-testing of samples for butter fat and it is

hoped that some time it will be possible to have a full time man to do this work throughout the year.

The Dairy Division has continued to cooperate for the past two years with the Milk Control Board, and as much time as possible that could be spared from the regular work has been devoted to helping establish and keep prices stabilized in the different markets where the Board is operating. The operation of this law in the hands of the present Board is of untold value to the milk producers and dealers throughout the state. It has seemed wise to have the members of this Division spend considerable time working with the Control Board, even though it does not come within our jurisdiction, but when the benefit to the milkman is considered, it is well worth while.

The last Dairy, Seed and Pomological show was held in Lewiston in 1936. At that time, the Seed Improvement Association was disbanded. It was felt that the show was not being of sufficient value to Maine Agriculture to continue it longer. As a result of this, the Maine Dairymen's Association in cooperation with this Department and the Extension Department at Orono, held two very successful Livestock Field Days, and I feel that this "Type and Production Show," as it is called, should continue as an annual affair and all possible assistance be given to it.

We have also held a meeting of the Maine Dairymen's Association in Lewiston in connection with the new Trades Show which held its first meeting in the Armory at Lewiston in 1938. This show seems to have been a success and I am glad to have had an opportunity to have worked with other organizations in putting on the show.

During the past two years, I have attended the usual number of dairy and grange meetings. We have had more dairy exhibits than usual at the Agricultural Fairs and considerable interest was shown in them.

In closing I would like to express my thanks and appreciation for the counsel and assistance given to me by Commissioner Washburn and the other members of the Department.

Respectfully,

C. P. OSGOOD,  
*State Dairy Inspector*

*H. M. Tucker, Chief, Division Animal Industry:*

I, herewith, submit my biennial report for the fiscal years 1936-1938.

During the past two years the Sheep Industry in the state has been favored by relatively high prices for wool and lambs which have returned substantial profits and stimulated widespread interest among farmers in nearly all sections of the state. In attempting to encourage and assist in establishing new flocks and increasing the numbers in other flocks I have worked on the plan of community groups rather than individual conferences.

Although there appears to be sufficient interest to create a substantial increase in our sheep population we are constantly and without hardly an exception confronted with the statement that, if they can be assured against destruction of their flocks by dogs and bears they will gladly utilize many of their now unused pastures and fields by stocking them to capacity with sheep, as the cash and labor requirements are much less while the cash returns are greater than with most other livestock projects.

In the early spring of 1937 claims for sheep and cattle killings indicated a substantial increase over any previous years, which naturally caused a feeling of discouragement among livestock owners and seemed to warrant more assistance and protection from the Agricultural Department. A careful survey of the situation revealed a surprising lack of enforcement of the present dog laws which were designed to give livestock reasonable protection.

Many personal conferences with city and town officials have resulted in a more rigid enforcement of the law and a greater effort to locate and cause guilty dogs to be killed. In most towns or localities where one or more guilty dogs were killed damage to sheep and cattle was greatly reduced, and, in some sections such damage ceased entirely until a new lot of killers developed.

Sheep have long been considered "an old person's friend." A large majority of our farms are now owned and managed by persons long past middle age who rarely ever can adjust themselves to new ideas and projects. Most of these farmers have

for years worked and planned a program that could be maintained during their declining years and that would provide sufficient income for their needs. A careful study shows that approximately 75% of the sheep in the state are owned by this class of farmers.

A recent report from a Chairman of Selectmen shows that in his particular town there were only three flocks of sheep at the time taxes were assessed, all owned by aged men, since which two out of the three flocks have been nearly destroyed by dogs and the remaining sheep sold, not to be replaced. As the guilty dogs were not located it may be expected that at any time the third and last flock will be raided and destroyed, leaving three families of aged farmers with a shortened income and a possibility of requiring public aid at a later date.

The demand for purebred rams of quality, which with some breeds is beyond the supply, indicates an increasing interest in improving the producing quality of flocks and which will result in an increased income.

A better ram program has been encouraged and should be vigorously pushed by this Department until many more scrub rams are replaced with purebreds which is sure to increase both the quantity and quality of both wool and lambs.

Nearly all farmers are confronted with an unbalanced financial situation and are searching for a source of relief. A general increase in both quality and number of sheep is our answer. The initial cash investment is much less per animal unit than any other line of livestock, while the cash returns are greater on the investment and labor requirements.

Complaints from sheep and cattle owners during the past two years that raids by dogs on their flocks and herds have been rapidly increasing, indicate that vicious dogs are on the increase, and, because such raids in most cases destroy a greater number of animals in each killing than in the past is apparent that larger and more vicious dogs are causing the increased destruction.

Investigation shows that prior to 1938 a large percent of all killings were done by unlicensed and in many cases uncontrolled dogs, kept largely by families unable to properly feed and care for themselves. And, worse still, while such dogs are increasing the sheep population is decreasing until at present the number



of dogs in Maine outnumbers sheep by at least 10,000 which adds materially to the unbalanced and distressed financial condition of many of our families, as only a small percent of dogs brings any income to their owners, while every sheep returns to its owner a net cash income.

Because of increasing complaints from sheep owners in all parts of the state that dogs were rapidly forcing them out of business, legislation was enacted to more adequately control all dogs, first, by causing them to be legally licensed under more stringent regulations. This has caused dog owners to become more fully conscious of the necessity of compliance with all laws governing dogs and especially that owners could and would be legally responsible for all damage done by their dogs. Enforcement of the new legislation was placed in the hands of the Commissioner of Agriculture with authority to develop rules and regulations necessary not only to cause all dogs to be licensed but requiring a complete description giving the age, breed, sex and all color markings, also, the name and address of the last previous owner and signature of the owner or applicant.

Because of a fine spirit of cooperation by nearly all clerks in the cities and towns the results have been all that could be reasonably expected. This present year beginning with April first, being the first in which the Department of Agriculture has been responsible for enforcement of the dog laws, has brought out much valuable information for all interested in honest law enforcement.

Nearly all city and town clerks appreciate the fact that the State is ready to assist them in every possible way in fulfilling their duties which has been exemplified by hundreds of letters asking for advice and information which in every case has been promptly given from this office. This fine spirit of cooperation has made it possible to make this report, while incomplete, show very satisfactory improvement over past years. We are confident that as the law becomes more commonly known all honest dog owners will appreciate the greater protection given them and others will become so license conscious that resistance to honest compliance will be very slight.

While killings by unlicensed dogs have decreased during the eight months in which the new regulations have been in effect,

reports of raids and killings by unlicensed and uncollared dogs are still coming to this office.

Frequently these reports indicate that in many towns and cities the officers, who under the law are responsible for its strict enforcement, fail and neglect their duty and in some cases entirely ignore the statutes requiring all unlicensed dogs to be destroyed by killing after May first each year.

The effectiveness of the new licensing law is favorably indicated by a substantial reduction in the number of sheep killed during the first eight months of its enforcement, from April 1 to December 1, 1938 as compared with the corresponding months in 1937, a reduction of 233 head.

It is believed that the present dog laws would be entirely adequate for livestock protection if all city and town officials would have them enforced, and, that legislation may be necessary to penalize city and town officials who neglect strict enforcement of the present laws.

Records show that 68,290 sets of license blanks and the meta tags to correspond were mailed to 520 cities and towns and we have reports from 501, leaving 19 unreported to date. The 501 reports are divided as follows:

49,231 males, and spayed females.

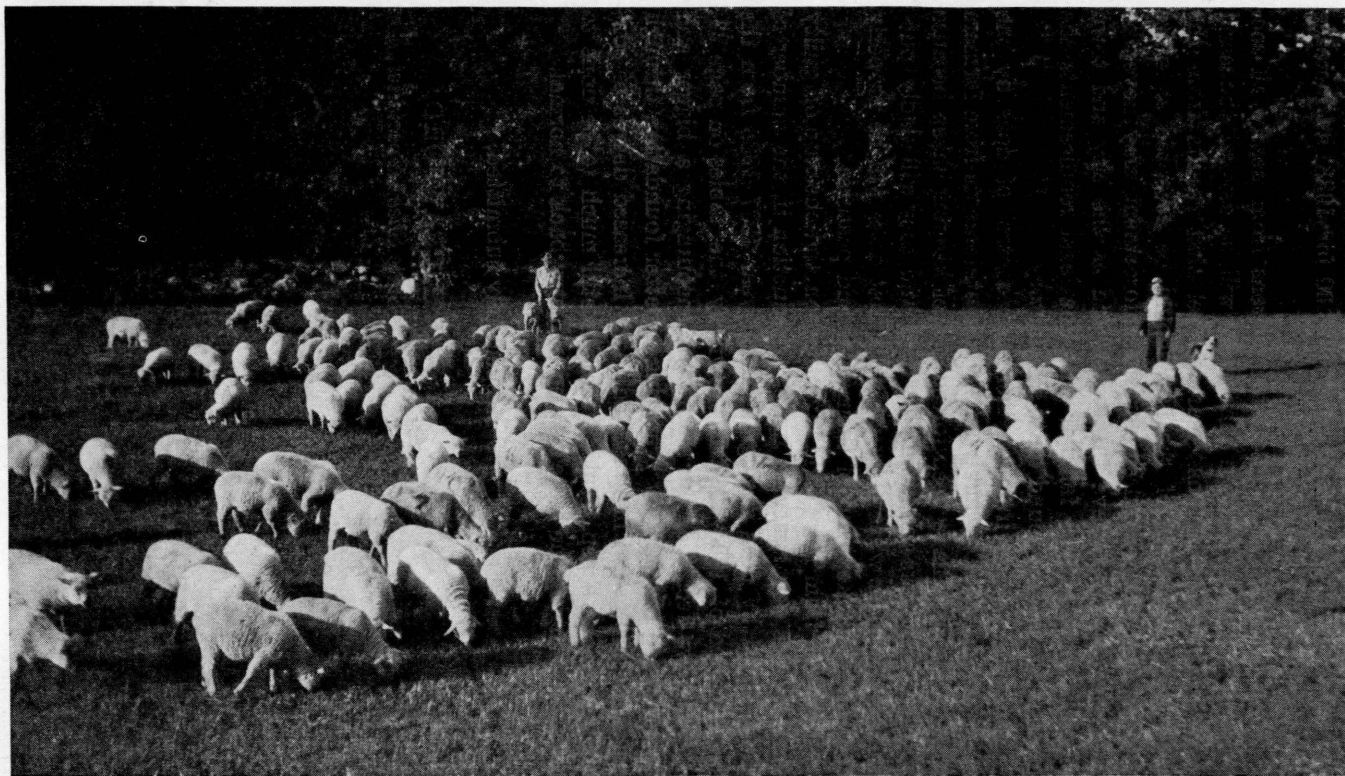
4,321 females capable of producing young, including those covered by 394 kennel licenses.

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53,552 grand total dog licenses, reported to date.

This shows an increase in revenue to the State from \$57,164.00 for the year 1937 to \$74,776.00 for 1938 to date, a net gain of \$17,612.00, or, an increase of 30% over 1937. In comparing the total number of dogs with the entire population of the state we find approximately one dog to each twelve people. These figures are based on reports at hand which doubtless will be found nearly correct when complete tabulations are possible.

Records from the office of the State Treasurer show that the total receipts from dog taxes for 1937 were \$57,164.00, while the 1938 records with 19 cities and towns unreported show that that amount should be increased to \$74,776.00, and, using the number of dogs reported by clerks in the 19 unreported cities and towns as of 1937 would indicate an additional return from those towns of



*These Money-Makers are on the way back*

\$2,552.00, or, a grand total of \$77,328.00 for 1938, an increase of approximately \$20,164.00, or 35%.

While complaints by interested citizens from nearly all sections of the state indicate that there will be several thousand dogs escape licensing this year we feel that results from the first year's operation of the law should be accepted as quite satisfactory. One hundred percent enforcement may never be achieved but we believe that when and as the city and town officials become more familiar with the legal requirements the present law will be found quite satisfactory.

Beneficial results from an increased control of dogs by the state are indicated by many letters and statements from farmers who in the past have been forced out of keeping sheep because of frequent attacks and killings by dogs and they will gladly purchase more flocks when they are sure that dogs will be properly controlled and kept out of their fields and pastures.

Resulting from more rigid investigation and checkup on guilty dogs by this department a material reduction in the number of sheep killed by dogs during the fiscal year 1937-1938 from the same period of 1936-1937 is shown by the tables on page 27.

While we feel that our efforts in encouraging a bigger and better sheep industry by preparing a better foundation through adequate protection has resulted in an increased degree of confidence among sheep farmers, there is still much to be done to assist in bringing the state's sheep industry back to normal.

Respectfully submitted,

C. H. CRAWFORD,  
*State Sheep Specialist*

	No.	Amt. Paid		No.	Amt. Paid
Sheep and Lambs killed and injured by <i>dogs</i> ,	1,938	\$11,452.09	By Bears	1,347	\$7,906.56
Heifers killed and injured by <i>dogs</i> .....	14	345.13	By Bears	1	25.00
Cows killed and injured by <i>dogs</i> .....	10	295.00			
Calves killed and injured by <i>dogs</i> .....	2	21.00	By Bears	7	59.50
Pigs killed and injured by <i>dogs</i> .....	8	54.00	By Bears	10	56.50
Hogs killed and injured by <i>dogs</i> .....	3	40.00	By Bears	1	30.00
Bull killed and injured by <i>dogs</i> .....	1	13.67			
Goats killed and injured by <i>dogs</i> .....	24	205.00			

\$12,425.89

\$8,077.56

Total amount paid for Sheep and Lambs..... \$19,358.65

Total amount paid for Heifers, Cows, Calves, Pigs, Hogs, Bull, Goats.... 1,144.80

Grand Total ..... \$20,503.45

REPORT ON SHEEP AND OTHER DOMESTIC ANIMALS PAID FOR, FISCAL YEAR 1937-1938

	No.	Amt. Paid		No.	Amt. Paid
Sheep and Lambs killed and injured by <i>dogs</i> ,	1,585	\$10,707.54	By Bears	954	\$6,115.00
Heifers killed and injured by <i>dogs</i> .....	17	450.00	By Bears	8	241.00
Cows killed and injured by <i>dogs</i> .....	8	221.12	By Bears	1	60.00
Calves killed and injured by <i>dogs</i> .....	2	33.00	By Bears	8	165.00
Pigs killed and injured by <i>dogs</i> .....	5	38.00			
Hogs killed and injured by <i>dogs</i> .....	19	67.50	By Bears	3	48.00
Bulls killed and injured by <i>dogs</i> .....	5	100.00	By Bears	1	25.00
Goats killed and injured by <i>dogs</i> .....	2	25.00			
Colts killed and injured.....			By Bears	1	35.00
Oxen killed and injured.....			By Bears	1	15.00

\$11,642.16

\$6,704.00

Total Amount paid for Sheep and Lambs..... \$16,822.54

Total Amount paid for Heifers, Cows, Calves, Pigs, Hogs, Bulls, Goats,

Colts, Oxen..... 1,523.62

Grand Total..... \$18,346.16

## Biennial Report, Division of Plant Industry

To Hon. Frank P. Washburn, Commissioner of Agriculture:

The following is a summary of the activities of the Division of Plant Industry covering the period between July 1, 1936 and July 1, 1938.

### Seed Certification

	<i>Ac. Entered</i>	<i>Ac. Passed</i>	<i>Bu. Certified</i>	<i>Bu. Sold</i>
1936-37 Mountains....	8,405¼	6,517	2,491,123	908,743
Cobblers.....	11,094¾	9,255	3,280,665	2,097,499¼
Sp. Rose.....	1,020	913	356,526	203,164½
Katahdin....	880	587¼	228,416	111,168¾
Chippewa.....	313½	302½	152,479	45,586¾
All Others....	870¼	509¼	196,905	95,273¾
	<hr/>	<hr/>	<hr/>	<hr/>
	22,583¾	18,084	6,706,114	3,461,436
1937-38 Mountains....	12,705¾	11,117	3,723,083	882,310
Cobblers.....	11,755	10,503½	3,489,262	2,057,984½
Sp. Rose.....	1,256¾	795½	206,910	128,265½
Katahdin....	1,356½	1,099¼	353,079	136,974¾
Chippewa.....	1,727	1,399	518,609	237,976¾
All Others....	967	803	228,958	113,514½
	<hr/>	<hr/>	<hr/>	<hr/>
	29,768	25,717¼	8,519,901	3,557,026

A careful study of the statistical presentation of two years' work will show rather definite progress is continuing to be made in seed certification. While there was a recession of interest during the first year covered by this report the second year showed the largest entry that had ever been made and the season closed with the largest carlot sale that had ever been made by Maine growers. An unusually heavy rainfall during the season followed by severe cold weather through digging caused the crop to be put in storage in a rather unsatisfactory condition. The price received for the crop was better than for many seasons. Late blight took its toll in both seed and table stock and the mild winter following harvest presented many storage problems. The question of dirt on the potatoes was serious during the entire season and it is doubtful if we ever marketed a crop so dull in appearance as this particular one. The shrink was

unusually high and the price activity in the spring of 1937 caused many of our growers to sell short and come up to planting time with much undesirable seed on hand. During the spring of 1937 some reports came back to us of receivers not being satisfied with the certified seed. We could not blame them owing to its appearance but in addition to this we got our first report of bacterial wilt in Maine seed. This came from Florida where a committee was appointed to urge upon the industry Federal certification to take the place of State regulations.

In the summer of 1937 the entry for inspection was larger than it had ever been before due, no doubt, to the fair price received for the previous crop in spite of its general appearance. The thing that stands out is that in spite of shipping poor looking potatoes a good crop was grown and kept the reputation of the blue tag in its same favorable position.

During this season's field work an unusually strong program was attempted to rid our crop of the bacterial wilt which had been reported to us. We were able to locate the source of the wilt and to define its area as rather local. We were forced to reject about 350 acres which had been contracted by southern growers. This caused our people a severe loss but in order to make a quick clean-up all fields showing even a trace of wilt were rejected. Several states sent pathologists and horticulturists to watch our procedure in handling what appeared to be a bad trouble.

In the fall of 1937 the potatoes went under cover in about the finest condition that could be imagined. As compared with the previous year the Service felt that it was going to be easy to handle the crop. In November, however, net necrosis made its appearance in the first lot of Spauldings which we were attempting to ship to Florida. Within a short space of time it was learned that net necrosis was present in nearly all varieties. It did not show in the Chippewas or Katahdins. Some in the Cobblers but not very much. The Mountains, our leading table stock variety, were in very bad condition. This was brought about by the high peach aphid count of the previous summer which insects spread leafroll. Primary infection is followed by net necrosis in the tuber. In the spring of 1938 there was probably planted more necrotic tubers in Maine than had ever been planted before with the result that in general the plants got away

to a rather poor start and through June the percentage of leaf-roll plants ran from 40 to 70 in many table stock fields. Certified fields indicate that the rejection will be much higher than it has been for many years bringing to light the fact that there is not enough tuber index work being done nor are there enough tuber index growers to maintain a seed program; the type of which is needed in Maine.

The writer feels compelled to say that the Department of Plant Pathology at the Maine Agricultural Experiment Station is not large enough or strong enough to cope with the present seed situation in Maine. We are not attempting to blame anyone because these things cost money. We are stating what we believe to be a fact in the hope that this matter may be brought to the attention of those in authority.

During the past two seasons Mr. John L. Scribner has been in the South during the time of delivery and sale of most of the certified seed. He has been able to keep us advised of the spots that were complaining about Maine seed and we have tried to remedy the situation as best we could. Mr. Scribner inspected deliveries from cars, boats at Savannah and at numerous points to learn just how much of the complaints could be remedied by us here at home.

In January, 1938, there was planted on the farm of Mr. William Scoville at Hastings, Florida, a plot of about  $2\frac{1}{2}$  acres in which many samples of seed from Maine were tested to indicate what we could expect from planting them here the following spring. The results obtained from this, our first attempt, was very gratifying and there can be no doubt but that next winter we will be called upon to expand the size of this acreage. This work was financed by the Potato Tax Research money and was supervised and the readings taken by the Maine Agricultural Experiment Station; Doctors Folsom and Bonde participating. As a result of the information gained by this plot we know of one Maine grower who changed his plans entirely and who from present indications will have a lot of good seed for sale which he otherwise would not have had.

In our last report we indicated that we were encouraged by the steady progress that had been made in Maine certified seed work. We must indicate at this time that never in the history of our being connected with certified seed work have we been



damaged so much as did the net necrosis following leafroll of last season and it will take us three or four years to get over this providing everyone works hard. In addition, we have bacterial wilt to contend with and this, too, presents a difficult problem.

### **Insect Control**

This Division has an appropriation for insect control but it is not sufficient to attend to all the demands that are being made upon us. During the winter of 1936-37 a Federal Brown-tail Moth project was carried on which resulted in a large decrease in the numbers of this pest and it will probably be several years before the Brown-tail will become a general nuisance. There are, however, isolated spots such as the coast section of Cumberland County, Castine, Rockland, where colonies seem to thrive year after year and more or less work has to be done. During 1937-38 there was no project and the only work done was by some towns that realized their responsibility under the Statute.

With the Gypsy Moth the story has been bad for several years. The winters have apparently been so mild that no egg clusters have been destroyed by the cold and there has been a continued build up of the Gypsy Moth population. It has been so serious in many cases that camp owners and owners of larger property have been very insistent that something be done to help them. During each of the two years covered by this report we have sprayed in about sixteen or eighteen towns. In the spring of 1938 it became necessary to hire several commercial machines to help out the work. This was at a cost of about \$2,000 which the Department had saved for this purpose by cutting down the number of men on the payroll in the winter months. During the spring of 1938 the Governor and Council appropriated \$10,000 and this Department will act as sponsor for a W.P.A. project to be carried on this fall. Mr. Fitzgerald, W.P.A. Director, has set aside the sum of \$109,000 to be expended for Gypsy and Brown-tail Moth work and the removal of favored food plants. This office is charged with the responsibility by Director Fitzgerald of seeing to it that a good project is established and we will do our best to meet his requirements.

C.C.C. Camps at Alfred, Jefferson and Bridgton, working under the direction of the State Forest Commissioner, have

contributed their part in an attempt to keep down the Gypsy and Brown-tail in the areas within 25 miles of the camps. These are, for the most part, young men quick to learn and capable where tree climbing is concerned. Again we express our thanks to the C.C.C. Camps and the officials for the contribution which they are making to help our citizens in controlling these pests. I can only repeat that it is too bad that the work of painting egg clusters cannot be followed up by the use of more spraying machines.

The European Corn Borer work has been continued with an increased appropriation over that of the two previous years. Each year the growers of all kinds of corn have been solicited and asked to support a fall plowing campaign as well as a general cleanup of all trash and materials having to do with this crop. The response I believe is as good or better than could normally be expected from this type of campaign. The commercial grower has for the most part been very helpful. The small home gardener cannot quite see why he should be concerned, therefore does not have as much interest. The canners have not only had the corn borer to contend with but have had the corn ear worm and the stalk borer which have necessitated more vigilance on their part than usual and added to the cost of inspecting the product after its arrival at the factory. For many years the Department has carried on what might be termed an educational campaign with the corn grower. This cannot be continued forever and it seems that another year this appropriation could be reduced and gradually withdrawn. After the growers of the State have been told what is the best thing to do, that is, plowing under the stubble and waste material, it does not seem as though it should be necessary to call every year and tell the same story. There is some indication that the European Corn Borer has continued to expand in small numbers over a larger area but we do not know of any heavy infestations. From a practical standpoint there is hardly ever a piece of corn where the borer count is sufficient so that the poor ears cannot be culled from the good ones.

The Japanese Beetle situation appears to remain fairly constant. We have furnished inspectors in the markets during the period when the Federal quarantine is in effect, trying to expedite the movement of products affected by this regulation. We

have had no reports from outside sources that the infestation has increased in any appreciable amount. One Portland resident notified us of some beetles on his property on the Western Promenade and the investigation proved that this was correct. This is, however, within the quarantined area and shows some infestation in York and Cumberland County. We will again this year set up trap operations in cooperation with the U. S. Department of Agriculture. Mr. Towle, of the Bureau, has already been assigned to us and will report soon for duty.

### Varied Activities

In addition to insect control and seed certification, the members of our staff have been prepared to serve as lecturers before different organizations. Mr. Babb and Mr. Johnson have carried most of the load in this respect. Mr. Babb attends 66 meetings a year with an attendance of 5,846. Mr. Johnson had 32 meetings with an attendance of 1,500. Mr. Painter has also attended several meetings. In addition many radio talks were prepared either for delivery personally or by Station announcers. The usual number of trips were made to judge Fairs, estimate crop damage and similar errands. The writer has personally attended both winter and summer meetings of the Potato Association of America, also summer meetings in several states from North Carolina to Maine.

In January, 1938, for the first time, there was held what is known as the First Agricultural Trades Show in the Armory at Lewiston. This Show of 96 booths occupied by 50 exhibitors of farm equipment brought to a large farm population the latest in their line. This was an experiment and meetings were conducted by the florists, poultrymen, vegetable growers, apple-men and dairymen to interest the farmers in coming to see what the tradesmen had to offer. We owe much to the Extension Service for their help in furnishing committeemen and speakers. At the close of the meeting it was voted to hold another such affair in 1939 and this Division will again use its staff and facilities.

In closing I would like to indicate that the seed growers of Aroostook County are alive to the situation that confronts them and that within the next two years rapid strides will be made in tuber index and tuber unit seed potato work. One of our larger

companies is negotiating for a tract of land in the deep forest where it can have an isolated seed plot. There are two or three groups of men ready to finance the right individual whom they believe can produce good foundation seed stock. If we can succeed in our effort to strengthen our Experiment Station Department of Plant Pathology and get two or three more men into foundation stock work, then we will make real progress.

We thank all those in agricultural work in Maine wherever located for the support which they have given us. We in turn have tried to be helpful and hope that as long as we continue in agricultural work that the splendid support which now exists may be maintained. I wish to thank you, Commissioner Washburn, for the time that you have spent with me helping to guide the destinies of my Division.

Respectfully submitted,

E. L. NEWDICK

*Chief Division of Plant Industry*

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

I hereby submit my report for the Bureau of Horticulture covering the period from July 1, 1936 to July 1, 1938.

The annual apple tree pool which has been conducted for the past years was conducted during 1937 and 1938 as usual. In the 1937 pool there were 6,400 trees purchased and in the 1938 pool 6,600 were purchased. During the last two pools the five leading varieties in order of importance have been McIntosh, Cortland, Northern Spy, Red Delicious and Baldwin, the McIntosh being far in the lead as figures for the 1938 pool indicate: of the 6,631 trees purchased 4,048 were McIntosh. The second variety Cortland numbered 661.

Since the winter injury of 1933-34 it has been more difficult to purchase two-year old trees than usual. Indications are, however, that the nurseries have again been able to renew their plantings and from now on the two-year olds will be more readily available.

An attempt has been made to secure a new source of raspberry stock which would be free of disease and do well under the

conditions of Maine. To date we have met with very good success securing our stock from the states of New York and Michigan.

The Western Maine Fruit Growers convention was conducted in Auburn in February, 1937 and in Lewiston in conjunction with the first Agricultural Trades Show in January, 1938. The attendance has been very good at these meetings.

We made 550 inspections of nurseries and greenhouses each year giving our utmost attention to helping the nurserymen and the greenhouse men meet the requirements of the various quarantine regulations throughout the country. It has been necessary to inspect several carloads of Christmas trees each year in order that they might be shipped to midwestern markets.

We have assisted the Fish and Game Department to estimate damage caused by deer, partridge, and pheasants.

The Horticulturist and his assistant have spent a great deal of time making and arranging exhibits and displays in conjunction with advertising of Maine agricultural products. A very active part has been taken in the work of the New York and New England Apple Institute which has benefited the fruit growers of the State a great deal.

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

Assistance has been rendered those who wished to improve their home grounds, parks, and public buildings. This assistance was given through lectures on these subjects and rough plans drawn when requested.

Many talks over the radio, to granges, garden clubs, and other organizations were made throughout the two years by the State Horticulturist and his assistant.

I wish to take this opportunity to express my appreciation for your kind assistance and wise council in executing the duties assigned to me.

Respectfully submitted,

STANLEY L. PAINTER,

*State Horticulturist*

## Biennial Report Divisions of Markets

*To the Hon. F. P. Washburn, Commissioner of Agriculture:*

The following is a summary of the work done by the Division of Markets during the biennial period of July 1, 1936 to July 1, 1938.

The major activities of the Division of Markets for the past two years may be divided into four groups; first, Standardization; second, Market News and statistical information; third, cooperative organizations and fourth, miscellaneous.

### Standardization

#### POTATOES

In the matter of standardization the potato industry, being the largest income producing crop of the state, also has adopted the most extensive use of grades and standards of any agricultural product in our state. I am quoting from a report submitted by Head Potato Inspector, Vernon W. Palmer of Caribou, which summarizes the present status of work along this line.

“Inspection using U. S. grades and standards as a basis of determining the quality and condition of potatoes was started as a purely state proposition in 1921 and in that season 156 inspections were made. In 1922 legal authority was given the Federal Bureau of Agricultural Economics for cooperating with the states in shipping point inspection work. A cooperative agreement was drawn up with the bureau that season which with various amendments has been in continuous effect since. Prime benefits from such an arrangement are: (a) uniform interpretation of grades with national standards in all parts of the country, (b) all State-Federal certificates become prima facie evidence in all U. S. courts and State of Maine courts. During the 1922 shipping season 384 inspections were made. In the crop years of 1923 and 1924 the operation of the Maine Potato Growers Exchange disturbed the established methods of marketing and made Shipping Point Inspection impracticable with the result that very few inspections were made. In 1925 numerous requests for resumption of the Service were made and

a small office was opened at Caribou. From this time on shippers have made increasing use of the Service in reducing their adjustment claims and as a means of making satisfactory sales to distant markets. Following the precedent of several other states a fee of \$4.00 per car plus necessary travel expense when the inspector was away from his designated station was established in Maine. However, in the face of low prices following the depression of 1929 it seemed that cost of this Service should be kept in line with the changed conditions. Accordingly in 1933 the fee was reduced to \$3.00 per car plus travel. This fee has been continued to the present time. It should be borne in mind that this Service is a purely voluntary one and the measure of its value to shippers may best be shown by the extent to which they have asked for it. The following table gives a clear picture on this point.

<i>Season</i>	<i>Number Inspections</i>	<i>Number Men Employed</i>	<i>Avg. No. Inspections per Man per Week</i>
1926-1927	5567	26	11.2
1927-1928	5573	24	9.2
1928-1929	4114	25	8.2
1929-1930	5837	27	9.9
1930-1931	5457	21	9.4
1931-1932	3775	18	8.6
1932-1933	231	9	2.8*
1933-1934	3429	14	10.9
1934-1935	7678	28	12.3
1935-1936	24805	55	16.3
1936-1937	26088	57	14.7
1937-1938	28255	81	15.2

\*This year only state inspections were made until January.

“A conviction that truth in branding applied generally to all potatoes shipped from Maine would tend to better market outlets finally crystalized in the 1935 legislature with the Maine Potato Branding Law. The coming into effect of the statute in the 1935 crop season stimulated inspection as indicated by above table. Much credit for the efficiency of the inspection work should be given to the Federal Supervisor, G. Ray Warren, who has trained inspectors and cooperated fully in the Shipping Point Inspection work for the last twelve years. The value of this inspection service is indicated not alone by its use

by shippers but also in the fact that when exportations of potatoes have been made to foreign countries, as well as when the Agricultural Adjustment Administration inaugurated their Starch Diversion Program for purchases by the Federal Surplus Commodities Corporation in the 1937-1938 shipping season, our Service was called upon to furnish complete inspection. This necessitated the loaning of twenty-five men for the Starch Diversion Program who were replaced by new men trained and substituted without impairment to the efficiency of inspection work on table stock. In order to maintain a well trained force the problem of year round employment for the men needed to be solved. This has been partially done through cooperation with the federal service which cooperates with the southern states in their shipping point inspection work during the early summer. This enables several of our Maine inspectors to work on southern deals from four to twelve weeks and in return Maine gives employment to an equal number of southern inspectors during the winter months. The development of grading services at the snap bean canneries and sweet corn factories during July, August and early September has also provided employment for many of the potato inspectors. This has enabled the Division to retain more capable men than would otherwise be possible.

“The typing, bookkeeping work, billing and keeping of financial records for the seasonal total of over 28,000 inspection certificates is no small job and has required the employment of five full time clerks at the Caribou office during the entire season. During the heavy shipping portion of the season it has been necessary to employ six additional clerks. The value of experience in the Caribou office is indicated by the request of the AAA for the loan of two of these clerks for work in their Starch Diversion office and also a similar request from the Maine Experiment Station on potato research work.

“With the passage of the Personnel Law by the Legislature of 1937 the opportunity was offered for a more careful selection of applicants for positions as inspectors. With the approval of the Personnel Director, Mr. Earl R. Hayes, all new inspectors beginning with the 1937-1938 season have been chosen only after passing a written examination. From this list the most promising men are chosen and are given from ten days to two



weeks training at Caribou covering the proper interpretation of State and Federal grades, certificate writing and knowledge of rules and regulations relating to the same. These inspectors have covered the territory from Ft. Kent to Sherman in Aroostook County with one regularly stationed at Corinna and two at Bucksport during the season when shipments were made by water.

“In spite of every precaution to thoroughly train the men the element of human judgment must always be reckoned with. However, the efficiency of the Service may well be measured by the number of reversals which have been made on appeal inspections in the receiving markets. The 1937-1938 season is not only a record breaker for the small number of reversals but is a credit to the careful training of an unusually large number of new inspectors that were used because so many of the experienced men were loaned to the AAA. The total number of reversals was 20 which represents .07% of the 28,255 inspections which were made. Shipping Point Inspection Service has now become a self-supporting activity. The law authorizing this Service stipulates that the fees shall be reasonable and as near as may be to cover the costs of the service rendered. Consequently, while it is necessary to charge the full \$3.00 fee throughout the season in order to meet payrolls and other necessary expenses while collections are being made and the money replaced to the credit of the appropriation for the Division of Markets, at the close of the season any savings which may be made are rebated to the users of the Service. In the 1936-1937 shipping season the rebate mounted to 41c per car or a total of \$10,334.82 and in the 1937-1938 season 43c per car or a total of \$11,106.90 was rebated. The total collections and disbursements including rebates for both seasons follow: 1936-1937 \$76,009.54 and 1937-1938 \$79,129.90.

“After the experience of the 1935-1936 shipping season it became apparent that the attitude of the courts was to interpret the Maine Potato Branding Law as a purely truth in branding statement. Therefore, it was apparent that sufficient grades or regulations must be provided so that any potatoes fit for human consumption might be disposed of in the regular channels of trade. Accordingly, after due hearings, the so-called Cull regulation was promulgated in the summer of 1936 and in

December of 1937 the Utility Grade. With these refinements in the potato standardization program the industry may now boldly claim that they propose to sell to the public any or all of their crop with the assurance that it will be properly marked as to quality."

A great deal of supervision is now necessary to keep Shipping Point Inspection running smoothly and this requires the undivided attention of Vernon W. Palmer, Head Potato Inspector at Caribou, and to him a great deal of credit is due. While the Federal Supervisor has been most helpful at all times, it should be borne in mind that the state is required to finance the entire deal and the Federal Government insists that the costs of supervision plus 15c per carlot certificate must be guaranteed by the state. Accordingly, the entire program of establishing adequate fees, making prompt collections and efficient expenditure of the funds must be supervised by the State Head Potato Inspector.

### SWEET CORN

The value of grading the raw product at canning factories is becoming more evident as the packers have continued the use of the sweet corn inspection service. This work, originally worked out with the Extension Service and the Bureau of Agricultural Economics, has seen but few changes except in detail since the official start in the 1934 season. In the 1936 season the number of factories and substations using this Service rose to thirty-three. Forty-five inspectors and field supervisors were employed to care for the volume during the rush days. This rapid rise from twenty-three in 1935, without all the factory superintendents and many of the producers understanding the benefits of using the service, created a reaction. In 1937 the number of stations using the service fell to twenty-three which reduced the number of men needed to thirty-five. The total cost to the factory per day for each inspector employed amounted to approximately \$9.00 which included the cost of the Federal Supervisor and the State field checking men. The indications as this report is written are that thirty-one factories at least will use the service during the 1938 season which reflects the growing popularity of the grading service. Farmers who produce the better quality of raw product are receiving a bonus while average quality is paid for at the flat price and inferior corn is given the lowest price of all.

More factories each year are adopting the grading method in paying for the raw product. The canner is enabled to put up a better and more uniform product at less labor cost, thereby making it easier to market his pack while the producer is paid for the raw product in proportion as high or low quality is delivered to the factory.

### SNAP BEAN GRADES

After two years of preliminary investigation the snap bean grades for canning were promulgated by the Federal Bureau of Agricultural Economics and for the first time a cooperative Federal-State grading service will be inaugurated in the 1938 canning season at eight different factories which also have twelve to fifteen substations.

### BLUEBERRIES

The blueberry industry, largely centered in the eastern part of the state, has made strides in improving the quality of its product during the last several years. Better field methods of culture and dusting have yielded a higher quality raw product and the canners have adopted improved methods of packing. The vacuum process in particular appears to be a forward step. The purchase of 332,268 bushels by the Maine Blueberry Packers in 1937 has been exceeded in size only by the 1930 crop. The results were identical and prices have declined consistently during the 1937-1938 marketing season. These low prices have increased the interest in better quality with the result that the blueberry section of the Maine Canners Association has requested the Federal Bureau of Agricultural Economics, the Maine Department of Agriculture and the Extension Service to conduct investigational work looking to the establishment of grades for canning blueberries. Arrangements have been completed to conduct this work cooperatively with the Riverside Canning Co. at Harrington and the Jasper Wyman & Son factory at Cherryfield. While much of the experimental work will be done at these two factories it is expected that valuable information will be furnished by many other packers who have shown deep interest in the work.

## Truth in Branding

In reporting for the second time on enforcement of the Maine Potato Branding Law the results are most encouraging. In the 1936-1937 potato shipping season 6874 individual checks were made on various shipments while in the 1937-1938 season 6195 checks were made. The latter season proved particularly difficult because of an unusual spread of net necrosis in table stock potatoes. To meet this situation the Utility Grade was promulgated December 13, 1937 and amended January 14, 1938 permitting 25% damage by net necrosis including not more than 11% serious damage. That such a grade was necessary was later demonstrated by the fact that 742 inspections were made for the Utility Grade alone. Had no such grade existed many individuals, unfortunate enough to have had their crop affected by this trouble would have found themselves in the situation of either shipping their product misrepresented as to quality or else having been obligated to dispose of their entire crop at the starch factories.

The enforcement of the potato branding law was carried out both years by three full-time inspectors and one part time inspector. During the 1937-1938 season the part time man was able to give less time to the potato law because of additional duties connected with the Maine Fresh Egg Law. During the 1936-1937 season 42 cases were taken into the Courts and in 1937-1938 the number dropped to 35. The cases were decided favorably to the State in all instances. A writ in equity to enjoin the Commissioner from enforcing the law was dismissed by Judge Barnes at Houlton March 9, 1938.

The Maine Fresh Egg Law became operative July 24, 1937 as the result of gradual development among the poultrymen of a sentiment favorable to this movement. The so-called Cold Storage Law for eggs had proven to be impracticable of enforcement. Unless the tedious work of checking through invoice and bills was followed to determine if the eggs had been in storage for thirty days, no case could be built up. So far as known there is no chemical process or candling operation which will reveal whether an egg has actually been in storage or not. Producers felt, however, that the consumers were entitled to receive a really first-class product when they asked for eggs as "strictly fresh," "native hennery," "nearby" or by similar

terms. It was equally reasonable, inasmuch as eggs were not sold by the pound, to at least give some indication as to the weight which might be expected per dozen. With these two thoughts in mind the Maine Fresh Egg Law provides that unless the size is marked on the basket or other container the consumer may expect large eggs (24 ozs. or better to the dozen). If the eggs will not meet this size but will average 21 ozs. to the dozen then they are to be marked "medium." Eggs not meeting the weight requirements of either medium or large are to be marked "small." A standard of quality is set up in the law requiring that any eggs represented as strictly fresh, hennery, native, etc., must at least meet the minimum specifications of U. S. Extra eggs. With this simple law an educational campaign was carried out in cooperation with the Extension Service through their County Agents and the Maine Poultry Improvement Association so that meetings were held wherever interested groups could be found. Several Chambers of Commerce called together their grocery divisions and the objectives of the law as well as its requirements were explained. This prepared the way for inspections when the law came into effect and from August 1, 1937 until June 30, 1938, 6826 definite inspections of different retail establishments were made. Reactions on all sides have been very favorable towards this truth in merchandising eggs program and so far it has been unnecessary to resort to court action.

### Advertising

The story of advertising reads like a romance to those who will follow the rise and fall of different articles which have adopted this aid to wide distribution. The public appears to be ever ready to accept something new and unusual. It is equally quick to drop and forget that which proves to be unsatisfactory or misrepresented. The matter of adapting advertising to the marketing of farm products has been tried for many years with citrus fruits, apples and cranberries but Maine has made few attempts at such promotional campaigns and some of these were none too successful in the years that are gone. However, the gradual increase in the use of national standards for farm products has laid a broad and firm foundation for advertising. Low prices and decreasing per capita consump-

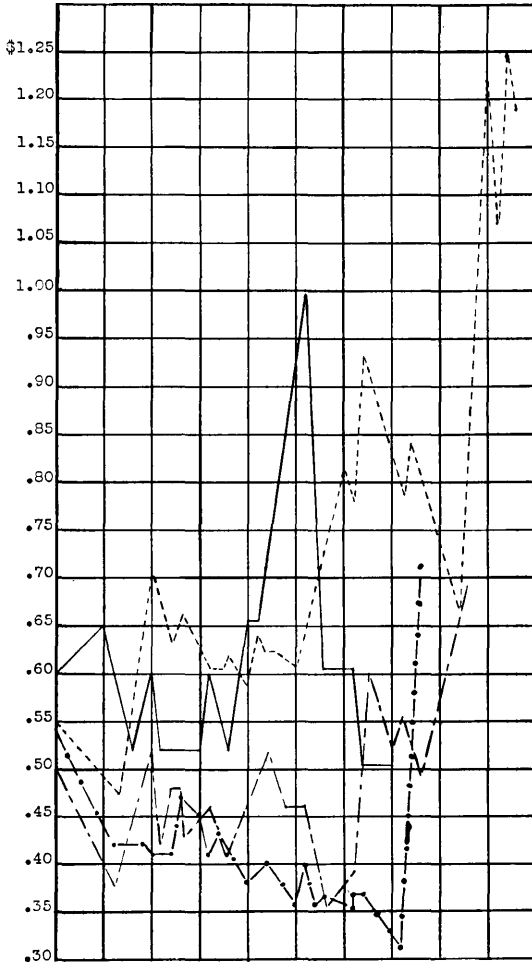
tion aroused the potato industry in particular to a realization of the gravity of the situation. The per capita consumption ran as high as 4.2 bu. per year at one time, of recent years it has fallen as low as 2.8 bu., thus it was plainly evident that the potato was losing its position as a staple food. By using a portion of the agricultural advertising fund of the Maine Development Commission in the season of 1936 very marked benefits were noted in the markets where this venture was tried. Consequently, the potato industry asked for and secured from the 1937 Legislature the potato advertising law and industry tax of 1c per barrel for carrying out the same. The formulation of a plan for the advertising campaign was developed through the cooperation of the potato industry advisory committee, the Maine Development Commission and Maine Department of Agriculture. Through the general standardization law authorizing the Commissioner of Agriculture to promulgate trade marks and brands, the blue, white and red State of Maine trade mark was developed and linked up as a means of identifying the better quality of potatoes wherever sold in original containers. The following graph depicts graphically the beneficial influence which this advertising program has had on the price level of the 1937 crop of potatoes, particularly when studied in connection with the table showing the production and stock on hand figures for the years 1924, 1931 and 1934 when the quantity and supplies available were most similar to the crop of 1937 of any seasons in the last eighteen year period.

While the prices realized by producers for the 1937 crop of potatoes could not be considered as covering the cost of production it should be recognized that compared with similar years of high production the returns were much larger. At least a part of this better situation may well be credited to the advertising program. It should also be borne in mind that better grading practices adopted voluntarily by the industry plus the pressure of the Maine Potato Branding Law and the efforts of the AAA to stabilize the price level through their starch diversion and relief purchase programs have all tended to bring about the higher price level for the 1937 crop of potatoes.

So successful has been the potato advertising program that the sweet corn canners have attempted a modest campaign

# Maine Potato Prices Delivered Basis f.o.b. Presque Isle, 100 lb. Sacks 1924, 1931, 1934, 1937

Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June



1924 —————  
 1931 - - - - -  
 1934 - · - - -  
 1937 ·······

Crop Year	U. S. Production 000 Omitted	Maine Production 000 Omitted	Stocks on Hand Jan. 1 U. S.	Stocks on Hand Jan. 1 19 Late States	Stocks on Hand Jan. 1 Maine, N. Y., Pennsylvania	Stocks on Hand Jan. 1 Maine
1924	384,166	40,848	119,223	103,890	45,858	22,090
1931	384,125	47,988	109,932	104,365	45,989	27,618
1934	406,105	55,404	126,715	112,267	58,766	31,657
1937	391,159	48,503	108,936	101,503	43,488	26,179

along the same lines and similar programs are under consideration by the blueberry packers.

### Market News and Statistics

For over ten years the division has issued a mimeographed weekly market news sheet condensing the items of most interest concerning the Boston, Portland, Lewiston, Augusta and Bangor markets. This has covered fruits, vegetables, dairy, poultry, feed and grain prices and market conditions. A summary of this report is broadcast each Thursday noon over WRDO and distributed to the Associated Press for release at the same time. This service was rendered for years without cost to citizens of the state. However, when the mailing list reached 2800 in 1936 the cost of postage was too much for the appropriation. Accordingly in August of 1937 a subscription of 25c per year was established in order to partly pay for the cost of mailing. This had had the effect of reducing the mailing list to approximately 1500.

Supplementing the news of the markets has been added a mimeographed sheet of want and for sale items for exchange between the farmers of the state. This feature has met with popular approval and many letters have been received testifying to the results from this means of exchange.

The Market News Service conducted during the season at Presque Isle has rendered for years a real service to the potato industry. The Bureau of Agricultural Economics provides an expert reporter with necessary equipment and materials to conduct this daily news service from September 15 to May 1 and the Division of Markets cooperates with financial assistance in the hiring of clerical help, purchasing of supplies and whatever information may be secured through the Inspection Service.

Routine statistical work is carried on each year covering the pack of blueberries, New England Crop & Livestock reviews with supplementary information in regard to rainfall, temperature, acreages, yields and total production over a long term have been offered. Special tabulations by towns have been purchased from the U. S. Bureau of the Census and issued in bulletin form for the 1935 agricultural census. Many individual requests for special statistical information have been answered by special accumulation of statistics from different sources.



## Cooperative Organizations

For several years the poultrymen of Maine have been agitating the need of a producer-owned outlet for their eggs similar to those existing in New Jersey, Connecticut, Massachusetts and New Hampshire. The Maine Poultry Improvement Association and the Extension Service joined in the discussion of such a movement. In April of 1937 a cooperative marketing demonstration was arranged between seventeen poultrymen, the Department of Agriculture and members of the Extension force whereby the poultrymen were to furnish from one to five cases of eggs per week, the Maine Department of Agriculture was to furnish equipment and a trained candler for a receiving and marketing station and the Extension Service was to acquaint the poultrymen with the whole marketing plan for a trial period of two months. The station was opened up on May 2 in Augusta and the demonstration continued throughout the months of May and June. Albion Goodwin, Jr. did a fine piece of work directing this project. Results were sufficiently encouraging so that on June 22 the Maine Poultry Cooperative was incorporated by the poultrymen themselves and on July 1 took over the demonstrations as a going concern. Owing to certain needs of larger space and more direct market contacts headquarters of the cooperative were first moved to Hallowell and finally to 34 Union St., Lynn, Mass. This latter move occurred in October at which time Mr. E. A. Trethewey was elected manager and the business is now conducted as a cooperative sales agency and auction. A real place is being made for Maine eggs in the Boston market and with increasing volume the cooperative may continue to render a valuable service to Maine poultrymen.

The marketing of milk in the Boston milk shed despite all efforts to bring about a reasonably stable situation seems to be in a chronic state of chaos. The New England Milk Producers Association for many years has spoken for the dairy industry with force and effectiveness. Changing conditions and the advent of the AAA created new problems complicated by a strike involving two of the largest Boston distributors in December of 1936, the unfortunate result of which has been a wide split in the thinking of Maine dairymen. The net result was a heavy withdrawal of membership from the milk association.



*The Last Load*

This situation continued several months until the old principle that the dairymen could make effective their opinions only through organization became apparent. From loosely organized local units was developed a sentiment in favor of a state wide and perhaps regional organization. This crystalized on December 3, 1937 in the incorporation of the Maine Dairyman's Association, Inc. which has now secured a signed membership of over 500 and is employing a full time field man (Mr. Edward Babb) checking tests and weights of their membership. This organization requested the milk section of the AAA through the Boston administrator, Mr. Samuel W. Tator, for recognition as a producers' cooperative. This request was made immediately after the association was organized in December but up to June 30, 1938 various technicalities appear to have stood in the way of official recognition.

Farmers' Unions, Grange Stores and various other types of cooperative organizations continue their service as reported in previous years.

### Miscellaneous

It is needless to remark that the amount of correspondence involved in carrying on the work of the Division of Markets has multiplied considerably on account of the new duties committed to the division by the legislature as well as by increased use of the services rendered as routine activities for several years. It is nothing unusual for the Chief alone to dictate from thirty to forty letters in one-half day and this does not take account of extensive correspondence by the Head Potato Inspector at Caribou and the Assistant in the office at Augusta. Publicity work through radio talks, circular letters and lectures take up considerable time. In the two year period the head of the division has attended 153 meetings with an attendance of 8471 people. Nine special cooperative poultry meetings were addressed by the fresh egg inspectors besides several other public meetings for discussion of grading work of various types.

Along with these lectures have often been conducted demonstrations in egg candling, potato grading or apple sorting. Incidentally, the apple growers were able to dispose of several carloads to the Federal Surplus Commodities Corporation through being able to have official inspection of their stock.

Exhibits still continue to furnish one of the most valuable educational and advertising mediums through which public attention and interest in Maine products can be aroused. The Approved Maine Roadside Sign continues as a popular help for both the farmer and the consumers. The farmer benefits through having the motorist quickly identify his stand as one which specializes in the finest of locally grown fruits and vegetables. The consumer is assured of being able to patronize the roadside market where the prime aim is to sell only freshly picked, full weight and shown quality of the products that tickle the taste of the exacting consumer. These blue and gold signs were first used to identify roadside markets in 1932 when fourteen were displayed. This has grown gradually and thirty-four were used in 1937 and an equal number is already spoken for for the 1938 season.

In conclusion, the head of the division as well as the heads of various activities connected with the division wish to express their appreciation of the help and cooperation received from other members of the Department, the Extension Service, the Press of the State and various federal and other agencies who have cooperated in the improvement of marketing methods in the State of Maine.

Respectfully submitted,

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

## Report of the Chief, Division of Inspection

To Hon. Frank P. Washburn, Commissioner of Agriculture:

I respectfully submit herewith my report covering the work of the Division of Inspection from July, 1936 to July, 1938.

The work of this Division has consisted in the enforcement of the laws regulating the sale of agricultural seeds, commercial feeding stuffs, commercial fertilizer, drugs, foods, fungicides and insecticides; the enforcement of the weights and measures law, and the regulating, grading and packing of apples.

### Seed Inspection

The results of the analyses of the samples collected by inspectors together with samples from dealers may be found in Official Inspections No. 166.

	1937	1938
Number of samples collected . . . . .	104	190
Hearings arranged . . . . .	19	24

### Feedingstuffs Inspection

The following table briefly outlines the scope of the work with feedingstuffs:

	1937	1938
Number of samples collected from July, 1936 to July, 1937 . . . . .	999	
Number of samples collected from July, 1937 to July 1938 . . . . .		597
Number of brands registered . . . . .	1224	1354
Number of hearings arranged . . . . .	139	117

The results of analyses of the samples taken may be found in Official Inspections Nos. 164 and 168.

### Fertilizer Inspection

In 1937 and 1938, samples of practically every registered brand of fertilizer were collected and analyzed, endeavor being made to obtain as many samples as possible from the farmers having fertilizer on hand.

The following table briefly outlines what was accomplished:

	1937	1938
Number of brands registered . . . . .	391	374
Number of samples collected . . . . .	532	482
Number of hearings arranged . . . . .	40	56

The results of the analyses of the samples collected may be found in Official Inspections No. 165.

### Fungicide and Insecticide Inspection

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

	1937	1938
Number of brands registered . . . . .	331	336
Number of samples collected . . . . .	69	58
Number of hearings arranged . . . . .	6	4

The results of analyses of samples may be found in Official Inspections No. 166.

### Food Inspection

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

	1937	1938
Number of samples collected . . . . .	84	241
Number of hearings arranged . . . . .	57	60
Number of non-alcoholic beverage licenses issued . . . . .	176	204
Number of sardine licenses issued . . . . .	28	27

In the general work of food inspection, the collection of samples represents only in a small way the amount of work accomplished, and as always been our custom we have tried our best to effect the best results, that is by education and prosecution. Particular attention has been paid during the past two years to bottling plants where carbonated beverages are manufactured.

### Drug Inspection

The inspection of drug stores and the collection of samples has been carried on in the usual manner by an inspector who is a registered druggist.

	1937	1938
Number of samples collected . . . . .	122	145
Number of hearings arranged . . . . .	30	38

The results of the analyses of the samples of foods and drugs collected have been published in Official Inspections Nos. 163 and 167.

### Collaboration With Various Federal Agencies

The very nature of the work assigned to the Division of Inspection, namely, safeguarding the food supply of the people of the State of Maine, has brought very definitely to our attention the necessity of the help and the assistance that has been enjoyed from various Federal agencies, in the control and distribution of various kinds of foods.

### Shell Fish

The taking and shipping of shellfish into Massachusetts is a problem in itself. A Massachusetts Statute requires that in order to legally distribute and sell shellfish within the borders of that State there must be on file in the office of the Commissioner of Health of that State a certificate issued by the food control officials of the state where the shellfish had origin, attesting to the sanitary conditions of the flats and beds where such shellfish were taken, and the quality of the shellfish thus sold and distributed. This certificate must also bear the stamp of approval of the U. S. Public Health Service.

Fortunately the legislatures of 1933 and 1935 granted authority to the Commissioner of Agriculture and the Commissioner of Sea and Shore Fisheries, to issue certificates and licenses respectively, and with this authority of the Statute it has been possible to engage in a definite work with the U. S. Public Health Service, and U. S. Food & Drug Administration in certifying as to the quality of shellfish shipped from Maine, and attesting to the flats and beds where such shellfish were taken.

Upon recommendation of officials of the U. S. Public Health

Service a resurvey of the clam flat areas on the Coast of Maine was undertaken in the Autumn of 1937, and continued into the Spring of 1938. The services of a trained sanitary engineer were secured and a bacteriological laboratory with a bacteriologist in charge, was added to the equipment of the chemical laboratory where food and drug samples have been handled in the past. Numerous sea water samples were taken and rather a complete survey was made from the mouth of the Piscataqua River to the mouth of the Penobscot River. As a result of this survey several closed areas were added to the territory that had already been posted, and a more complete supervision has been maintained of flats and shucking houses than ever before. An inspector of the department has devoted most of his time to this work both in Summer and Winter.

### **Blueberries**

In order to assist in marketing blueberries it has been necessary to set up a system of inspection to determine the quality of the berries and secure if possible, immunity from seizure in the markets beyond our borders; and the Bureau of Entomology in their investigation of the blueberry fly in Washington County, recommended as a remedial measure to prevent infestation of blueberries by the blueberry fly, dusting of blueberry bushes and growing areas, with calcium arsenic. The plan recommended by the U. S. authorities has been almost universally adopted by all blueberry growers, and we hope this Division has assisted materially in working with blueberry growers and packers in the application of insecticides, to prevent infestation. But as with the spraying of larger fruits such as apples, pears and peaches, so here, a danger was discovered in marketing blueberries with a residue of dust poison. So it has become necessary to determine the quality of berries that have been in contact with arsenical dust owing to the perishable nature of the product. With the necessity for immediate examination and early reports, field laboratories with chemists in charge, were established at points where blueberries were shipped in commercial quantities, at Rockport, Rockland, Cherryfield and Harrington. These field stations were in operation throughout the blueberry seasons. At these field stations it has been possible to make tests of berries that have been fly infested and



also for berries contaminated by arsenical dusting or spraying. With this surveillance of blueberry distribution it has been possible to prevent the shipment of berries either fresh or canned, carrying objectionable quantities of dust or spray residues.

### **Maple Sugar and Syrup**

Unknown to most people of the State an industry has been conducted in the Northern portion of Maine along the Canadian border by peasant farmers from the Dominion of Canada. This industry is the production of maple sugar and maple syrup. For some forty years or more these Canadian's have been permitted by the U. S. Government to cross the border in the Spring for the purpose of tapping maple trees and producing syrup and sugar. The maple syrup and sugar industry outside of that territory in Maine is small. And here, on account of the peculiar location, far from roads and not easily accessible, it has not attracted residents of Maine to the job.

Early in 1937 and again in the Spring of 1938 in collaboration with Federal officials a canvas was made of the situation in Northern Maine and samples of sugar and syrup produced there were collected. Analysis of these samples showed heavy lead contamination. and as a result of this investigation in the Spring of 1938 after numerous conferences with Canadian buyers and officials permission was granted finally to the Canadian farmers to return to the scene of their operations and manufacture sugar and syrup in the Spring of 1938, with the understanding that none of this product would be used for food, and that it would be sold to tobacco manufacturers to be used in chewing tobacco and cigarettes only, but not for food on account of the danger of lead contamination.

### **Sardines**

The statutes definitely charges that officers of the Department of Agriculture shall see that sardines packed in Maine are packed in conformity with the requirements of the Federal Food and Drug Act and the Maine food law. In discharge of this duty particular attention has been paid to the sardine factory inspection. In 1937 twenty-eight sardine factories were

licensed to pack sardines and in 1938 the number was twenty-seven.

In 1938 in collaboration with U. S. Food & Drug Administration new definite regulations governing toilet and general sanitary conditions in the factories were published and put into effect and enforced. In response to the strengthening of these regulations it is gratifying to report that department officials received splendid co-operation from most of the packers. As in our report of 1934 and 1936, it is gratifying to report that the statutes requiring Winter Yellow Oil in sardines has done much to improve the quality of the Maine pack. Supplementing this statute a new regulation will be put into effect for the season of 1938 that will set definite standards for free fatty acid, color and cold test for Winter Pressed Cottonseed Oil, and we are sure that this will also greatly help the industry. The pack of sardines for the season of 1937 was 1,759,819 cases. The season of 1938 thus far indicates that the pack for 1938 will be considerably less than in 1937.

### **Recommendations**

Upon recommendation of soil experts fertilizer manufacturers have for several years added magnesium to the complete fertilizer sold to the farmers of Maine, and as a result have turned to this department with the request that determinations be made for magnesium content in all samples guaranteed to contain this element. This is an added expense to the cost of analysis. With this in mind we recommend a change in the fertilizer law at the next session of the legislature, that will require an additional registration fee for all fertilizers that contain magnesium, and authority for the collection of that fee.

Again as in the report of 1934-36, a recommendation is made that a closed season during the Summers months prohibiting the shipping of shellfish from Maine would work to advantage.

We would also recommend that some sort of definite regulation be established under statute providing for ante-mortem and post-mortem examination of all beef killed for intrastate trade, in keeping with the provisions already made under the Federal Act for interstate trade.

### Conclusion

In conclusion I wish to express my appreciation for the help and cooperation of many Federal agencies, the officials of the Maine Extension Service, the Maine Agricultural Experiment Station, and to you and your wise counsel and helpful attitude in the administration of affairs assigned me.

Respectfully submitted,

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

## Report of the Deputy State Sealer of Weights and Measures

To Hon. Frank P. Washburn, Commissioner of Agriculture:

I respectfully submit, herewith, my report covering the work of the Bureau of Weights and Measures from July 1, 1936 to July 1, 1938.

The routine work has been carried on as usual — testing new equipment purchased by the various towns for the use of their local sealers, visiting and assisting the local sealers in their work, reweighing package goods, testing heavy duty scales, oil pumps, bottles, gasoline pumps and vehicle tanks.

From August 9th to September 7th, 1937 the Vehicle Scale Testing Unit of the National Bureau of Standards was in the state upon special invitation from our Bureau.

This Testing Unit consists of a motor truck upon which is mounted a power-operated, horizontal-boom crane. The primary load consists of fifteen 1,000 lb. test weights and the gross weight of the test weights and truck is approximately 40,000 lbs.

Because of the limited time allotted to us we could not cover the whole state but scales were tested in the following places: Wells, Biddeford, Saco, Portland, Brunswick, Lewiston, Auburn, Augusta, Waterville, Bangor, Belfast, Rockland and Bath.

### Results of Tests

The scales reported upon herein, are classified as accurate or inaccurate upon the basis of the Tolerances adopted by the Twenty-Seventh National Conference on Weights and Measures which, in general, may be stated as + (plus) or — (minus) 0.20 percent, applied to errors of the scale indications with respect to the standard-weight loads used.

Summary Table

Ownership	Number tested	Found Accurate		Found Inaccurate	
		Number	Percent	Number	Percent
Coal Dealers	44	12	27	32	73
Miscellaneous	11	2	18	9	82
State and Municipal	4	3	75	1	25
Total	59	17	29	42	71

In each of the places visited by the Testing Unit, tests of vehicle scales were made by the local sealers of weights and measures. The testing equipment utilized, however, appeared to be inadequate for the purpose. It was reported that the test weight loads used by the local sealers ranged from a minimum of 250 pounds to a maximum of 3500 pounds. In most cases a passenger automobile or light truck was used as a strain load in combination with the test weights but the Testing Unit's tests indicated that the examinations made by the local sealers did not develop the errors which occur under heavier loads.

As a result of the tests made by the Vehicle Testing Unit it is evident that the various towns and cities cannot expect to have accurate tests of their heavy duty scales with the limited equipment which they possess. The National Bureau of Standards has recommended that suitable equipment should be provided by the state and used by the state in cooperation with the local weights and measures officials for the regular testing of all vehicle scales throughout the state.

On January 1, 1937 the following regulation became effective: "All future replacements or new installations of gasoline pumps, other than the visible bowl type, shall have positive piston displacement type meters and air eliminators in order to insure the delivery of 231 cubic inches per indicated gallon."

This regulation prohibited the installation of hand gasoline pumps after January 1, 1937. All gasoline pumps of this type which were installed before this date were allowed to remain in operation. As result of this regulation many new electric pumps have been installed and the public has benefited by this much improved type of pump as well as by quicker service with each purchase of gasoline.

There are at the present time 245 sealers of weights and measures who are serving in the various cities and towns of the state. In many cases one sealer is appointed to serve in several towns. The sealers are required by law to make an annual report of their work to this Bureau and a summary of their work by counties is hereby appended.

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

Respectfully submitted,

G. K. HEATH, *Deputy State Sealer*

## STATE REPORT OF WEIGHTS AND MEASURES FOR THE YEAR 1937

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 . . . . .	1449	643	6	234	21	553	12	119	10	0	3	25	13	32	1	2	0	19	0	0	0	0	0	0	0
Aroostook . . . . .	908	558	9	79	28	636	521	153	14	0	2	6	33	3	0	0	0	51	0	0	0	0	0	0	0
Cumberland . . . . .	3252	859	23	208	37	1165	0	156	33	74	0	64	135	44	0	5	1	77	0	4	3	0	5	0	1
Franklin . . . . .	318	307	10	74	10	243	12	56	13	0	0	0	2	2	0	0	0	5	0	0	0	0	0	0	0
Hancock . . . . .	673	342	5	238	42	397	205	97	29	0	0	4	5	0	0	0	1	5	0	1	1	0	0	0	0
Kennebec . . . . .	1932	3433	172	478	213	847	0	282	33	0	20	46	41	114	5	18	3	22	0	5	2	1	0	1	1
Knox . . . . .	743	524	29	584	40	291	1192	49	23	0	2	12	5	6	2	11	2	2	11	0	0	0	0	0	0
Lincoln . . . . .	392	563	2	144	13	224	640	45	6	0	0	2	1	0	0	0	1	1	0	0	0	0	0	0	0
Oxford . . . . .	659	938	12	68	49	398	200	67	10	0	0	12	34	76	0	4	5	12	32	0	0	0	0	0	2
Penobscot . . . . .	1466	1429	13	93	26	660	313	157	33	0	4	32	15	3	0	0	0	2	0	0	1	0	0	0	0
Piscataquis . . . . .	371	209	4	39	13	205	0	25	4	0	0	5	6	3	0	3	0	2	0	0	0	0	0	0	0
Sagadahoc . . . . .	456	159	0	24	4	220	0	23	6	0	0	9	4	0	2	1	1	5	0	0	0	0	0	0	0
Somerset . . . . .	471	370	15	99	13	386	3	61	12	0	0	9	11	21	8	6	0	30	6	6	0	0	0	0	1
Waldo . . . . .	353	404	0	49	2	184	0	76	19	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington . . . . .	534	354	42	343	34	346	675	83	61	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0
York . . . . .	842	179	12	115	18	424	340	53	6	0	0	5	46	2	1	1	0	15	0	1	0	0	0	0	0
<b>Totals . . . . .</b>	<b>14819</b>	<b>11271</b>	<b>364</b>	<b>2869</b>	<b>563</b>	<b>7179</b>	<b>4113</b>	<b>1507</b>	<b>312</b>	<b>74</b>	<b>36</b>	<b>235</b>	<b>356</b>	<b>309</b>	<b>19</b>	<b>70</b>	<b>13</b>	<b>247</b>	<b>43</b>	<b>20</b>	<b>3</b>	<b>5</b>	<b>1</b>	<b>5</b>	

# STATE REPORT OF WEIGHTS AND MEASURES FOR THE YEAR 1638

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 . . . . .	860	563	4	129	10	598	0	114	10	0	0	8	17	7	0	0	0	29	0	0	0	0	0	0
Aroostook . . . . .	1141	374	4	110	26	661	204	176	10	0	0	11	25	4	0	0	5	37	4	4	0	0	0	0
Cumberland . . . . .	2649	1043	23	117	76	1181	0	205	29	73	3	129	141	13	0	0	5	24	4	4	0	0	0	0
Franklin . . . . .	266	232	0	49	0	171	12	48	12	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Hancock . . . . .	535	364	2	182	32	269	357	59	36	0	0	0	8	0	0	1	0	0	0	3	0	0	0	0
Kennebec . . . . .	1751	2516	159	599	172	638	0	193	44	0	21	39	28	82	99	41	2	32	9	9	2	0	0	3
Knox . . . . .	688	579	22	392	26	310	854	45	16	0	0	10	5	6	0	10	1	1	12	0	0	0	0	0
Lincoln . . . . .	400	561	4	249	11	221	1200	81	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Oxford . . . . .	393	279	20	54	1	338	0	67	0	0	0	4	8	5	2	0	0	0	0	0	0	0	0	0
Penobscot . . . . .	1383	1435	33	115	20	688	625	161	35	0	10	12	9	7	0	0	0	0	0	0	0	0	0	0
Piscataquis . . . . .	268	150	8	30	7	187	0	94	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Sagadahoc . . . . .	325	44	0	0	0	148	0	14	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Somerset . . . . .	508	384	11	56	20	414	16	69	2	0	0	14	23	13	0	8	2	23	0	4	0	0	0	0
Waldo . . . . .	238	416	0	50	3	146	0	43	29	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0
Washington . . . . .	473	358	27	167	19	315	800	118	55	0	0	2	4	0	0	0	0	0	0	0	0	0	0	0
York . . . . .	1151	99	4	233	21	576	0	75	0	0	2	30	75	0	0	8	2	12	0	1	0	0	0	2
Totals . . . . .	13029	9397	321	2532	450	6861	4068	1562	299	73	40	281	345	146	9	75	13	177	16	25	2	0	0	5

DEPARTMENT OF AGRICULTURE