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The Commonwealth of Massachusetts

ANNUAL REPORT

OF THE

Commissioner of Agriculture

FOR THE

Year Ending November 30, 1931



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The Commonwealth of Massachusetts

DEPARTMENT OF AGRICULTURE

To the Honorable Senate and House of Representatives:—

In compliance with the provisions of Chapter 128 of the General Laws, I am herewith making my annual report for the year ending November 30, 1931, for the Department of Agriculture.

Respectfully submitted,

A. W. GILBERT, *Commissioner.*

PERSONNEL OF THE DEPARTMENT

COMMISSIONER OF AGRICULTURE—DR. ARTHUR W. GILBERT, BELMONT

ADVISORY BOARD APPOINTED BY THE GOVERNOR AND COUNCIL

- LESLIE R. SMITH OF HADLEY, Term expires November 30, 1933.
 GEORGE E. TAYLOR OF SHELBURNE, Term expires November 30, 1933.
 JAMES O'BRIEN OF LEE, Term expires November 30, 1931.
 HERBERT N. SHEPARD OF WARREN, Term expires November 30, 1931.
 JOHN BURSLEY OF BARNSTABLE (WEST), Term expires November 30, 1932.
 STUART L. LITTLE OF NEWBURY, Term expires November 30, 1932.

DIVISIONS AND ORGANIZATIONS

- DAIRYING AND ANIMAL HUSBANDRY—*Director*, JOSEPH C. CORT, READING.
 MARKETS—*Director*, LAURENCE A. BEVAN, NEWTONVILLE.
 ORNITHOLOGY—*Director*, DR. JOHN B. MAY, COHASSET.
 PLANT PEST CONTROL—*Director*, R. HAROLD ALLEN, TAUNTON; *Assistant Director*, QUINCY S. LOWRY, CANTON.
 RECLAMATION, SOIL SURVEY AND FAIRS—*Director*, L. B. BOSTON, AUBURN-DALE; *Assistant Director*, A. W. LOMBARD, ARLINGTON.
 AGRICULTURIST—DANIEL J. CURRAN, MARLBOROUGH.

STATE RECLAMATION BOARD

- Chairman*, EDWARD WRIGHT, DEDHAM
 L. B. BOSTON, AUBURNDALE
 GEN. RICHARD K. HALE, BROOKLINE
Secretary, GEORGE R. STRATTON, HOPKINTON

REPORT OF THE COMMISSIONER

Agriculture in Massachusetts is confronted at this time with numerous problems of readjustment. For the past two years, there has been a downward trend in prices, both for manufactured commodities and agricultural commodities culminating in a world-wide general depression which has apparently reached a most acute stage.

Widespread unemployment, reduced purchasing power and the lessening demand which generally accompanies such period has reflected itself in very low prices for most agricultural products during the year 1931.

In Massachusetts our problem is serious, but our farmers are in a better position to withstand the shock of this great depression than many other states. The values of our farm lands were never inflated to the extent of other states. Our farming is specialized, but not as highly specialized as certain states in the middle west and in the southwest. A large proportion of our farmers are raising a variety of food products that give to them a very substantial part of their food requirements for living. Others of our farmers are engaged in two or more specialties and when one cash project is greatly weakened by market conditions, there is a remaining cash project that permits our Massachusetts farmer to carry on effectively.

The nearness to populous markets presents a distinct advantage to our local farmers. Our investigation and study indicates that our farmers near these large consumer markets are receiving a better price for their farm products than producers at greater distances. The cost of transportation, the extra expenses connected with packing and grading products for distant shipments are factors that influence this price equation. Our farmers will continue to enjoy the advantages of local markets so long as they furnish the consumer with a quality farm product at a fair price.

It is true our real estate taxes create a very heavy burden on the farmer. Our rural communities, however, are most sincere at this time in their efforts to reduce their budgets, and in this way lower taxes that now fall heavily upon the land.

We are in the midst of a period of driving competition and our farmers are making honest effort to organize to meet this competition. They are making every possible reduction in overhead in labor and in other costs of production and in many instances are marketing their crops under cooperative organizations. The Massachusetts farmer has organized his farm and his work upon a basis of most economical production, and at the present time he is probably in a position to successfully weather the remaining period of the depression that now exists. He has practised denials in the past and the matter of living frugally for a period of a few years does not bring to him the same apprehension that might naturally come to other workers who have prospered during the fat years of industrial activity and have not learned the lesson of strict economy as a program for the lean year.

The continuing ability of our farmers to withstand and effectively combat this period of depression will undoubtedly give courage to other less fortunate workers to the end that the people of Massachusetts may emerge from this period undaunted and ready to go forward toward the goal of greater accomplishment.

LIST OF FARMS FOR SALE AND SUMMER VACATION FACILITIES

Among the most important services which the Department renders are the issuance each year of two bulletins listing Massachusetts farms which are for sale and farm homes which desire to take a few summer boarders. This service has become increasingly popular. The demand for farms and homes in Massachusetts is increasing. Farmers, particularly those living in the West and South, are looking to New England for their future homes. In general, land is lower in price here and the facilities for marketing their products are much better. Our lists are in great demand. Thousands are sent each year to every State in the Union. It is difficult to enumerate tangible results but we are reasonably sure that hundreds of farm owners and new buyers are brought together each year.

Likewise the numbers of farmers and their wives who earn considerable sums through the rental of rooms in summer are increasing.

Many school teachers, mothers with young children and others prefer to rest in the shade of an old-fashioned elm, enjoy fresh food and breathe fresh country air. The cost of a summer respite is often reduced.

As this movement grows, farm homes become increasingly more modernized and better equipped. The possibilities of mutual helpfulness are almost unlimited.

RECIPIENTS OF AWARDS FOR AGRICULTURAL ACHIEVEMENT

The Advisory Board constitutes a Board of Awards who select each year from a large list of recommended candidates, five or six persons within the Commonwealth who have made some outstanding contribution in agriculture and rural life.

For this year the following were chosen and will be presented with their honors at the Union Agricultural Banquet in Worcester on January 7, 1932:

Harry A. Ford, Community Service, Dalton.

Harvey F. Tompson, Market Gardening, Seekonk.

Mrs. Barbara E. Goff, Community Service, North Grafton.

Douglas J. Hayes, Duck Raising, Sterling.

Marjorie Armstrong, Club Work, South Braintree.

Gordon M. Cook, Club Work, Hadley.

REPORT OF DIVISION OF DAIRYING AND ANIMAL HUSBANDRY

MILK QUALITY IMPROVEMENT WORK

A program for the improvement of the quality of milk produced on Massachusetts farms was conducted by taking samples of the milk as it was brought into the plants of 384 dealers located in forty-nine cities and towns. The purpose of this work is to determine the quality of milk produced, to improve the practices in the production of milk, decrease the losses resulting from low quality milk, and to extend the market by stimulating consumption through the production of high quality milk. The samples taken were tested for keeping quality by the methylene-blue test, which gives an approximation of the bacteria count, and by the sediment test, which gives an indication of the amount of visible sediment in a pint of milk. In a few cases butter fat tests and total solids were also taken, as well as temperatures. The results of these tests are returned to the farmers on quality test report cards. When possible, the farms producing the poorest quality milk are visited and assistance rendered in determining the cause for the poor condition of the milk. An attempt has been made to interest milk dealers in carrying on similar work so that a permanent improvement may be affected.

In several instances plans have been worked out with dealers to put their producers on a basis of payment for quality, rating them according to kind of milk they actually produce. The result of this practice is to encourage the production of clean milk with a low bacteria count. Local boards of health, county agricultural agents, and milk dealers have been active co-operators in this quality milk improvement project.

MILK DEALERS' FINANCIAL REPORTS

For the third year financial reports have been required from milk dealers purchasing milk from producers of milk in the Commonwealth. A larger list of dealers was circularized and more reports submitted up to November 30 than during the previous year. There was more demand for the information contained in the reports. Milk producers seemed to realize their value.

OLEOMARGARINE INSPECTIONS

A larger number of stores were inspected for compliance with the oleomargarine laws than ever before, but the number of minor violations was relatively small. The eastern half of the State was quite completely covered by the inspections, which totaled 6,896 in stores and 161 in restaurants.

HORSE CONTESTS

Assistance was again given in conducting commercial horse shows at Springfield and Boston, and also the dynamometer contest at Springfield and Worcester for the determination of the pulling power of draft horses. The entries were larger and the contests more keen than ever before.

SHEEP RAISING STIMULATED

Considerable stimulus was given to the sheep industry of Massachusetts by bringing from the West five carloads of western ewes, totaling between eleven and twelve hundred. This project was worked out through the cooperation of a committee of sheep raisers. The sheep were distributed mostly in small lots throughout the State. A few were sold to farmers in nearby States. The results for the most part were very satisfactory, as they were purchased on a low market and were distributed to the farmers at cost for prices far below the actual cost of raising them. In many instances the early lambs for the Easter market and the wool clip were sufficient to pay for the cost of these ewes.

Assistance was also given to many local farmers in disposing of their surplus sheep and lambs. The Easter market for lambs in the spring of 1931 was somewhat lower than the previous year, yet it was to the advantage of the farmers to sell his small lambs at that time rather than to wait for the summer or fall market. This offers one of the best possible outlets for Massachusetts produced lamb. Often the price received for the lamb is equal to more than the cost of the breeding ewe. There is a good opportunity for expansion on many Massachusetts farms by adding a small flock of sheep. The labor involved secures excellent returns.

MASSACHUSETTS WOOL POOL POPULAR

The wool pool for 1931 has proved of unusual interest as compared to previous years. Nearly 30,000 pounds of raw wool was received from approximately 250 producers scattered throughout the State. There were many new members in the pool owing to the fact that it offers the best means of disposing of locally raised wool at satisfactory prices.

All of the wool was made into virgin wool blankets which were returned to the farmers after the payment of the cost of manufacture and handling. A greater variety of colors and styles were manufactured than in previous years, which has added to the details of the management, but has resulted in greater satisfaction and better market for the finished products.

The actual return for raw wool marketed through blankets has been most excellent and probably represents a greater difference compared with the price received at the market for raw wool than ever before. The average return through the blanket plan is between fifty and sixty cents per pound on the raw wool basis, whereas the farmers were offered, by country buyers, between fifteen and eighteen cents for the wool at the time of shearing. The quality of the blankets is so superior and the price so reasonable that the consumer benefits as well as the producer.

POULTRY CERTIFICATION WORK

Fifty-three flocks were certified for the 1931 hatching season. All birds were banded after being inspected for productive capacity, health and vigor and reasonable conformity to standard requirements. Later in the season two other inspections were made of all flocks to check on the weight, shape and color of the eggs used for hatching. The total number of birds inspected was 54,395.

The 1931-1932 hatching season inspection work started in October, and up to November 30, 1931, ten flocks were inspected, containing 10,862 birds. Interest in the work seems to be as great as in former years. A large number of inquiries are received for the official list of certified breeders. A fee which covers the approximate cost of the inspection service is charged for this work.

GAME BIRD CERTIFICATION

During the year a new grade was established for game birds, principally pheasants and quails. This was done at the request of a group of game bird breeders, and the work will be along lines similar to that for certified poultry flocks, except that it is not based upon freedom from Pullorum Disease. Massachusetts Certified Game Bird Grades are as follows:

"Massachusetts Certified Game Bird Breeding Stock must meet the following requirements —

Inspected and leg-banded for:

- a. Quality of stock determined with inspection of birds and premises.
- b. General health and vigor of stock.
- c. Hardiness of stock based on source.

Massachusetts Certified Game Bird Hatching Eggs must meet the following requirement:

Produced only from Massachusetts Certified Breeding Stock.

Massachusetts Certified Baby Game Bird Chicks must meet the following requirements:

1. Produced only from Massachusetts Certified Hatching Eggs.
2. Normal and vigorous.

Massachusetts Certified Twelve-Week Old Game Birds must meet the following requirements:

1. Produced only from Massachusetts Certified Hatching Eggs.
2. Normal and vigorous."

MILK MARKET SURVEYS

The Division made extensive milk market surveys in New Bedford, Taunton, Plymouth, Northampton and Framingham at the joint request of milk producers and dealers in these markets. Statistical data covering receipts, sales, producers' prices, wholesale and retail prices, purchasing methods and relative milk consumption were obtained from the representative dealers supplying these various markets.

This survey material was of great assistance to the representatives of producers and dealers in working out adjustments in the price of milk in the New Bedford and Plymouth markets, and in furnishing dealers and producers with valuable information as to the amount of surplus milk on the Taunton, Northampton and Framingham markets.

MILK CONSUMPTION SURVEYS

In co-operation with the United States Bureau of Agricultural Economics and other agencies, a consumption survey of milk and dairy products was made in Metropolitan Boston. In addition, other milk consumption surveys were carried on in Holyoke and Framingham. All of these surveys indicated a reduction in the consumption of milk in 1930 compared with 1929. A more drastic decrease in the consumption of milk was found in Holyoke and Framingham than in Metropolitan Boston during this period.

SPECIAL COMMISSION ON DAIRY FARM INSPECTION

As provided by Chapter 49, Resolves of 1931, the Division rendered assistance to the Special Commission on Dairy Farm Inspection Laws. The director was appointed secretary to the commission and made all arrangements for hearings, meetings and inspection trips. Special investigators of the Division, working for the commission, collected, tabulated and summarized data relative to the problem of dairy farm inspection. This information was obtained by personal interviews with milk inspectors or members of boards of health, with Massachusetts milk producers and distributors.

REPORT OF THE DIVISION OF MARKETS

During 1931 the Division of Markets continued the program in assisting the farmer to improve local products so that they would reach the consumer in the freshest and most attractive manner.

Definite surveys of markets were made to find out what consumers desired, and inspections of farm products were conducted to see how closely they conformed to such demand.

At the same time the Division has continued its market reporting work which has been carried on for a dozen years and today is not questioned. Continually the Division is called upon to furnish information about food supplies and consumption of different kinds of foods in our cities, and so this year surveys have been made in several of our large industrial centers.

The only great change in marketing legislation dealt with the revision of the apple grading law. The change was toward a more voluntary use of grades, but not enough time has elapsed as yet to draw too definite conclusions about the effect of the new law.

One entirely new service was offered this past year which affects not only farmers but many consumers. This was the leasing of a sign by the Department of Agriculture to farmers' roadside markets that comply with certain standards.

GRADES AND STANDARDIZATION

In carrying out the projects outlined in the Massachusetts Farm Marketing Program regulatory work and educational work have been continued during the past year. Farms, retail markets, and wholesale markets have been visited at which inspections were made on produce carrying the state label. Grading demonstrations have been held in various parts of the state—talks and lectures have been given on various phases of the program—exhibits have been displayed at many of the major fairs and some of the minor fairs. Careful studies in marketing or grading have been made in order to determine the proper standards to establish, and lastly, publicity was given to the program for the benefit of the consumers as well as the producers. Radio programs were broadcast and newspaper articles disseminated. In brief, the program has been furthered more than in the previous year.

INSPECTION OF EGGS

Inspections of labeled eggs have been made at almost every farm in the State where the official label is used. Likewise retail stores and wholesale houses handling labeled products were visited as well. In all, approximately 300 inspections were made. The number of labels distributed during the past year showed a 50 per cent increase over 1930. Approximately 75 per cent of these labels went to men who used them before.

INSPECTION OF ASPARAGUS

Inspections of asparagus carrying the State label were made usually at the receiving market late in the evening. Inspections were made at least twice a week throughout the growing season and detailed records kept of the findings. The greatest value that an inspection service gives is the check up in the market of the grade and condition of the product. The inspector checks these two items and makes comments upon the appearance of the product. Very often he can show that slight improvements can be made in packing or grading that will make the product far more attractive to the buyers.

INSPECTION OF STRAWBERRIES

Inspections of strawberries were made mostly at shipping point. Car lots of berries were sent out daily throughout the season. All labeled berries were inspected at the loading platform.

This year at Falmouth instead of having the growers label their own crates, the association attached the labels only after the berries had been inspected. Field inspections were also made wherever necessary and individual grading instructions given.

According to reports from commission houses there has been a tremendous improvement in the grading of the crop in the past two years.

INSPECTION OF BLUEBERRIES

A proposed grade for blueberries was made for the Granville Blueberry Growers' Association. This grade was used during the season by twenty members. Records were also kept of the inspections made and individuals instructed accordingly.

This project was not entirely one of inspection. It was more one of finding out facts of grading blueberries to see if a grade could be established. It was pioneer work, since there are no federal grades established and the only State grades adopted anywhere are for blueberries for canning or for cultivated blueberries.

The results of the trial seem to show that the grade as written was suitable to berries when picked by hand, but not of much use when the berries were picked by a scoop.

By organizing and standardizing their product these blueberry growers have overcome problems which they could not have done as individuals.

ASSISTANCE GIVEN TO OTHER COMMODITIES

The Division of Markets assisted other organizations by designing labels for them and suggesting different forms of advertising material in the shape of posters and different inserts and pamphlets. Especial attention was given to this form of service to the Bay State Egg Producers and the New Salem Raspberry Growers, and the Worcester County Grape Producers.

As in other years, turkeys carrying the New England label were inspected both at the farms and in receiving markets.

VARIOUS MARKET SURVEYS

At the request of a New England committee this Division assisted in making a survey of the live poultry marketing situation in Boston and adjacent shipping territory. It was found out that the Boston market is quite limited in its demand and that New York dominates the price for live poultry from our Massachusetts farmers.

Complaints have been received from time to time relative to the quality of eggs sold at roadside stands so that a check up was made of over 100 stands in the eastern part of the state. Eggs purchased from these stands were candled and weighed. The results show that the quality of most of the eggs was good and that although complaints were justified in some cases, on the whole the eggs were of good quality. However, purchases made of other eggs at such stands which were competing with the Massachusetts Specials showed that the eggs carrying the official grade mark were far superior to the former lots.

During the fall there was much interest by rabbit producers in the question of marketing their product and the Division co-operated with them in conferring with buyers, commission merchants, stores and restaurants to see if the market for rabbit meat could be increased. Results of interviews showed that certain improvements in packaging would need to be made and that other meats furnished such competition that a substantial increase in rabbit production would be questionable at present.

CHANGES IN APPLE GRADING LAW

The many changes in the Apple Grading Law, which were enacted by the 1931 legislature and which became effective July 7, made it necessary to carry on an extensive educational campaign during the summer and fall months in order to acquaint growers, packers, and dealers with the new requirements of the law.

Representatives of this Division gave demonstrations and talks in practically all the important apple districts of the State. Representatives of the United States Department of Agriculture assisted at these meetings in explaining the United States grades, which are now a part of the State grading law.

The complete law, regulations and definitions were distributed in printed form to all commercial apple growers and dealers. In addition to the printed copies, a chart was prepared and distributed, which described in graphic form the limitations of each grade.

This chart was an outstanding feature of the educational campaign connected with the introduction of the new grades. So far as known, it is the first time that such a realistic method has been employed in the explanation of apple grade terms. This Division is greatly indebted to the Massachusetts State College for valuable assistance and advice in connection with the technical details involved in the make-up of the engravings. Indicative of the popularity of this type of chart is the fact that New Hampshire, Rhode Island, and Connecticut rented the engraved cuts for use in preparation of similar charts in their respective states.

Supplementing the demonstrations and meetings referred to above, a combined inspectional-educational service was conducted throughout the packing season in eastern Massachusetts and in Franklin County. A resident inspector, stationed in each of these districts, devoted his whole time to visits to orchards and packing houses for the purpose of assisting growers in their grading and packing problems.

Inspection work has been carried on at city markets and in cold storage warehouses as usual.

FEDERAL-STATE SHIPPING POINT INSPECTION

In response to the urgent demand of apple growers, a co-operative agreement was entered into in July with the United States Department of Agriculture for the conduct of federal-state shipping point inspection of apples covering the issuance of official certificates showing quality and condition of the apples as inspected at shipping points. Four other New England states, viz., Maine, New Hampshire, Vermont and Connecticut, joined Massachusetts as State participants in the agreement, thereby putting this project on a New England wide basis.

Under the terms of this co-operative plan the Federal Department agreed to furnish and pay travel expenses of a supervising inspector. The states agreed to pay the salary of this supervisor and also to pay a small per certificate charge for each inspection. The states furnished and paid the inspectors serving under the supervisor, and, in turn, received the fees for the issuance of certificates.

This service was planned primarily for the purpose of expediting the movement of New England apples intended for export to foreign countries. Export shipments of New England apples, however, were greatly curtailed because of the rigid restrictions maintained by Great Britain and Germany against apple maggot. Furthermore, the unsettled financial conditions abroad, particularly the depreciated value of the British pound sterling, were also very effective in limiting the foreign outlets for local apples.

Consequently the demand for shipping point inspection was much less than would have been the case under normal crop and economic conditions. Nevertheless, the maintenance of this service during the past season has been of much value from an educational point through the better knowledge that growers have, thereby, acquired concerning federal grades. All the New England participants in this project hope to be able to carry it on during the coming season.

Onion growers of the Connecticut Valley requested shipping point inspection of their product and the Division furnished this for them for the season, co-operating closely with the special Connecticut Valley Onion Committee. The detailed arrangements were handled by the Springfield office of the Federal Department of Agriculture and nearly one hundred carloads of onions were inspected with certificates written for them.

RADIO MARKET NEWS SERVICE

The Massachusetts Department of Agriculture is co-operating with the United States Department of Agriculture, other New England States, and WBZ station for combined radio agricultural market reports. Talks on

timely subjects are concluded, with reports covering the market terminal; the market for fresh dressed meats; the wool market; the receipts of poultry, butter, and eggs at Boston, the New York market for potatoes, onions, butter and eggs and the Chicago market for butter and eggs. Carload shipments of the more important crops are also given.

The evening broadcasts include reports covering the Boston markets for fruits and vegetables; butter; eggs; wool; hay, grain and feedstuffs; live-stock; the important Connecticut markets; Springfield, Worcester, and Providence produce markets: Presque Isle potato market, and such other information as may be available and of value.

In addition to arranging and carrying out the daily programs over WBZ, WBZA, and the short wave station W1XAZ, which carries out programs to more distant points, material was secured or prepared for use over station WGY. This consists of a mid-week and week-end summary of the Boston wholesale markets for agricultural products, material from the Massachusetts Department of Agriculture and the Massachusetts State College, which is used alternately Fridays, and monthly reviews.

MARKET REPORTING

Wholesale market news service covering the daily reports on supply and prices of fruits and vegetables on our three principal markets, Boston, Worcester, and Springfield, was continued throughout the year. Special effort was directed towards giving as complete information regarding market conditions of these products as possible.

SPECIAL APPLE MARKET REPORT

The Special Apple Market Report was issued through the winter and spring months and resumed with the beginning of the local crop season in August. Due to further insistent demand for more frequent reports early in the season, the twice-a-week service which started last year in September, was this year advanced to the third week in August.

The number of paid subscribers to this service has shown a further advance during the past season, reaching a new peak, slightly larger than last season's previous high mark. It is a fine commentary on the usefulness and popularity of these reports that this increase in subscribers has taken place despite the fact that the Massachusetts apple crop was only one-third as large as the previous year, and notwithstanding the depressive effect of general business conditions.

RETAIL PRICE REPORT

The Boston Weekly Retail Price Report was issued regularly, based on data collected in Boston and close vicinity. Special attention was given to New England and locally produced products. The report is used by home-makers and others buying in retail quality, newspaper and magazine household sections, home-maker hour radio broadcasters, schools, college economics departments, producers selling direct to consumers, markets and research agencies.

CO-OPERATION WITH OTHER AGENCIES

To make progress on our agricultural problems the best efforts of all agencies are needed and if close co-operation can be maintained with all of them, our agricultural situation will be benefited. The Division of Markets enjoys such pleasant relations with both official and private organizations in carrying out marketing work.

Much of the work relating to grading is educational and so the State Department of Agriculture works closely with the extension service along all marketing lines. Also in connection with the different types of research work carried out by both the Experiment Station and the local office of the United States Department of Agriculture.

The Division of Markets has also worked with the Boston Market Gardeners' Association, the Massachusetts Fruit Growers' Association, the Farm Bureau, the Grange and local farm groups.

STATISTICAL INFORMATION

Since 1923 the annual bulletin "Receipts and Sources of Boston Food Supply" has been published and has been used by research workers and students in marketing, teachers, housewives, farmers and various marketing agencies or middlemen. The report is a summary of the receipts and sources of the most important foodstuffs coming into Boston.

BOSTON WHOLESALE AND RETAIL REPORT

So many requests for information come to this office for the trend in receipts of apples in Boston and also the range in prices over a period of years that the Division of Markets summarized in detail such information. There is, therefore, on file the number of bushels of apples received weekly from the principal apple producing sections of the United States. This information is sorted so that the volume that these specialized producing sections ship is known and the time of year of such shipments. Many requests are received from growers of vegetables for average prices of these commodities and for the volume of weekly receipts. For the first time, therefore, a summary of the weekly prices and weekly trucked-in receipts of the major kinds of vegetables on the Boston market has been prepared. The total volume of such products goes beyond 5,000,000 bushels and the average value is over \$4,000,000.

ROADSIDE STAND SIGN

In 1928 the Division of Markets made a careful analysis of roadside stand selling which brought out clearly the standpoint of the consumer. Consumers desire fresh products and wish to know which stands sell locally grown products.

Stand owners realizing the problem facing them also wanted some method of identifying real farm-owned stands and asked the Department for assistance. A plan was then prescribed to farm roadside market owners for their consideration.

This program was essential that they might lease a sign from the Department of Agriculture, provided they lived up to certain regulations. These regulations had to do with the origin of the products they sold, the appearance of their stand, and the quantity of their goods.

Fifty-five stand owners leased the sign for the season and have reported that it was of value to them in selling their goods.

The Department had three inspectors who visited all the stands at intervals and not only checked up on the regulations, but gave suggestions to stand owners which resulted in many improvements.

MARKET SURVEY IN FIVE CITIES

During the last half of 1931 several Massachusetts cities were studied briefly in order to obtain a picture in each of the cities of the prevailing food marketing conditions.

With the exception of milk records kept by the city departments of health, there are practically no available records of total amounts of foodstuffs received or distributed in the cities surveyed. The city departments of public welfare and health and outside social service agencies usually reported the extent of donations for food to the needy, and representatives of these organizations being in close contact with hundreds of consumers were able to contribute much other information concerning consumption and buying habits and the restrictions governing the use of grocery orders which are the means commonly used in supplying food to the applicants.

Wholesalers and retailers were the chief informants regarding current practices in buying, selling, and distributing the bulk of the foodstuffs used in supplying the individual cities. These men and women frequently related personal experiences in the market, often covering periods of twenty years or more, and from them the investigator learned of the changes taking place in the distributing customs of the city, trends in the demands of quality, package, etc., and of most importance, their opinions and reactions

concerning the locally grown products--the products themselves and the part local producers play in meeting the demands of the buyers. Throughout, special attention was paid to all factors directly or indirectly affecting or concerning the consumption of the local products. If there seemed to have been a decided increase in consumption of western dressed poultry as against the locally dressed birds, reasons were sought. Was decreased consumption of locally dressed poultry due to less local production, change of economic conditions of consumers, lessening quality of the local product, buying inconveniences to the market man himself, or what? If a wholesale house claimed to handle only a few native potatoes now as compared with hundreds of sacks ten years ago, although potato production in the locality showed a steady increase, the investigator attempted to learn the causes; was the decrease in the handling of the native stock due to a decrease in the total potato handlings of the company, or to poor quality or slack grading of the natives as compared with the shipped-in potatoes, or to what was it due?

In cities having a farmers' market, the market was studied from various angles, the location of the market place in relation to the food distributing business houses of the city, the advantages and disadvantages to both buyers and sellers using the farmers' markets often brought forth criticisms and some constructive suggestions which were summed up in the reports of the brief studies of each city.

Although it is impossible without extensive and detailed research to determine the amount of foodstuffs coming into the cities studied, a fairly concise outline of the principles of food sources and distribution was obtained in each city with considerable pertinent information, particularly such as related to locally grown products. During the course of each study, the prevailing retail food prices were observed and compared with the quotations on the Boston Retail Price Report in order to make an estimate of the relative food costs to the consumer.

REPORT OF THE DIVISION OF ORNITHOLOGY

The work of the Division of Ornithology now covers a much wider field than was anticipated when first organized, and it has increased correspondingly in importance. The work is not only confined to such matters as the distribution and feeding habits of birds, but to such related subjects as the location and management of bird sanctuaries, the rearing of game birds and animals, the control of injurious insects, rodents and predators, methods of protecting and increasing beneficial forms of wild life, the identification of birds, mammals, insects, and even snakes, and of wild plants, including their fruits and their value in attracting birds. The effect of birds in controlling insect pests is, of course, of major interest to a great many agriculturists, and is the subject of many inquiries.

BIRD HABITS REPORTED FROM WIDE AREA

Several hundred reports are received each month from bird observers on the status of the feathered population coming under their observation. While most of these reporters write from Massachusetts or adjoining states, there are regular correspondents from points as remote as Canadian Labrador, South Carolina, California and Alberta. The mass of interesting data thus made available is digested and condensed into a monthly bulletin called "Items of Interest," which is mailed to regular correspondents and others. This bulletin is also sent to many newspapers in the States and in Canada, many of which quote from it regularly. Each issue contains a brief resume of the weather of the preceding month, notes on the abundance and distribution of the different species of birds and on their habits, reports of the activities of bird-banders, and notes on the conservation and protection of birds.

BIRDS IN RELATION TO THE CRANBERRY INDUSTRY

During the past year considerable time has been spent in a study of the relation of birds to the cranberry industry, one of the most important

branches of agriculture in Massachusetts. Field studies were made of the feeding habits of many birds at cranberry bogs, including stomach examinations of birds collected. In this investigation the Department worked in co-operation with the Massachusetts Cranberry Experiment Station, and was also assisted by workers of the New Jersey Cranberry Experiment Stations. As a result Department Publication No. 133, "The Cranberry Growers' Interest in Birds," was prepared and printed for free distribution among cranberry growers in the State and to others interested.

COLORED BIRD PLATES AVAILABLE

The Legislature of 1931 passed a resolve authorizing the printing of an edition of 10,000 sets of the colored plates of the "Birds of Massachusetts." These valuable illustrations will soon be available to the public at a nominal cost. Public documents Nos. 112 and 116 on "Bird Houses" and "Methods of Attracting Birds" were also revised and new editions printed for general distribution.

INCREASING DEMAND FOR BIRD INFORMATION

The Division still handles much correspondence relating to the three-volume work on the "Birds of Massachusetts and Other New England States," sale of which is handled by the office of the Secretary of the Commonwealth. The Department of Agriculture recently mailed several thousand circulars regarding these volumes, with the result that the sale of these books jumped more than five hundred per cent in three weeks' time.

As has been customary in the past, representatives of the Division fill numerous lecture engagements on birds before Granges, Girl Scouts, Boy Scouts, Campfire Girls, and similar organizations, and in schools. The economic value of birds is always stressed in such lectures, as well as methods of protecting and increasing the bird population.

REPORT OF THE DIVISION OF PLANT PEST CONTROL

BENEFITS OF NURSERY INSPECTION

The Massachusetts nurseries are at this time in excellent condition and recent inspections have shown them to be apparently free from insect pests and diseases. All crop producers, of which the nurseryman is one, soon learn that their greatest hazard is damage or destruction of their crops by pests. The inspection of nursery stock is designed to prevent the sale of stock infested by insects or disease, liable to kill or seriously injure it. The inspection benefits the nurseryman in that it calls to his attention infestations that might result in serious loss. At the same time it protects the public and assures it of purchasing only good clean stock. There are more nurseries in Massachusetts now than ever before. Many of these are small, but with the opportunities offered in this healthful occupation and the chance of disposing of ornamental stock in thickly populated areas near home, it is not surprising that more lovers of horticulture are taking up this line of work.

CERTIFICATES AND LICENSES GRANTED

The Division of Plant Pest Control has this year issued 332 certificates to growers of nursery stock, and 294 agents' licenses to persons dealing in nursery stock but who are not growers. The conditions in the nurseries hold true in the properties adjoining them, and these have shown a marked improvement in the past five years.

Infestations of the gypsy moth were practically negligible in the nurseries, and consequently we were able to complete our inspections and issue all certificates at an early date.

CORN BORER QUARANTINE EXTENDED

The European Corn Borer quarantine has been extended westward to include most of Franklin, Hampshire, and Hampden Counties. The infestations of the two-generation corn borer in these counties are extremely light, and it is hoped that control measures will be successful in keeping the damage at a minimum.

Parasites which have been imported have become established and will without doubt prove to be a determining factor in controlling the ravages of this pest. Until, however, these are present in larger numbers, we must rely largely on artificial control measures. Our program of inspection, plowing and burning, has been very vigorously enforced, and the results have been very encouraging. On December 1 the Division had fifteen inspectors in the field to report all violations of the corn borer law—where corn stubble has not been destroyed. The violators were called into hearings where each case was reviewed and educational instruction given.

RECOMMENDATIONS FOR CORN BORER CONTROL

On account of the practice to seed in cover crops in corn fields, especially in central and western Massachusetts for the purpose of establishing a crop rotation, the Department of Agriculture made the following recommendations with reference to corn borer control:

1. Modern cutting appliances that will cut corn stalks at the ground level should be used in all cases where seeding in corn fields is practised, and any corn field must be free from corn stubble to obviate the necessity of fall ploughing.

2. Clean culture practices with reference to weeds and other plants ordinarily infested with the corn borer should be followed in an organized effort to maintain effective control of the corn borer.

The provisions of the present Corn Borer Law, requiring that all corn stubble be ploughed under or otherwise destroyed on or before December 1 of the year of its growth shall be enforced, and only in cases where corn stalks have been cut to a ground level, leaving no determinable corn stubble, shall the necessity of fall ploughing be obviated.

The Division has co-operated with the Federal Government in maintaining a corps of inspectors in the Boston and Worcester produce markets, and also at designated points where the quarantine is enforced.

JAPANESE BEETLE CONTROL MEASURES

The area quarantined for the Japanese Beetle in Massachusetts at the present time includes all of Bristol County and parts of Plymouth and Hampden Counties, and the City of Boston.

During the past summer, 1,200 traps were used in the City of Boston. These traps were baited with geraniol, a substance that is attractive to the beetles. Traps were also placed in Attleboro, Brockton, Cohasset, Falmouth, Hyannis, New Bedford, Plymouth, Sandwich, Springfield, Wellesley, and West Springfield, a total of 5,350 traps being used. A greater number of beetles were collected this year than in 1930, but only one additional infestation was found, that in the City of Taunton, which is already in the area under quarantine.

Soil treatment was carried on in Springfield; the Charlestown Navy Yard; Boston Common; and in the Boston Public Gardens. This treatment was in the nature of applying arsenate of lead to the soil in the hope of building up an immune soil.

All nurseries within the area quarantined are obliged to attach a Federal tag to shipments consigned to outside points, and a record kept of each tag used. This is a serious handicap, especially during the busy season. The quarantined area in Hampden County has been considerably reduced, and at present the larger nurseries in the county are outside the area.

The quarantined regulations prohibit the shipment from the infested areas of green corn on the cob; beans in the pod; bananas in entire bunches or in clusters of twenty-five or more; apples, peaches, or berries from June 15 to October 15, unless a permit or certificate is attached. The regulations also prohibit the shipment of nursery, ornamental and greenhouse stock, and all other plants including parts of plants and cut flowers, and sand, compost, and manure to points outside the area except under certification. No restrictions, however, are placed on the movements between October 16 and June 14 of cut flowers or plants without roots.

It is fair to assume that the infestation of Japanese Beetle in Massachusetts will increase, but we believe that with our present knowledge of control measures, and with the aid of parasites, we will be able to cope with this pest without serious loss to our agricultural interests.

DISTRIBUTION OF BEES ON INCREASE

The use of bees in fruit orchards during the blooming season, as has been outlined in the two previous annual reports, continues. Without available figures it appears that an even greater number of packages of bees were bought in 1931 by orchardists. It has been variously estimated that in excess of a half ton of bees are brought north for orchard purposes. These package bees are obtained exclusively from southern apiaries, being unobtainable in May from northern sources. By some orchardists, they are preferred to colonies of bees. There seems to be a growing interest, however, in the use of colony bees. But the local supply is sufficient in most orchard regions; hence, package bees will doubtless be needed for some years to come. There is a definite trend with the active beekeepers to prepare apiaries for rentals to orchardists. Some apiarists rent first to orchardists in early season and then to cranberry growers at a later season. The interest in this phase of beekeeping seems to be growing, but must be greatly expanded in order to meet fully fruit growers' requirements.

INSPECTION OF APIARIES

The center of intensive apiary inspection in 1931 was Middlesex and Essex counties. An extra appropriation of \$500 was available to assist particularly in the work in Essex County. Excepting in a few towns in Middlesex County, which could not be reached before the appropriation was exhausted, practically every apiary known to the Department was visited, and all colonies examined. Many apiaries, heretofore not recorded, were located. This intensive inspection had the sanction of the beekeepers' societies, county agents and farm bureaus of Middlesex and Essex Counties, who co-operated to their utmost. Throughout the area, a letter of warning, requesting co-operation, was sent out in May to each known beekeeper. In late May and early June the inspectors went into the field. Each inspector worked under prescribed and uniform instructions. The procedure was essentially the same as reported in 1930 and as used in the Worcester County area.

As is annually anticipated, American foulbrood was the chief bee disease encountered. So little European foulbrood is now found in Massachusetts, that it may be considered almost negligible. This is due in part to a better understanding by the beekeepers and in part to the more general use of good Italian stock, which, of course, is highly resistant to European foulbrood. American foulbrood cannot so easily be disposed of. Its tenacity is more baffling to the beekeepers. Its prevalence was unmistakably pronounced in Essex County, where less eradication work has heretofore been done. Through the splendid co-operation of the beekeepers, however, the situation in this county and in Middlesex County would appear to be well in hand. Improvement should be noticed in 1932, when it is hoped that it will be possible to still further suppress the disease in these counties. Then, they should more nearly approach in freedom from disease, the counties westward, in the State. The Department has been voluntarily and repeatedly praised for its work in Middlesex and Essex Counties.

Consistent with the large area under intensive clean-up check was maintained on conditions in other parts of the State. No serious situations were encountered nor new outbreaks discovered. The improved condition of the western counties, previously reported, appears to have been maintained. Conditions found south of Boston, with the exception of one limited area on Cape Cod, showed no new developments. The Cape Cod outbreak appears under control and confined. The next area which should receive intensive work by the Department, as soon as funds can be procured, includes Norfolk, Bristol and Plymouth Counties. These may be worked to advantage as a

unit from the north, where much preliminary work has been done, southward. The State then will have been thoroughly covered, except in Cape Cod and the islands, where there are very few beekeepers and colonies of bees.

The Inspector of Apiaries and deputies have attended many beekeepers' meetings where they have usually spoken. The apiary inspectors for the year 1931 were as follows:

Inspector of Apiaries, Burton N. Gates, Worcester.

Deputy Apiary Inspectors:

Mr. Fred E. Challet, Northampton

Mr. H. Shuman, Billerica.

Mr. F. S. Devereux, Green Harbor.

Mr. John Van de Poele, Abington.

Mr. B. A. Hildreth, Sherborn.

Mr. H. L. Walton, Worcester.

Mr. Ivan Rawson, Pittsfield.

WHITE PINE BLISTER RUST WORK

The Division has maintained its co-operation with the United States Department of Agriculture, local property owners, and other State Departments owning forest lands, in the endeavor to prevent further damage to the white pine trees of the Commonwealth, as a result of the prevalence of the fungous disease known as the white pine blister rust. This disease, which passes a part of its so-called life cycle in the tissues of the leaves of currant and gooseberry bushes (*Ribes*), is known to have damaged white pines in 329 of the 355 cities and towns in Massachusetts, according to our records to the close of the present fiscal year.

The temperature, humidity, and rainfall conditions during the field season from April to October, inclusive, were very favorable to an unprecedented development of the disease, at least on the *Ribes* host plants. These conditions will, undoubtedly, result in an increased evidence of the rust on white pines in those sections of the State where *Ribes* still persist.

During the year, the efforts of the personnel of the Division were about equally divided between the task to destroy all wild and cultivated *Ribes* in the white pine growing sections of the State, and the special project involving the complete elimination from the entire State area of European black currants, a variety of *Ribes*, particularly susceptible to infection. In the regular control work, 115,529 acres of land were examined, and 264,215 wild *Ribes* were found and destroyed. In this work 6,658 *Ribes* under cultivation were uprooted as a further protection to nearby white pines. The Division co-operated with 383 individual property owners, and three other State Departments in this protective work. In the special project relating to the elimination of black currants, it was necessary to examine 141,342 properties in the 103 cities and towns canvassed during the year. On 1,330 of the locations inspected, plantings of black currants were found and destroyed. These garden plots contained 11,716 such plants. In this special project 41 per cent of the individuals who possessed black currants removed them voluntarily.

During the regular spring inspection of the white pine producing nurseries in the State, the disease was apparently still in existence in but two nurseries. The surroundings of three pine producing nurseries were re-examined, in order to maintain adequate *Ribes*-free conditions and thus insure the continued production of disease-free white pines in our Massachusetts nurseries. In these examinations, conditions were found to be very satisfactory, and a mere 31 wild *Ribes* were found in all the areas examined. It was also gratifying to note that in these instances at least there had been no replanting of cultivated *Ribes* in the sanitation zones.

PERMITS GRANTED

In connection with the Federal quarantine relating to the interstate transportation of *Ribes* and five-leaved pines, 89 permits were issued from this office, allowing the entry into Massachusetts of 1,254 currant bushes, and 443 gooseberry bushes. In addition, 12 permits were granted to accompany

incoming shipments of 2,825 white pine seedlings or transplants. One permit was issued to cover a shipment of white pine branches for use in Christmas greenery.

At the close of the 1931 field season, initial examinations for Ribes had been practically completed in the principal white pine growing districts of the State and approximately three-fourths of the State area had been canvassed in connection with the black currant elimination project. Although the work which has already been done has been effective in temporarily checking the spread of the disease, and thus preventing for the time being increased damage to white pine, field experience and experimental work during the initial program, have demonstrated that there is a continuing problem in maintaining adequate control. This results from the recurrence of wild Ribes in control areas and an occasional instance of replanting of cultivated Ribes. This will necessitate the re-examination of areas where conditions favorable to a continued spread of the disease appear to exist. Such check-up work can only be accomplished under some sort of guidance such as has been furnished by this division and the representatives of the co-operating Federal office, during the initial control effort.

The co-operative blister rust control activities of the year have been planned and supervised by Messrs. Earle M. Brockway, William Clave, G. Stanley Doore, William T. Roop, and Ralph E. Wheeler, under the direction of Mr. C. C. Perry, who represents this Division and the Bureau of Plant Industry of the United States Department of Agriculture under a formal co-operative agreement.

Mr. C. C. Perry has had the supervision of the white pine blister rust work and his assistance and co-operation at all times have been greatly appreciated.

REPORT OF THE DIVISION OF RECLAMATION, SOIL SURVEY AND FAIRS

RECLAMATION WORK

There have been several requests relative to the reclaiming of farm lands for agricultural purposes which the Department has answered either by personal visitation or by correspondence. For the most part, however, there seems to be comparatively no interest in or need for further reclamation work as it relates to the utilization of waste lands. Greater need seems apparent in the better use of lands already in crops or the better adaptation of such lands in other crops. The report of the State Reclamation Board in another section of this bulletin will give more in detail the work that has been in progress during the year in the drainage of marsh areas.

SOIL SURVEY ACTIVITIES

During the year there were several requests for specific soil survey reports of work already completed. The Valley county reports have not as yet been fully summarized, although the Department expects to receive the Hampden and Hampshire county reports from the federal department at an early date in 1932.

AGRICULTURAL FAIRS

Agricultural organizations sponsoring fairs and exhibits made considerable progress on the kind and quality of exhibits shown. There was an increase in the number of cattle exhibited and while hall exhibits were about 5 per cent less in quantity than for 1930 the quality and arrangement were far superior. Attendance at the fairs was 14 per cent under the previous year, undoubtedly due to general business conditions as well as the infantile paralysis scare. Fair organizations are paying more and more attention to expenses, the better arrangement of exhibits, the comfort and convenience of their patrons, and in general putting their organization upon a more efficient business basis. The work done and number and quality of exhibits shown by the young people are most encouraging. The Department has co-operated with the junior department of the State Extension Service in promoting Camp Gilbert at Amherst as well as a leader training

conference for the 4-H Clubs. It has also co-operated with the vocational section of the Department of Education in various projects relating to the judging of livestock.

SPECIAL FEATURES AT FAIRS

The Department, in co-operation with the Massachusetts State College, arranged to exhibit at several of the larger fairs, a mechanical hen and a special livestock exhibit. Both of these features were well received and decided assets to the educational departments of the fairs.

LEGISLATURE PROVIDES FOR NEW STATE BUILDING

The legislature, by the Acts of 1931, Chapter 413, provided for a Massachusetts Building on the Brockton Fair grounds which will be ready for occupancy in 1932. This building will be designed somewhat after the present State building on the grounds of the Eastern States Exposition at West Springfield and will be used for the purpose of exhibiting both agricultural and industrial products of the commonwealth. It shall be under the supervision of and maintained by this Department at the expense of the Commonwealth.

ALLOTMENT OF STATE AGRICULTURAL PRIZE MONEY

The Department received 123 applications for agricultural prize money, made 112 allotments and paid premiums to exhibits of 104 organizations. Amount of allotments ranged from \$15 to \$1,800, and was distributed through 23 major fairs, 19 community fairs, 14 poultry and rabbit associations and 48 grange exhibits. In addition to the above, agricultural prize money was used in financing the exhibit at the Massachusetts State Building, special exhibitions at the Union Agricultural Meeting, egg exhibits, fruit shows and similar displays sponsored by the Department during the year.

Financial report of agricultural prize money for 1931 follows:

Agricultural and Horticultural Societies

(Brockton and Eastern States not included)

Acton Agricultural Association, \$750; Barnstable County Agricultural Society, \$800; Blackstone Valley Agricultural Society, \$400; Bristol County Young Farmers' Fair, \$450; Deerfield Valley Agricultural Society, \$746; Essex Agricultural Society, \$1,800.70; Franklin County Agricultural Society, \$1,800; Hampshire, Franklin and Hampden Agricultural Society, \$1,800; Groton Farmers' and Mechanics' Club, \$600; Highland Agricultural Society, \$800; Hillside Agricultural Society, \$950; Housatonic Agricultural Society, \$1,800; Littleville Community Fair, \$400; Marshfield Agricultural and Horticultural Society, \$800; Martha's Vineyard Agricultural Society, \$500; Nantucket Agricultural Society, \$200; Plymouth County Agricultural Society, \$650; Sturbridge Agricultural Association, Inc., \$700; Union Agricultural and Horticultural Society, \$750; Weymouth Agricultural Society, \$487.50; Worcester Agricultural Society, \$1,188; Worcester County West Agricultural Society, \$950; Worcester Northwest Agricultural Society, \$1,050; total, \$20,372.20.

Community Fairs and Local Exhibitions

Ashby Community Fair, \$69; Bolton Farmers' Fair, \$50; Cape Cod Horticultural Society, \$50; Chester Junior Fair, \$6; East Longmeadow Community Fair Association, \$60; Granville Community Fair, \$75; Hampden County Improvement League, \$100; Hancock Community Fair, \$35; Heath Community Fair, \$145; Hingham Agricultural and Horticultural Society, \$98.50; Monson Community Fair, \$100; Orange Boys' and Girls' Club, \$75; South Amherst Apple Show, \$83.25; Sterling Farmers' Club, \$100; United Shoe Machinery Athletic Association, \$50; Upton Farmers' Club, \$100; Union Agricultural Meeting Fruit Show, \$268; Wales Community Fair, \$25; Westfield Young People's Agricultural Society, \$47; total, \$1,586.75.

Poultry and Rabbit Shows

Athol Poultry and Pet Stock Association, \$199.50; Boston Poultry Show, Inc., \$375; Essex County Rabbit Breeders Association, \$50; Fitchburg Poultry Fanciers' Association, \$196; Massachusetts State Rabbit Breeders Association, Attleboro Branch, \$50; Metropolitan Reading Poultry Association, \$59.50; Middlesex County Rabbit Breeders Association, \$21; New England Poultry Association, \$250; New England Rabbit, Cavy and Fur Club, \$99.50; Springfield Poultry Association, \$200; United Rabbit and Cavy Club, \$50; Southern New England Rabbit Breeders' Association \$40; South Shore Co-operative Rabbit Breeders Association, \$50; West Medway Fur and Feather 4-H Club, \$20; total, \$1,660.50.

Subordinate Granges

Amherst, \$7.50; Assonet, \$15; Brimfield, \$25; Braintree, \$25; Boylston, \$15; Bedford, \$49; Billerica, \$15; Cochituate, \$15; Dedham, \$15; Dunstable, \$25; East Bridgewater, \$25; East Freetown, \$20; Fairhaven, \$15; Grafton, \$25; Groton, \$13; Halifax, \$14.50; Hilltop, \$25; Holliston, \$20; Hinsdale, 11.50; Leicester, \$14; Lincoln, \$15; Ludlow, \$28; Mansfield, \$45; Merrimac, \$25; Natick, \$35; Nemasket, \$10; Norton, \$45.50; Northboro, \$20; North Seekonk, \$15; Oak Hill, \$20; Plainville, \$19.50; Palmer, \$15; Ponkapoag, \$24; Princeton, \$12; Rochester, \$24; Rockland, \$15; Randolph, \$30; Stockbridge, \$49; South Middleboro, \$8.50; Thrifty, \$28.75; Upton, \$20; Westboro, \$20; Wendell, \$18; West Stockbridge, \$28; Warren, \$35.50; Waltham, \$15; Westford, \$18; Weston, \$15; total, \$1,043.25.

Summary of State Prize Money

Agricultural and Horticultural Fair Exhibitions.	\$20,372.20
Community Fairs and Local Exhibitions	1,586.75
Poultry and Rabbit Shows	1,660.50
Subordinate Granges	1,043.25
Junior Activities	1,931.92
Badges, Medals, Cups, Ribbons, Trophies	742.22
Livestock Judging Teams	445.65
Special Exhibitions	8,499.08
Miscellaneous Expenses	435.03

REPORT OF THE STATE RECLAMATION BOARD

RECLAMATION DISTRICTS

During the fiscal year 1931, practically all of the reclamation districts previously organized under the State Reclamation Board or its predecessor, the Drainage Board, were inactive. During the year, one more reclamation district was formed, in East Boston and Revere, known as the Belle Isle Reclamation District. The area comprising this district is owned by a small group of proprietors, who are planning to reclaim certain lands, presumably for industrial use, and at the same time eliminate mosquito breeding areas.

MOSQUITO CONTROL PROJECTS

By far the principal activity of the State Reclamation Board during the past year has been in the way of forming and supervising mosquito control projects under the provisions of Chapter 288 of the Acts of 1929. The Cape Cod Project and the Nantucket Project, both formed the previous year, were very active, continuing the work so well started in 1930. The Belmont-Cambridge-Watertown Project was organized in December, 1930, and the Natick Mosquito Control Project was organized in July, 1931. In addition to these two projects, there were formed four State projects, under the provisions of Chapter 112 of the Acts of 1931, which was based on a message to the General Court from His Excellency, Governor Ely, asking for an appropriation of \$270,000 for the relief of unemployment, the same to

be spent under the direction of the Reclamation Board on mosquito control work.

These four projects, which were confined to salt marsh areas, were made up as follows:

	<i>Allotments</i>
Bristol-South Plymouth—from the Rhode Island line to Wareham, excluding the town of Marion	\$90,000
South Shore—from Plymouth to Weymouth, inclusive	70,000
North Shore—from the New Hampshire state line to Manchester, inclusive	90,000
South Essex—from Beverly to Revere, inclusive	20,000

In addition to the allotments as listed above, these amounts were increased by municipal appropriations and private contributions, as follows:

Bristol-South Plymouth	\$2,650
South Shore	18,200
North Shore	150

In November, at the special session of the General Court, a second message from Governor Ely was instrumental in securing an additional appropriation of \$100,000, under Chapter 465, to continue the work started under Chapter 112. Of this \$100,000, allotments were made as follows:

Bristol-South Plymouth	\$25,000
South Shore (including Quincy)	40,000
South Essex	35,000*

Under the provisions of Chapter 112, work on the salt marshes was inaugurated in the latter part of March and continued throughout the summer months until the money was exhausted, and was resumed again in November with the new appropriation granted under Chapter 465.

The expenditures on these projects instituted under Chapter 112, during the fiscal year 1931, were as follows:

<i>Project</i>	<i>Expenditures</i>	<i>Total</i>
Bristol-South Plymouth	\$91,121.91	
South Shore	86,504.46	
North Shore	89,983.96	
South Essex	24,876.92	
	<hr/>	\$292,487.25

Expenditures on other than state projects were as follows:

Cape Cod	\$119,963.20	
Nantucket	7,526.37	
Belmont-Cambridge-Watertown	3,262.02	
Natick	142.25	
	<hr/>	130,893.84

Grand Total \$423,381.09

In the four State projects employment was given to a total of 1,372 citizens of the Commonwealth, during the fiscal year 1931, all from the ranks of the unemployed, and, in practically every instance, to men with a large number of dependents. Thus, in addition to successful work in controlling mosquito breeding areas along the seacoast of the Commonwealth, a very creditable result was obtained in relieving distress among groups of unemployed, many of whom would otherwise have required assistance from welfare boards or private charities.

The work consisted mainly of ditching the salt marsh areas which were found to be breeding, and these ditches in the four State projects totaled as follows:

Bristol-South Plymouth	335 miles
South Shore	365 miles
North Shore	232 miles
South Essex	56 miles

*Part of this to be expended on sod removal in the North Shore area.

The figures given above cover the new ditches constructed, and the old ditches and existing water courses which were either cleaned or redug.

In the two remaining seacoast projects, namely Cape Cod and Nantucket, the work on which was started in the late spring of 1930, the total ditching up to November 30, 1931, was as follows:

Cape Cod, 1,250 miles, of which 216 miles were constructed in 1930;
1,034 miles in 1931.

Nantucket, 83 miles, of which 80 miles were constructed in 1930;
3 miles in 1931.

The entire State appropriation for mosquito control granted as an emergency relief measure was allotted to the seacoast towns, because it was possible to use considerable labor from nearby industrial areas severely hit by unemployment, and the Board felt that mosquito control work on other than the salt marsh areas would be only of local benefit.

The budget for administrative work of the Board called for \$17,000, which covered the services of regular and part-time employees of the Board, as well as necessary expenses incurred in planning and supervising work for the various mosquito control projects in operation during the year.

The extra demands of the State projects, in addition to the other projects other than State, gave very little opportunity to serve some of the municipalities which inquired for information and surveys. However, investigations and reports were made in most instances, and it is evident that this work of mosquito control will have the attention of many communities when conditions return to normal in the Commonwealth.

RECLAMATION LEGISLATION, 1931

Senate 4.—A report to the General Court in accordance with provisions of Chapter 379 of 1930, presenting the record of work accomplished on the Cape Cod Mosquito Control Project, together with recommendations of State Reclamation Board.

House 1310.—Special report of the State Reclamation Board relative to draining certain marsh lands in Lynn, Revere and Saugus for abatement of the mosquito nuisance.

Chapter 315.—Amendment to Chapter 379 of the Acts of 1930, creating Cape Cod Mosquito Control Project.

Chapter 112.—Appropriation of \$270,000 for mosquito control work as a measure of relief during unemployment emergency.

Chapter 465.—Appropriation of \$100,000 additional for purposes of continuing work under Chapter 112.

Chapter 181.—Providing for method of abatement of certain mosquito nuisances.

Chapter 182.—Amendment to Chapter 252, Section 11, of the General Laws, providing for collection of Reclamation District assessments by local tax collectors.

MOSQUITO PROJECTS AND PERSONNEL

Mosquito Control Projects

Commissioners

Cape Cod (constituted March 27, 1930)	Oscar C. Nickerson, Chatham, Chairman. Harry S. Dowden, Sandwich, Secretary. G. Webster Hallet, Osterville.
Nantucket (constituted April 8, 1930)	Thomas H. Ball, Chairman. Louis J. Praeger, Secretary. Elmer J. Blanchard, Horace G. Norcross, Irving A. Soverino, Edmund Z. Ryder, William Holland, Frederick P. Boynton.
Belmont-Cambridge-Watertown (constituted Dec. 8, 1930)	L. M. Hastings, Cambridge, Chairman. Arthur E. Burke, Watertown, Secretary. Fred E. Poor, Belmont.
Natick (constituted July 31, 1931)	Thomas W. Sheehan, Chairman. Francis J. Murphy, Secretary. Lyman A. Brown.

State Projects

Bristol-South Plymouth (constituted Mar. 18, 1931)	James T. Hennessey, Wareham, Chairman. Thomas W. Whitfield, Fairhaven, Secretary. Frederic A. Gower, Fall River.
South Shore (constituted Mar. 28, 1931)	James W. Turner, Scituate, Chairman. Charles S. Clark, Duxbury, Secretary. Hollis T. Gleason, Cohasset. Hon. Frank A. Manning, Brockton. Frank L. Sinnott, Marshfield.
North Shore (constituted Mar. 27, 1931)	Hon. Michael Cashman, Newburyport, Chairman. Howard N. Doughty, Ipswich, Secretary. Lawrence J. Hart, Gloucester.
South Essex (constituted May 19, 1931)	Charles F. Cotter, Lynn, Chairman. Henry A. B. Peckham, Saugus, Secretary. Edmund Talbot, Salem.

REGULATORY WORK OF THE DEPARTMENT

CHANGES IN APPLE GRADING LAW

The effect of the Massachusetts Apple Grading Law was changed by new legislation during the last session of the legislature. The law in operation during the past 15 years was a compulsory law that required a definite grade mark upon all closed packages of apples. Some of our producers who were not equipped with grading machines and other modern equipment have found it difficult in the past to pack and mark their apples in full compliance with the Apple Grading Law. Many of our fruit growers were desirous of packing their fruit in closed containers and marking the containers with three essential requirements:

1. The variety of fruit.
2. The minimum size or numerical count.
3. The name and address of the packer by whose authority the apples were packed.

There was, in fact, an increasing number of producers who considered that a greater leeway should be provided in the marking and branding of apples.

A committee of producers, marketing officials and others interested in the development of the fruit industry presented an apple grading law to the general court, and this law was passed by the legislature and became effective July 11, 1931. This new legislation provides for the establishment and promulgation of grades by the commissioner of agriculture and optional use of such grades upon closed packages of apples. It is no longer necessary to mark or brand closed packages with an official grade, but if such packages are marked and branded, it is essential that the requirements of the grade be met.

The regulatory phase of our work in connection with the enforcement of the Apple Grading Law consists of:

1. *Inspections.* All principal markets are inspected daily by qualified men and a representative number of packages of apples are inspected with reference to their compliance with the provisions of the law. A report of the inspector's findings are submitted to the department in each individual case.

2. *Hearings.* In the case of violations of the Apple Grading Law, a notice of an official hearing is sent to the parties concerned, stating the place, date and hour of the scheduled hearing and a brief description of the violation. Each case is heard separately and a brief is prepared for further consideration.

3. *Prosecutions.* All cases that cannot be settled to the full satisfaction of the commissioner at a hearing are prosecuted in the lower courts. During the past year, more than 125 persons were called into official hearings and only two cases were prosecuted in our courts. All persons who were heard by the regulatory section were followed up carefully through subsequent inspections, and it is our observation that the men called into hearings profited greatly by the admonition and advice that was given by the regulatory officers.

The new law apparently has created a more favorable situation with respect to violations, inasmuch as not more than 25 hearings have been conducted during the months of August, September, October and November on violations of the optional law.

Seventy-five per cent of all violations reported have been for overfacing the packages. This is a serious violation, inasmuch as the faced or shown surface of the package is better than the contents and the buyer is deceived. It is our policy to make every effort to eliminate this phase of misrepresentation and deceit, and the great majority of progressive fruit growers are in strict sympathy with our efforts along this line.

CORN BORER ENFORCEMENT

During the past season, the number of corn borer violators summoned to hearings at the State House and other designated points was appreciably decreased. A new system was introduced, wherein the person neglecting to take care of corn stubble in the home garden was given instructions by the inspector and was requested to return a post card to this department indicating that the corn stubble had either been destroyed or buried to a depth of six inches or more. This plan has apparently worked very well, inasmuch as we have received wholehearted co-operation from the small gardeners in carrying out the policy of the department. No prosecutions resulted from the hearings conducted in the cases of the large growers, inasmuch as all were first violations, and it has not been the policy of the Department in enforcing the provisions of the Corn Borer Law to bring first offences into court. None of the violations reported during the past season were for second offences.

There has been a considerable activity on the part of Federal and State agencies interested in the control of the corn borer to put into practical operation the use of low cutting devices that will cut the corn stalk at the ground leaving no appreciable stubble. The corn growers have been notified through the county extension offices that the corn borer law would be inoperative in cases where the low cutting machinery cut the corn stalk at the ground level, leaving no corn stubble. Several demonstrations of low cutting devices have been carried on in different counties during the past year, and it seems that considerable improvement is being made in these implements for better control work. The Department is in favor of a progressive development along this line.

THE SEED LAW

Approximately 500 seed samples were collected during the past year from communities in every county in the State, and it would appear that a cross section of the seed industry was truly represented in the type and kinds of seed samples collected. All of the samples were sent to the seed laboratory at the Massachusetts Agricultural Experiment Station and a report of their findings will be published in bulletin form during the winter months. Regulatory work in connection with the enforcement of the seed law for the first few years will be centered chiefly on the publishing of results and tests and analyses of the samples collected from the seed dealers. The seed law is a true labeling law and poor seed may be sold if correctly labeled. It is our purpose to teach the farmer the resulting benefits of buying good seed that is correctly labeled and to insist upon the dealer selling seed with due regard to the provisions of the seed law. Hearings on reported violations will be

held and prosecutions will follow when in the opinion of the commissioner such action is necessary to obtain a full compliance with the provisions of the seed law.

FARM PRODUCTS GRADING LAW

Several hearings have been held relative to the misuse of official grades or labels in the sale of graded farm products. The Farm Products Grading Law is an optional law and it has been our policy to guard carefully the uses of the New England label on graded farm commodities. The co-operation of the producers has been encouraging and the violations reported have not been of great consequence. Our inspectors have spent considerable time in checking the sale of eggs, asparagus, tomatoes and strawberries and baby chicks graded and labeled in accordance with the provisions of this law. There have been cases where it was necessary to insist upon grade designations and labels being removed, when, in fact, the farm product did not meet the requirements of the grade. There have been other cases wherein the producer has been directed to remove a sign or advertisement indicating that farm products of an official grade designation were for sale, when, in fact, such farm products meeting the requirements of grade could not be obtained on this particular farm.

Every precaution has been taken to properly police the grades established by the commissioner of agriculture in order that the progressive farmer using the grade designation and label might profit by the sale of his graded farm products through a sales premium.

OTHER REGULATORY WORK

The nurserymen appear to understand fully the provisions of the law under which they operate and are careful to keep within the provisions of the law. One violation was reported in connection with the enforcement of the apiary law. This was an instance where the inspector was refused admittance to the premises where bees are kept. A conference was arranged in this particular case and the matter was adjusted to the satisfaction of the apiary inspector. The premises were finally inspected and the colonies of bees were found to be free from disease.

The inspectors and other regulatory officials of the Department have made a special effort to carry on a constructive program in regard to the enforcement of all laws coming within the jurisdiction of the Department. The farmer, the consumer, the commission man, the nursery man, the seed dealer and all other persons associated in any way with the regulatory work of the Department have been given impartial consideration in our efforts to bring about a substantial compliance with the laws that we are entrusted to enforce. Some of our laws are comparatively new and a greater amount of education is necessary in developing an understanding of our regulatory procedure and a co-operative interest among all the parties concerned. We find that our farm units, in general, are scattered and operated in general upon an individualistic basis. Many of our farmers are busily engaged during the working hours of the day, far removed from legislative and law-making activities and we find, therefore, that many of them are not well informed regarding laws that pertain to their occupational life. In order to serve them effectively, it becomes necessary to enlighten them regarding the law that pertains to their farming operations and enlist their co-operation in obtaining a full compliance with that law. Our experience has shown in our dealings with farmers that they have merited any consideration that we may have shown to them in applying the exercise of our police power with understanding and judgment as to their local agricultural problem.

