

MAINE STATE LEGISLATURE

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PUBLIC DOCUMENTS

OF THE

STATE OF MAINE

BEING THE

REPORTS

OF THE VARIOUS

**PUBLIC OFFICERS
DEPARTMENTS AND
INSTITUTIONS**

FOR THE TWO YEARS

JULY 1, 1928 - JUNE 30, 1930

AGRICULTURE OF MAINE

TWENTY-FOURTH REPORT

OF THE

Commissioner of Agriculture

OF THE

STATE OF MAINE

July 1, 1928 to July 1, 1930



GEORGE A. YEATON

Farmer, Active Granger, Extension Worker, State Horticulturist.
1860-1929. For fifty years friend, counselor and faithful worker
for the farmers of Maine.

DEPARTMENT OF AGRICULTURE

To *His Excellency, Wm. Tudor Gardiner, Governor of Maine,
and Council:*

As provided in the Revised Statutes of Maine, Chapter 39,
I am submitting a brief report of the work of the Department
of Agriculture for the period commencing July 1st, 1928, and
ending June 30, 1930.

Respectfully submitted,

F. P. WASHBURN,

Commissioner.

Augusta, Maine, June 30, 1930.

MAINE DEPARTMENT OF AGRICULTURE

Commissioner,
Deputy Commissioner,

F. P. Washburn, Augusta
Vacant

Staff

<i>Chief, Division of Inspection,</i>	A. M. G. Soule, Augusta
<i>Chief, Division of Plant Industry,</i>	E. L. Newdick, Augusta
<i>Chief, Division of Animal Industry,</i>	H. M. Tucker, Yarmouthville
<i>Chief, Division of Markets,</i>	C. M. White, Augusta
<i>Dairy Inspector,</i>	Clayton P. Osgood, Fryeburg
<i>Assistant Dairy Inspector,</i>	Gordon W. Drew, Pittston
<i>Assistant Dairy Inspector,</i>	Ernest F. Gilpatrick, Danforth
<i>Sheep Specialist,</i>	C. H. Crawford, Dexter
<i>Horticulturist,</i>	Robt. F. Chandler, Jr., New Gloucester
<i>Statistician</i>	George H. Chick, Monmouth
<i>Deputy Sealer of Weights and Measures,</i>	John H. Austin, So. Berwick
<i>Field Agent, Division of Markets,</i>	Fred C. Sturtevant, Hebron
<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, European Corn Borer Control,</i>	C. M. Washburn, Rockland

Chief Clerk

Dorothy M. Lippincott, Augusta

Clerks and Stenographers

Blanche E. Yeaton,	Augusta
Ethel Quinn,	Hallowell
Viola R. Martin	Augusta
Edith M. Farnham,	Augusta
Doris E. Cram,	Litchfield
Gertrude H. Grimes,	Chelsea
Rhea R. Woodman,	Augusta
Geneva M. Hall	Augusta

Report of the Commissioner of Agriculture

Recognizing the fact that biennial reports bearing upon the activities of a Department that has to do largely with the rapidly changing and constantly advancing program of Agriculture, are in a manner ancient history as they reach those whom they are designed to assist and also that the costs of Departmental printing are constantly ascending, it is proposed to make this a brief statement of the work of the Department in order that, if any substantial saving shall be effected thereby, it may be used for dissemination of more up to date information upon matters in which our farmers are concerned and upon which they frequently demand enlightenment and advice. I am presenting concise statements of the work of our divisions and bureaus as furnished by the chiefs and heads thereof. More detailed accounts of any special activities may be obtained at any time from any of the officials of the Department. Reports of the State Pomological Society and State Dairymen's Association are given only in skeleton form, but the Department stands ready to authorize and finance the printing at all times of such lectures and papers as the officers of said societies may approve. All data relative to Agricultural Societies and their officers with time of their various meetings are prepared and freely distributed.

Two activities of the Department may not be embraced within the appended division and bureau reports. Their supervision is assumed by the Commissioner in order to relieve the other fully engaged divisions.

Farmers' Institutes have been held during the biennium in connection with Grange meetings, Farm Bureau events and special gatherings of agriculturists all over the State. This is in accordance with our law and through such cooperation with other existing agencies we are undoubtedly able to reach a much larger circle of interested people and at a less expense. Service clubs and women's organizations are also manifesting a greater interest in the affairs of our farmers and in the operations of their State Government and the calls from

these are constant and increasing. During the past year speakers from the Department of Agriculture have been called upon to attend more than two hundred gatherings and they have probably met 20,000 people. The opportunities and courtesies uniformly extended to us by all the organizations we have met are deeply appreciated.

European Corn Borer Control has been carried on much as in the preceding period except that with the close of the 1929 season the greater part of the aid formerly furnished by the United States Department of Agriculture was withdrawn and with it the authority to maintain any interstate quarantine line. With our own funds and forces we have, however, set up the most effective defense practicable and have had always one hundred per cent coöperation from our corn growers and canners. There was a lamentable spread in 1928-1929 covering one hundred towns and cities largely along the coast, but it is more pleasing to report that the infestation in this area was not maintained and that the 1930 spread is only over eleven towns of which five are not near any great corn producing area. It is the belief of those engaged in this work that climatic conditions and the willingness of our farmers to coöperate in the fall plowing campaign, which is required, are largely responsible for the fact that no commercial damage has yet resulted. So long as heavy infestation exists in other New England areas, however, and so long as shippers and hucksters in those States, look to Maine as their market for vegetation maturing before ours, it seems advisable to maintain our intrastate restrictions. The Department has announced that if any corn actually infested with borers cannot be withheld in interstate passage, its entry into Maine will be treated as a violation of our Pure Food laws.

With this outline of two special lines of work I am appending the statements of my associates in the many other activities of the Department.

From all, I have had the finest coöperation and support; and the consideration and support, and the consideration given our Departmental affairs by your Excellency and Council, has been most gratifying and helpful at all times.

Report of Chief of the Division of Inspection

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

I respectfully submit herewith my report covering the work of the Division of Inspection from July, 1928, to July, 1930.

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

Prominent in the work of the Division have been added activities arising from new Statutes placing a definite supervision and inspection of sardine factories, with the Department.

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. 134.

	1929	1930
Number of samples collected.	533	611

Feedingstuffs Inspection

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

	1929	1930
Number of samples drawn from Sept., 1928, to May, 1929.	678	
Number of samples drawn from Oct., 1929, to June, 1930.		580
Number of brands registered.	794	847

The results of analyses of the samples taken may be found in Official Inspections No. 132.

Fertilizer Inspection

In 1929 and in 1930, 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:

	1929	1930
Brands registered.....	325	315
Samples collected.....	346	372

The results of the analyses of the samples collected may be found in Official Inspections, No. 133.

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.

The table below briefly outlines the scope of this work:

	1929	1930
Number of brands registered.....	241	229
Number samples collected.....	91	46

The results of analyses of samples may be found in Official Inspections, No. 134.

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. As a result of new duties imposed by the Legislature of 1929, authorizing supervision and inspection of sardine factories, much new work has been added to this branch of the inspection service.

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.

The results of the analyses of the samples of foods and drugs collected have been published in Official Inspection No. 131 and No. 135.

Special Activities

In 1929 and 1930 an unusual situation arose relative to the marketing of Maine clams, resulting from the passage of a special act by the Massachusetts Legislature prohibiting the introduction of clams into Massachusetts unless such shellfish were given an accredited quality and certified at point of origin by food officials. In order to meet these requirements, this work consisting of the inspection of clam flats and beds, and shucking houses, has been attended to.

A great deal of work has been done both in factory and field work relative to the canning of blueberries. In all this work of special endeavor there has been a definite system of definite collaboration with Federal officials, which has been very helpful, and of decided advantage in the accomplishment of inspection work.

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

Respectfully submitted,

A. M. G. SOULE,

Chief, Division of Inspection.

Report of the Deputy Sealer of Weights and Measures

To *A. M. G. Soule, Chief, Division of Inspection:*

As State Deputy Sealer, I herewith submit to you a report of the work done in this Bureau by C. O. Brown, deceased, my predecessor, and myself, covering the period from July first, 1928 to July, 1930.

This work covers a number of activities, testing of new equipment, purchased by the various towns for the use of their local Sealers; visiting the local Sealers and assisting them in their work; re-weighing package goods; testing heavy duty scales, oil pumps, bottles, and gasoline pumps.

There are approximately 16,000 gasoline pumps in our State, and during the summer months, I personally tested 1024 pumps, and while a few were condemned, the others were within the tolerances allowed.

During the period covered by this report, following the mandates of the Revised Statutes, the working standards of the State of Maine and all measuring devices were sent to the U. S. Bureau of Standards at Washington, D. C., where they were checked, verified and returned to this office.

The Statutes provide that every five years city and town standards must be verified by the State standards. During this period a number of towns and cities submitted their equipment. Only a few pieces were found to be inaccurate, and in each case, were repaired at this office.

The Legislature of 1929 added two amendments to the weights and measures law. One provided for an increase of fees to be charged by the local Sealers, and the other legalized the use of the ten ounce milk bottle. I find that the people throughout the State are taking more interest in this work, and this is demonstrated by the number of towns and cities that are purchasing new equipment for their sealers, which has been submitted to this office for verification, as required by law.

At the annual State Sealers Convention, we had an opportunity to hear from many of our local sealers and we also had an interesting talk from Mr. Ralph Smith of the U. S. Bureau of Standards of Washington, D. C. When the meeting was held in Portland in 1929, I was elected by the Maine Sealers Association as their delegate to the Massachusetts State Convention which was held in Beverly. I attended this meeting which was very instructive and helpful.

I also attended, in 1929, the National Conference of Weights and Measures Officials at Washington, D. C., where the problems of the different States were discussed and plans for new legislation were adopted.

A summary of the work done by local Sealers is hereby appended.

Respectfully submitted,

J. H. AUSTIN,

State Deputy Sealer of Weights and Measures.

STATE REPORT OF WEIGHTS AND MEASURES FOR THE YEAR 1928

NUMBER TESTED AND SEALED

NUMBER CONDEMNED

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.....	2251	1505	71	257	34	648	7	444	32	0	0	4	39	0	2	0	0	9	0	4	0	0	0	0
Aroostook.....	1192	912	33	220	53	265	30	166	51	0	0	0	26	0	0	0	0	15	0	0	0	0	0	0
Cumberland.....	3510	2746	193	2050	217	1159	319	293	60	184	55	1	264	24	10	5	94	0	5	0	21	5	0	0
Franklin.....	343	479	2	178	42	157	40	47	26	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
Hancock.....	548	429	32	369	65	203	1119	63	33	0	0	0	4	0	0	0	0	3	0	0	0	0	0	0
Kennebec.....	1354	1549	98	437	171	537	148	151	62	0	17	0	45	54	17	23	14	41	0	2	0	0	3	0
Knox.....	778	1149	42	1252	57	296	1954	246	27	0	0	0	8	20	2	16	1	1	31	2	2	0	0	0
Lincoln.....	388	284	50	218	16	130	1152	60	5	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
Oxford.....	496	240	15	188	23	320	48	18	0	0	0	0	7	0	0	1	0	1	0	0	0	0	0	0
Penobscot.....	1248	1410	31	463	70	494	101	170	10	0	0	0	38	10	0	0	4	18	0	0	0	0	0	0
Piscataquis.....	245	396	18	170	20	94	5	64	22	0	0	0	1	4	0	0	0	0	0	2	0	0	0	0
Sagadahoc.....	370	390	10	142	9	110	8	97	6	0	0	0	11	2	1	0	0	0	0	1	0	0	0	0
Somerset.....	450	324	42	85	20	205	0	90	11	0	0	0	11	10	0	0	8	0	0	1	0	0	0	0
Waldo.....	544	782	230	49	18	152	60	120	101	0	0	0	3	2	0	0	5	0	0	0	0	0	0	0
Washington.....	348	420	52	189	20	184	40	20	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
York.....	208	105	20	180	40	240	500	49	12	0	0	0	18	0	0	0	0	12	0	0	0	0	0	0
Total.....	13885	13120	939	6447	875	5194	5531	2098	458	184	72	5	485	126	30	45	126	100	36	12	21	5	3	0

STATE REPORT OF WEIGHTS AND MEASURES FOR THE YEAR 1929

NUMBER TESTED AND SEALED

NUMBER CONDEMNED

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	2171	1538	61	347	26	534	22	254	16	0	0	3	34	3	2	6	0	26	0	0	0	0	0	0	0
Aroostook	1460	1360	43	570	74	394	261	164	73	0	0	3	23	15	0	12	5	9	0	0	3	3	0	0	0
Cumberland	3626	2168	148	3460	251	1330	11062	390	0	109	27	0	206	18	4	2	9	138	0	7	7	0	0	0	0
Franklin	410	735	8	147	21	170	0	48	16	0	0	0	4	0	0	0	0	10	0	0	0	0	0	0	0
Hancock	517	450	30	394	50	213	325	72	28	0	0	0	1	0	1	4	0	1	0	0	0	0	0	0	0
Kennebec	165	2036	109	725	284	767	0	221	80	0	15	0	24	12	11	17	3	26	0	13	2	2	0	1	0
Knox	310	510	34	146	35	144	0	54	21	0	0	0	2	1	0	1	0	1	0	0	0	0	0	0	0
Lincoln	359	563	53	277	18	124	546	62	7	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Oxford	505	323	16	158	20	338	50	98	20	0	0	0	2	2	0	0	0	5	0	0	0	0	0	0	0
Penobscot	848	1022	90	261	40	539	262	183	0	0	0	0	11	21	0	3	2	21	0	0	0	0	0	0	0
Piscataquis	245	496	6	160	24	116	5	77	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sagadahoc	416	394	10	173	18	139	6	101	8	0	0	0	13	4	1	0	0	1	0	0	0	0	0	0	0
Somerset	479	386	59	155	39	269	0	108	14	0	0	0	16	14	0	9	0	10	0	2	0	0	0	0	0
Waldo	606	1298	233	54	22	170	75	140	110	0	0	0	2	3	0	0	6	0	0	0	0	0	0	0	0
Washington	437	510	67	221	31	197	50	81	41	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
York	907	217	55	272	30	386	4952	144	40	0	0	0	26	5	3	1	0	18	0	0	0	0	0	0	0
Total	13461	14006	1022	7520	983	5830	17616	2297	506	109	42	6	370	98	22	55	25	256	0	25	5	7	1	0	0

DEPARTMENT OF AGRICULTURE

Biennial Report, Division of Plant Industry

Hon. Frank P. Washburn, Commissioner of Agriculture

The following is a very brief summary of the activities of the Division of Plant Industry covering the period from July 1st, 1928, to July 1st, 1930.

Seed Certification

In 1928, 16,000 acres of potatoes passed the field inspection required by this Department. During the shipping season 645,028 barrels were sent to twenty-three states. In 1929, 10,799 acres passed inspection and 554,094 barrels were shipped to twenty-five states.

The outstanding thoughts in seed certification work at present are the existing need of more and better foundation stock, Green Mountains and an advertising campaign to acquaint southern growers with the methods of certifying seed in Maine. The foundation stock situation has been getting worse each year and there does not seem to be any help in sight as yet. Tuber unit plot work is a success only in isolated cases and no definite reason can be given why this is true. In sections that have been growing nearly disease free Mountains, plant diseases are slowly creeping in so that it is becoming harder each year to secure Mountains which are capable of being called foundation stock. At present we are getting along with the available sources of supply, but the territory within which the best type of seed can be obtained seems to be growing smaller each year.

Our inspectors have been with us for several years and the work is progressing. No attempt is being made, however, to carry on a consistent advertising campaign, to make an outlet for the product of the inspectors' work. We are a long way from our markets and should have contacts in the different seed buying states.

At present there does not seem to be any organization to lead off in conducting such a campaign. It is our belief that our work cannot hope to expand to its fullest extent until something of this nature takes place. Competition in the certified seed business is very keen.

Relative yields in our total potato crop have been exceptionally good during the last two years. The 1929 crop was the largest any state ever produced, being 50,120,000 bushels which resulted in a shipment of 61,328 cars from Maine. It is true that the total number of acres had been increased. The weather was favorable and the use of improved seed gave an average of 277 bushels per acre. The Arrostook County average was 297 bushels, a most remarkable showing.

The use of more power on the farm is making it possible to increase the acreage with the same relative amount of man labor. It looks as though one of two policies will have to be adopted in future potato production in Maine. The State can increase its acreage each year and become a more important factor in the market or, as has been suggested, the growers must organize and control acreage in coöperation with the potato growers of the country.

Insect Control Work

The Division is equipped with three power spraying outfits, which enable us to be of service in southwestern Maine in those cities and towns where insect pests seem to be of more importance. During each of the two years covered by this report we have had a coöperative agreement to spray in fourteen different municipalities; the city or town furnishing the material and this Department furnishing the labor.

Besides this, we have sprayed in the woodlands surrounding many of the summer camps and in some public camping places. There have been cases where it was necessary to spray in order that the actual business of caring for boys and girls at the camp could be carried on. The painting of Gipsy Moth egg clusters with creosote has been done in places where the trees were very heavily infested. This method of controlling the pest is quite expensive and recommended only in isolated cases.

In coöperation with the Federal Laboratory at Melrose Highlands, Massachusetts, parasite work has been done in an unusually large amount. Each year in May or June parasites, furnished by the Government, are distributed by our field agents. This type of work also requires that recoveries of eggs, larvae and pupae be made at different times of the year in order that determination may be made of the probable number of parasites that reach maturity. In the spring of 1929 parasite liberation was made in Augusta in an attempt to control the Satin Moth. To repeat a statement made in last year's report just what can be done by means of the parasite is not known, but it is the only source which seems to offer help in the control of insect pests. From time to time there comes to this office reports of insects in various parts of the State. Where proper spraying is carried on insect control is possible, but where reports come from large woodland colonies of different cases there is no known means of control except the parasite. Artificial insect control in woodland areas is out of the question.

A study of the insect problem shows that an increase in the Brown Tail Moth may be expected in 1931 and succeeding years unless something unforeseen occurs to give this insect a setback. The Satin Moth is still going strong and reports are received from at least one-half of the State each season.

Summary

The report of the Bureau of Horticulture will be found under a separate heading.

Outside the routine work of certifying seed potatoes and attending to the insect control work there are at least three members of the Division ready at all times to respond to invitations to speak before Granges and Service Clubs. In addition to this we have taken an active part each year in the Annual Apple, Seed and Dairy exhibit as well as furnishing men and money to make the Department exhibit at the Eastern States Exposition a success.

Several days have also been spent in assisting the Farm Lands Loan Commission in their farm appraisals.

I wish to take this opportunity to thank you for the cooperation which I have received during the period. To all other existing agricultural agencies we express our thanks and look forward to continued good will in agricultural work.

Respectfully submitted,

E. L. NEWDICK,

Chief of Division.

Report of the Bureau of Horticulture

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

I herewith submit my report for the Bureau of Horticulture covering the period from July 1, 1929, to July 1, 1930.

In view of the fact that I did not come into office until June, 1929, this report covers a one-year period, rather than two years.

We have attempted to coöperate with the Extension Service in the matter of encouraging the planting of young orchards of the proper varieties. It is our belief that the future hope of the apple industry in the State of Maine depends upon increasing our volume of high quality apples, consisting primarily of the McIntosh variety. It was toward this end a large part of our time among orchardists was devoted.

The Western Maine Fruit Growers Convention was conducted by this bureau in Auburn last winter, and the largest group of orchardists on record were in attendance.

We have inspected and certified 150 nurseries within the last year. The only disease of importance that gave us any trouble was raspberry mosaic. We are advocating that the growers raise more of the Latham variety which is more resistant to this disease.

We have tried to render every possible service to our nurserymen in giving them the most up to date information concerning the quarantine regulations of other states. We have always given any special inspections necessary to enable them to meet these regulations.

Hundreds of insect and disease troubles have been identified and the proper treatment prescribed to those who have sent in samples or requested aid.

We have assisted the Fish and Game Department in estimating the damage done by deer.

The State Horticulturist and his assistant continually gave lectures at Granges during the winter months.

We have answered all calls for help from the bee keepers. Although we do not have a bee expert with us, we have been successful in carrying assistance to those who have applied.

Respectfully submitted,

ROBERT F. CHANDLER, JR.,

State Horticulturist.

Report of Division of Animal Industry

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

I herewith present my report covering the two-year period July 1, 1928, to July 1, 1930.

The reports of the Dairy Bureau and Sheep Specialist will speak for their activities.

In the matter of disease control, the figures I am submitting show that bovine tuberculosis, on which the State has waged a long and winning fight, is now well under control and the expense of this work is now very materially reduced. During the fiscal year from July 1, 1927 to June 30, 1928, the state paid \$65,988 for indemnities on condemned cattle, while this last year ending June 30, 1930, the state paid \$27,099.51, or a saving of \$38,888.49, with every prospect that, with our present system of check test work every three years the cost of the work will be still further reduced. The percentage of disease for the year ending June 30, 1927, was 0.85%; 1928,

0.73%; 1929, 0.47%; 1930, 0.42%. Bovine tuberculosis could be totally eradicated if the tuberculin test was one hundred per cent perfect and if we could be sure no disease would be brought in from outside the state. Very little can be said against the accuracy of the test, yet it is a fact that occasionally an animal will not respond to it and unfortunately such a case is almost always one that has been affected for some time and is therefore a dangerous one to be left. In our check test work we have found a few such animals and unfortunately we have usually found others with them. In fact, if we find reactors we look for the spreader and sometimes we can pick her from among the non-reactors. Continual and persistent work along this line will eventually get all of this class. Barn infection is also the cause of some breaks, for many of the country barns are very hard to disinfect properly, but we have tried to have this work done thoroughly and in most cases, even where the infection had been present for a long time, there has been no further development of the disease.

Upon urgent requests from the cattle owners of the State this Division has commenced work on control measures of contagious abortion or Bang disease, such rules and regulations going into effect July 1, 1930. At this writing the response by cattle owners has been most gratifying. That something should be done along this line is very apparent but, like the tuberculosis work, we must commence in a small way, increasing the activities as public sentiment demands.

Glanders

During the year ending June 30, 1929, there were forty-one suspicious horses given the mallein test by order of this Division, only one of which reacted. During the year ending June 30, 1930, seventeen horses were mallein tested, four of which reacted. All reactors were killed, buried and the stables thoroughly disinfected.

Hog Cholera

There has been very little change in this disease. Very little serum is issued by this Division at the present time, as those who have had infection realize, in most cases, that

prompt immunization is absolutely necessary to protect their interests and they have attended to it themselves. It is not apparent that the disease is gaining in this state.

Following is a concise report of the work done by this division during the past two years:

July 1, 1928 to June 30, 1929

	Cattle. Reactors.	
Tested by co-operative men and accredited veterinarians	86,753	463
Tested for interstate shipment	11,152	6
Total number cattle tested and reacted	97,905	469
Percentage of reacting cattle		0.47%
Amount paid for condemned cattle	\$30,421.69	
Amount received and turned into treasury for salvage	\$11,527.33	
Number of cattle brought in on permit from other states and Canada	2,329	
Number of cattle permits issued	223	
Number of horses brought in on permit	1,880	
Number of horse permits issued	236	
Number of swine brought in on permit	3,667	
Number of swine permits issued	1,225	

July 1, 1929 to June 30, 1930

	Cattle. Reactors.	
Tested by co-operative men and accredited veterinarians	68,770	322
Tested for interstate shipment	9,456	7
Total number cattle tested and reacted	78,226	329
Percentage of reacting cattle		0.42%
Amount paid for condemned cattle	\$27,099.51	
Amount received and turned into treasury for salvage	\$8,820.74	
Number of cattle brought in on permit from other states and Canada	1,256	
Number of cattle permits issued	214	

Number of horses brought in on permit.	3,071
Number of horse permits issued.	287
Number of swine brought in on permit.	6,002
Number of swine permits issued.	2,121

Respectfully submitted,

HERBERT M. TUCKER,

Chief, Division of Animal Industry.

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

I submit, herewith, my report as dairy inspector for the two-year period ending July 1, 1930.

There has been a steady improvement in the quality of the market milk in the State. The dealers are buying up-to-date equipment as rapidly as possible in order to raise the quality of their milk. There seems to be a general trend in the larger cities toward pasteurization. One reason for this is the demand for pasteurized milk by our summer visitors.

Milk and Cream Analyses

One thousand five hundred and ninety-five milk and cream samples have been purchased by this Division and analyzed by the State Chemist at Orono. Eighty-one dealers have been notified by letter, that their milk is of poor quality. We have held seventy-three civil hearings for dealers selling milk which was either dirty or below standard. Two licenses have been revoked.

Inspection of Dairies

Two thousand eight hundred and seven dairies have been inspected by this Division. It was found during this inspection that most of the larger dealers are using steam sterilization and are doing everything possible to improve the quality of their milk supply. Most rigid inspection has been made of the dairies supplying milk to summer camps to insure a safe supply for the boys and girls coming into Maine. Although there have been no more inspections than during the two previous years, more time has been spent at each place visited as more can be accomplished with the producers by doing this.

Creamery Inspection

Nearly a hundred creamery patrons have been reinstated with the Boston Board of Health. Over eight hundred composite samples of milk and cream have been check-tested at different creameries throughout the State. Nearly the same number of Methylene Blue tests have been made at different creameries with a view of improving the supply of milk going out of the State. This work will be carried on more extensively in the future.

Local Milk Inspectors

Work has been carried on as usual with the local milk inspectors. I have found them ready to coöperate with me at all times and due to this coöperation much more work has been accomplished than could have been done otherwise.

Respectfully,

C. P. OSGOOD,

State Dairy Inspector.

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

I herewith submit my report for the fiscal years 1929-30.

Much progress toward building up a bigger, stronger, and more profitable sheep industry in the State has been made. Flocks generally show marked physical improvement as a result of continued personal inspection and public demonstrations on the care, feeding, feeds, and de-worming. This work is most commendable and much appreciated as evidenced by increasing requests from sections where little or no work of this kind has previously been done.

Each year the sheep industry has been given a strong boost by the State Sheep Specialist by coöperating and travelling with the Livestock Train which annually visits many agricultural sections, and which is visited by many thousands of farmers. At each station personal interviews are given and thousands of circulars and pamphlets given out.

Realizing the needs of an increased number of sheep, to consume marketless hay, and to graze neglected pastures, and that the natural increase from our flocks was inadequate to meet them, plans were made toward securing range sheep from Montana.

After securing prices and descriptions, meetings were arranged and all farmers interested given notice of the place and time. Each succeeding meeting indicated growing interest by an increasing attendance. Orders for approximately twelve hundred ewes were secured which, according to plans worked out by the Commissioner of Agriculture, and the State Sheep Specialist, were to be distributed in small units and in many sections of the State. This project was expected to stimulate more interest in sections where sheep could profitably fit in with the farm program.

Owing to the lateness of the season, November, 1929, only 740 ewes could be purchased, and these were distributed in five counties in numbers from two to one hundred and eight, largely to beginners. Reports from owners of these sheep show them to be high producers and generally satisfactory.

That this movement for more sheep was appreciated is well demonstrated by a greatly increased demand for the range sheep this year and coming from a much wider area.

Respectfully yours,

C. H. CRAWFORD,

State Sheep Specialist.

Biennial Report, Division of Markets

Hon. F. P. Washburn, Commissioner of Agriculture:

I hereby present my biennial report as Chief of the Division of Markets for the period July 1, 1928, to July 1, 1930.

In line with the progress indicated in the report two years ago the principal emphasis has been placed on the better grading program for farm products. The outstanding feature of this work is Shipping Point Inspection which still shows a steady growth. The total number of inspections last year being 5,837 carlots of potatoes and 131 carlots of apples, a total of 5,968 certificates being issued. A rather interesting development may be noticed in the number of cars which pass grade at shipping point as compared with the number which passed when a government inspection is asked for at receiving markets.

Number of Cars in Grade

<i>Year</i>	<i>Inspection at Shipping Point</i>	<i>Inspection at Receiving Markets</i>
1926	95%	45%
1927	94.2%	47.4%
1928	94.9%	41.1%
1929	87.7%	26.4%

By the above table it will be seen that chances were only one to four in the receiving markets during the 1929 season, when a car of Maine potatoes was in trouble that it would pass as U. S. No. 1. The question immediately occurred why this should be so, especially in view of the fact that potatoes from foreign countries were bringing from 25% to 60% per hundred more than Maine potatoes. Thanks to the coöperation of the Maine Development Commission it was possible to start a study of the relation of quality and prices of Maine potatoes in the Boston and New York markets to answer this question. Preliminary results from this study indicate that 40% of the price variations is due to bruises, 35% to under size and small size potatoes and 13% to a difference in color or brightness of the stock itself. This would

seem to indicate the necessity of further study to develop improved methods of handling our potato crop in order that greater returns may be secured.

Other standardization work is being carried on under the voluntary system of official grades set up by act of the Legislature in 1927. Already grades are established on potatoes, eggs and jelly, with a few producers using this means of uniformly grading their products with the added value of being able to sell and advertise them by means of the New England Quality Label. This label as well as the grades in connection with which it is used was developed in close coöperation with the other New England States as a part of the so-called Farm Marketing Program sponsored by the New England Council. This feature of the standardization work of the Maine Division of Markets has not been developed to anywhere near the extent that it has been in the other New England States. Connecticut alone has distributed more than a million and a half labels on various products in that State with constantly increasing popularity. Further promotional work should be done in Maine that our producers may benefit through extending the distribution of their products at premium prices.

Crops and Market News

Each year sees improvement both in the form and scope of the various reports issued in coöperation with the New England Crop Reporting Service. The seasonal reports on potatoes, apples, milk production and other farm products has been continued with noticeable improvement in the accuracy of the milk production figures as well as preliminary work being done to improve reports on poultry and egg production. Maine's share of the cost of this work has been \$1,000.00 per annum supplemented by smaller sums for special reports in coöperation with the U. S. Bureau of Agricultural Economics. Greater support has been given to the special market reports on potatoes issued from Presque Isle with the result that this service now extends from September 15 until April 30 at a cost of \$1,150 on the part of this Division. For the past two seasons this work has been directed from Presque Isle by Messrs. Coleman and Rutland, both highly trained men for this type of work.

Another new piece of Market News work has been undertaken with Massachusetts, New Hampshire and Connecticut, with the Bureau of Agricultural Economics as a directing agency. This is the distribution of miscellaneous farm market news and crop reports by radio, two periods being allotted daily by station WBZ and WBZA at Boston and Springfield. Timely reports are given to the rural sections in this way and the service has now reached the stage where its reports are anticipated by many farmers. Mr. E. J. Rowell has been the director of this work.

Representatives of the Division of Markets have set in at several New England Conferences relating to the general agricultural outlook, as a result of which at the beginning of each calendar year an outlook report has been issued giving the prospect for different livestock products and farm crops for the ensuing season. On the whole these forecasts have proven accurate and of benefit to New England farmers in planning their work for the coming season. At other conferences such subjects as the British embargo on American apples, the effect of the new Perishable Agricultural Commodities Act on shippers of farm products in this section and the activities of the Federal Farm Board in promoting co-operative effort throughout the United States have been discussed. In the matter of the apple embargo, Mr. Sturtevant of this Division accomplished a good season's work during the winter of 1929 and 1930 in inspecting apples for export to England. So successful was his work that after it was instituted no complaints were registered on account of maggot-infested apples reaching the English markets from Maine. At the special conference on this subject Mr. Motz, Special Agent on Foreign Fruit Reports stated that the general condition of New England apples arriving in England had not been particularly good and that unless a better system of inspection were instituted to keep back overripe, worm-infested, undergrade apples, the chances were more than even that a complete embargo would be placed against American apples. Such an Act on the part of England would be a direct blow to the orchard industry of Maine. Such an improved inspection service is being planned for the coming season.

In the matter of the activities of the Federal Farm Board: It appears that the increasing strength of national sales organizations and their high pressure methods tend to lower prices for agricultural products at the farm. That a more even balance may be restored, improvements in the methods of the independent shipper seem desirable in order that returns to the producer may be kept above cost of production. With this thought in mind there seems to be a growing sentiment in favor of the organization of some form of producer-shipper organization for the marketing of Maine potatoes.

In passing it should be mentioned that the most ambitious coöperative undertaking by Maine dairymen has passed into history during the last two years. The Turner Center System, so-called, which the dairymen of Maine had purchased by regular deductions from their checks over a period of 7 or 8 years found itself confronted with the problem of overexpansion of its distributing agencies in the cities with undersupply at its country stations. This unbalanced business resulted in poor returns to the dairymen, dissatisfaction and finally selling out of the whole organization to the H. P. Hood Company.

MISCELLANEOUS

The usual program of lectures and demonstrations directly related to marketing subjects has been carried on. Exclusive of many demonstrations at various exhibits and with small groups, 84 lectures have been delivered before 6,380 persons or an average attendance of 76.

Exhibits explaining grades and the sales value of many Maine products have been made at Orono, Portland, Lewiston, several small fairs and at the Eastern States Exposition. All of these have carried the impression of the quality and food value of Maine Farm products. At the Eastern States Exposition alone the exhibits have been viewed by approximately 150,000 persons each year. Other exhibits have been seen by several thousands in the aggregate.

During the biennial period assistance has been given to the State Farm Loan Commission in the appraisal of farms, 55 different farms having been looked over and opinions given

as to their value and the possibilities of purchasers or owners succeeding in their farm ventures. Some of these cases have been extremely discouraging, partly because of lack of capital on the part of the operator, partly on account of the type of farm involved and partly because of the lack of proper personal qualifications of the individual.

In closing a word should be said of the work which Mr. Sturtevant of this Division did in coöperation with the Horticultural Bureau of the Department in inspecting apple trees at the New York nurseries, previous to their being shipped to Maine for setting. Mr. Sturtevant assisted in this inspection work in the spring of both 1929 and 1930. The results of this preliminary work in securing good stock for Maine orchardists are already apparent in the vigorous growth which these trees have made since being set. With the establishment of Mr. Chandler as State Horticulturist this work should now be carried on regularly by that Bureau.

This report would not be complete without a word of commendation to Mr. Warren, Federal Supervisor of potato inspection, who has been loaned to us by the U. S. D. A. for both seasons. Also to Mr. Palmer, who has been the Head Inspector for this Division, as well as the individual men and clerks who contributed in no small measure to the success of the work of the Division.

During the last year Mr. Chick has been added to the personnel as Statistician and is gradually becoming established in this work.

The Extension Service of the University of Maine have coöperated in educational work connected with marketing with promising results.

Respectfully submitted,

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

Report of the Maine State Pomological Society 1928-1929

The 1928 Annual Meeting of the Maine State Pomological Society was held in Portland, Maine, November 21. The officers as elected at that meeting were as follows:

President

E. W. Dolloff Standish

Vice-Presidents

A. K. Gardner Orono

F. C. Sturtevant Hebron

Secretary

E. L. White Bowdoinham

Treasurer

T. E. Chase Buckfield

Executive Committee

The President, First Vice-President, Secretary and Treasurer, ex-officio

L. K. Lee Dover-Foxcroft

H. P. Sweetser Cumberland Center

R. F. Chandler, Jr. Augusta

Several reports were read and accepted by the Society, and an interesting talk given by Grant O. Hitchings, an orchardist of Syracuse, N. Y., on the different phases of orcharding, from soil management to packing and marketing of the fruit, questions being asked and answered.

The 1929 Annual Meeting was held in Lewiston, Maine, November 21st. The officers elected were:

President

A. K. Gardner Orono

Vice-Presidents

Fred C. Sturtevant Hebron

H. W. Peck Winthrop

Treasurer

T. E. Chase Buckfield

Secretary

E. L. White

Bowdoinham

Executive Committee

The President, First Vice-President, Secretary
and Treasurer, ex-officio

Lyman K. Lee

Dover-Foxcroft

Robert F. Chandler, Jr.

Augusta

Member of Experiment Station Council

W. H. Conant

Buckfield

Visitor to the College of Agriculture

Herman P. Sweetser

Cumberland Center

The Treasurer's report for 1929 showed receipts of \$3,526.54 with \$150 then due the Society from outside sources. Disbursements for all purposes were \$3,503.30 and the permanent fund invested for the Society amounted to \$3,060.

Valuable papers were presented and addresses given: "Experiment Station Fruit Investigations" by W. H. Conant; "Apple Disease Work" by Professor Donald Folsom; "Control of Apple Maggot and European Red Mite" by Professor C. O. Dirks; "Problems in Producing and Marketing New England Apples" by H. P. Gilmore, and others.

Copies of these addresses have been filed with the Commissioner of Agriculture and are available to any interested citizens. It should be understood that these or any others presented by the Society will be printed for general distribution at the request of its officers.

E. L. WHITE,

Secretary Maine State Pomological Society.

Report of the Maine Dairymen's Association 1928 and 1929

The 1928 annual meeting of the Maine Dairymen's Association was held in City Hall, Portland, Maine, November 20. The officers as elected at that meeting were: President, Ross Elliott, East Corinth; Vice President, C. E. Luce, Farmington; Treasurer, C. M. White, Augusta; Secretary, H. M. Tucker, Augusta; member of the Executive Committee, H. J. Shaw, Sanford; visitor to College of Agriculture, L. E. McIntire, East Waterford; member of Experiment Station Council, J. W. Leland, Dover-Foxcroft; representative to Federation of Agricultural Associations, E. B. Lord, East Lebanon, and J. A. Ness, Auburn. The treasurer's report showed total receipts of \$158.76 with nothing then due the Association. Disbursements for all purposes were \$9.04. The permanent fund invested for the Association amounted to \$485.24.

The report on the progress of Determining the Heredity of Dairy Production was given by Dr. John W. Gowen, who is now engaged in research work with the Rockefeller Institute and the University of Maine. During the afternoon session addresses were given as follows: "The Cows We Should Keep" by L. E. McIntire, East Waterford; "How She Should be Fed and Cared For" by Professor L. S. Corbett, Orono; "The Milking and Handling of Milk to Meet Public and Health Requirements" by Harold Shaw, Sanford; "The Market Outlook and What Must Be Done to Increase Dairy Revenue" by W. H. Bronson of the N. E. M. P. A.

The 1929 annual meeting of the Maine Dairymen's Association was held at the Armory Building, Lewiston, Maine, November 20. The officers as elected at that meeting were: President, C. E. Luce, Farmington; Vice President, M. A. Clark, Wilton; Treasurer, C. M. White, Augusta; Secretary, H. M. Tucker, Augusta; member of Executive Committee, H. J. Shaw, Sanford; visitor to College of Agriculture, L. E. McIntire, East Waterford; member of Experiment Station

Council, J. W. Leland, Dover-Foxcroft; representative to Federation of Agricultural Associations, E. B. Lord, East Lebanon, and J. A. Ness, Auburn. The treasurer's report showed total receipts of \$62.72 with nothing then due the Association. Disbursements for all purposes were \$4. The permanent fund invested for the Association amounted to \$543.96.

The report on the progress of Determining the Heredity of Dairy Production was very ably given by Dr. John W. Gowen of the Rockefeller Institute and the Maine Experiment Station. During the afternoon session addresses were given as follows: "The Essentials of Market Milk Production" by Professor Maurice D. Jones, University of Maine; "Milk Flavors: Good and Bad" by Professor L. M. Dorsey, University of Maine, and "Improvement in Quality of Market Milk" by Ernest Kelly, Chief Division of Market Milk Investigation, Bureau of Dairy Industry, Washington, D. C.

Copies of addresses will be printed for distribution at the request of the Officers of the Association.

H. M. TUCKER,

Secretary, Maine Dairymen's Association.