

MAINE STATE LEGISLATURE

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MAINE AGRICULTURE: LOOKING AHEAD



THE 1996 BIENNIAL REPORT ON AGRICULTURE

SUBMITTED TO

GOVERNOR ANGUS S. KING, JR.

AND TO

THE FIRST REGULAR SESSION
OF THE
118TH MAINE STATE LEGISLATURE

BIENNIAL REPORT ON MAINE AGRICULTURE FOR CALENDAR YEARS 1995 AND 1996

I. INTRODUCTION

The Commissioner of Agriculture, Food and Rural Resources is required under Title 7 MRSA section 2, subsection 5, to "report and make recommendations to the Governor and the Legislature with respect to methods of stimulating and encouraging the growth and modernization of agricultural enterprises in this State." This report is submitted in fulfillment of that requirement. Additionally, this report includes information on Maine agriculture that should be of interest to the general readership on this subject. Contained within these covers is a brief history of Maine agriculture, an overview of agriculture's contribution to the Maine economy, an analysis of the changing role of this department, a brief discussion of the department's strategic planning efforts, a section highlighting the department's efforts to promote the growth and expansion of agricultural enterprises, a summary of current legislative proposals, and a look at the near-term future of Maine's agricultural industries.

Maine's agriculture and food processing industries contribute over **\$1 billion** annually to the state's economy. There are many exciting things happening in Maine agriculture today, which will be discussed in latter sections of this report; however, first we will briefly examine from where our current agriculture industries have evolved.

II. A BRIEF HISTORY OF AGRICULTURE IN MAINE

During the colonial period, settlers of the territory that would become the State of Maine relied on farming for sustenance, while generating cash income from other activities such as lumbering, fishing, and commerce. At the time of Maine's statehood in 1820; the vast majority of the state's 300,000 people still relied on farming to meet their family's food needs. By the onset of the Civil War, changing economic and social forces were causing farming to shift from a largely subsistence endeavor to a commercial enterprise. Many people left agriculture to find work in the factories of growing cities; and the 55,000 farmers in 1860 continued to largely meet their families' needs while also generating income from the sale of crops. For the next 80 years, the state's farming community slowly evolved toward commercial agriculture. By the 1940s, about half of the state's 39,000 farmers were involved full time in agriculture, the rest were either part-time or grew food to meet their own families' needs.

At the time of the Civil War the total amount of land devoted to farming was 5.7 million acres, by 1880 it increased to 6.6 million acres, and by 1940 had declined to 4.2 million acres. This represented an increase from 29 percent of Maine's total land area (19.8 million acres) to 33 percent, and then a decline to 21 percent. Many factors caused this increase and decline in land farmed including changes in the population of Maine and the nature of agriculture. During this period, the average farm size was 100 acres. Photographs of rural Maine taken in the late 19th and early 20th century reveal expansive rolling fields of hay and pasture bounded by stone walls. These fields supported a prosperous sheep industry and an extensive animal-based agriculture dependent on draft animals for pulling farm equipment as well as wagons and

TABLE 1.
FARMS BY NUMBER AND SIZE
SELECTED YEARS FROM 1850 THROUGH 1995

Year	Farms Number	Average Farm Size Acres	Land In Farms Million Acres
1850	46800	113	4.555
1860	55700	108	5.728
1870	59800	104	5.838
1880	64300	99	6.553
1890	62000	98	6.180
1900	59200	97	6.300
1910	60000	105	6.297
1920	48200	113	5.426
1930	39000	119	4.640
1940	39000	108	4.223
1950	30400	138	4.128
1959	17360	178	3.082
1964	12875	201	2.590
1969	7971	221	1.760
1974	6436	237	1.524
1978	6775	221	1.500
1982	7003	200	1.580
1987	7300	199	1.450
1992	7300	199	1.420
1995	7600	178	1.350

carriages used for transportation. Maine's livestock inventory has declined substantially since an 1837 survey of farms reported 327,000 cattle and calves (versus 113,000 in 1995), 117,000 hogs and pigs (versus 6,500 in 1995), and 619,000 sheep and lambs (versus 11,000 in 1995). Sheep wool remained a relatively profitable commodity until the 1920s, when the industry experienced a precipitous decline due to plummeting domestic wool prices resulting from foreign competition and the advent of synthetic fibers. With the decline of an animal-based agriculture, much of the open hay and pasture land began to slowly revert to forest. Walking through almost any woodland in the southern part of the state one frequently finds stone walls and rusted, broken barbed wire fences, remnants of a bygone era. While some lament the loss of this pastoral landscape, other New England states share a similar agricultural history. These changes gave way to the more intensive and diversified agriculture that currently exists in the state.

In 1995, Maine had 7,600 farms using 1.35 million acres of land, or 7 percent of the state's land base (New England Agricultural Statistics 1995-1996). Approximately 560,000 acres, or 3 percent of the state's land base, is used for growing field crops including feed corn, dry hay, oats, fall potatoes, and sweet corn (1992 Census of Agriculture). Compared to the period prior to World War II, when the average farm size was around 100 acres, the current average is 178 acres. Table 1 shows the number of farms, their average size, and total acres of farmland in Maine from 1850 to 1995 (Farms of Maine and New England Agricultural Statistics 1995-1996). As people

exited farming, remaining farmers purchased available land to expand their own operations allowing for more efficient use of management and capital resources. Figure 1 shows Maine farms by various size categories as measured by acreage harvested (1992 Census of Agriculture). Figure 2 shows the regions where some of Maine's important agricultural commodities are produced.

In 1947, full-time employment on Maine farms totalled 46,700 workers, as compared to the 1992 full-time employment of 15,500 workers (consisting of 12,000 farm family members and an additional 3,500 hired workers) (Background Paper on the Economic Contribution of Maine's Natural Resources Industries). Half of Maine farmers list farming as their principle occupation, while the other half derive most of their income from other sources. The decline in full-time farm employment is due to a decrease in the number of acres farmed, an increase in the efficiency of farm machinery, and an increasing reliance on part-time and contract labor. Maine farms remain primarily family-owned businesses. Based on 1992 Census of Agriculture data, 88 percent of Maine farms were sole proprietorships owned by an individual or family; 5 percent were family-held corporations, 5 percent were owned by partnerships, and less than 2 percent were held by other types of ownership such as a non-family held corporation, cooperative, estate or trust.

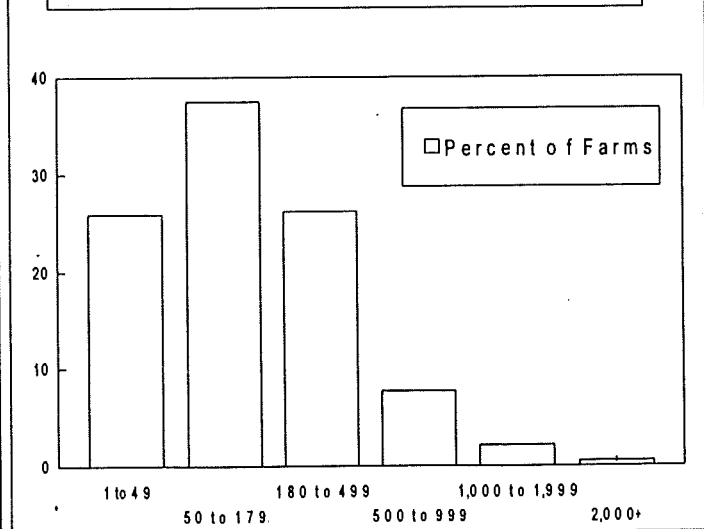
III. THE ECONOMIC VALUE OF MAINE'S AGRICULTURAL INDUSTRIES

Maine's agriculture and food processing industries contribute over **\$1 billion** annually to the state's economy. Maine produces more food crops for human consumption than any other New England state. Maine ranks first in the world in the production of blueberries, producing over 25% of the world's total blueberry crop. Maine produces over 50% of the world's wild blueberries; and Maine's production is increasing at the rate of several hundred acres annually. Maine is the largest producer of brown eggs in the world! In New England, Maine ranks first in potato production and second in the production of milk, aquaculture products, and apples. Nationally, Maine ranks third in maple syrup and eighth in potatoes. The greenhouse/nursery and aquaculture sectors have also shown steady growth in total sales since 1990. Cranberry production has recently enjoyed a resurgence in Maine. Seventy acres have been brought into production through a \$1.4 million capital investment.

Producer receipts at the "farmgate" for Maine's crop, livestock, and aquaculture industries totalled \$479 mil-

Figure 1. Farms by Acres Harvested in 1992







Source: 1992 Census of Agriculture

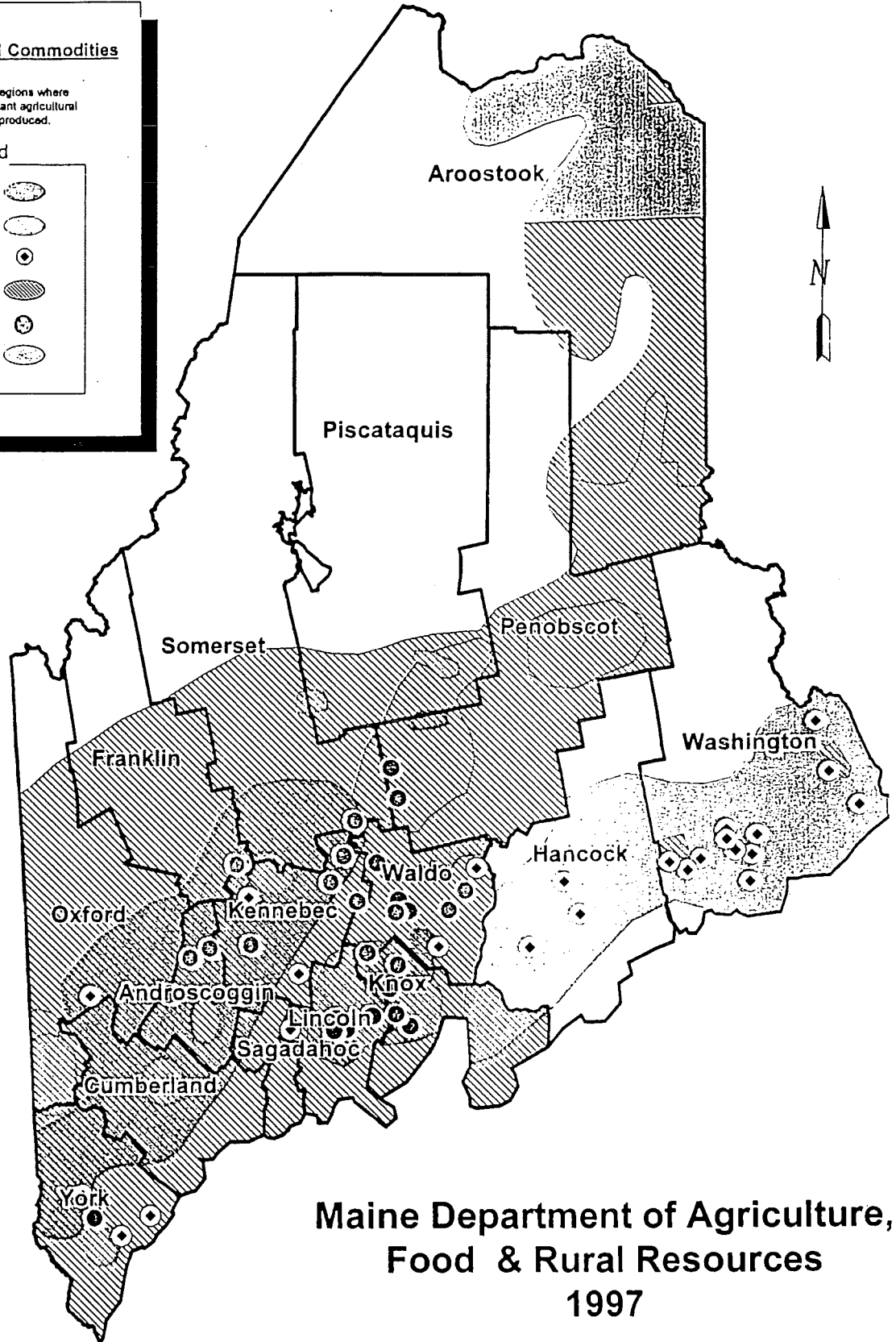


Maine's Agricultural Commodities

This map shows the regions where some of Maine's important agricultural commodities are produced.

Legend

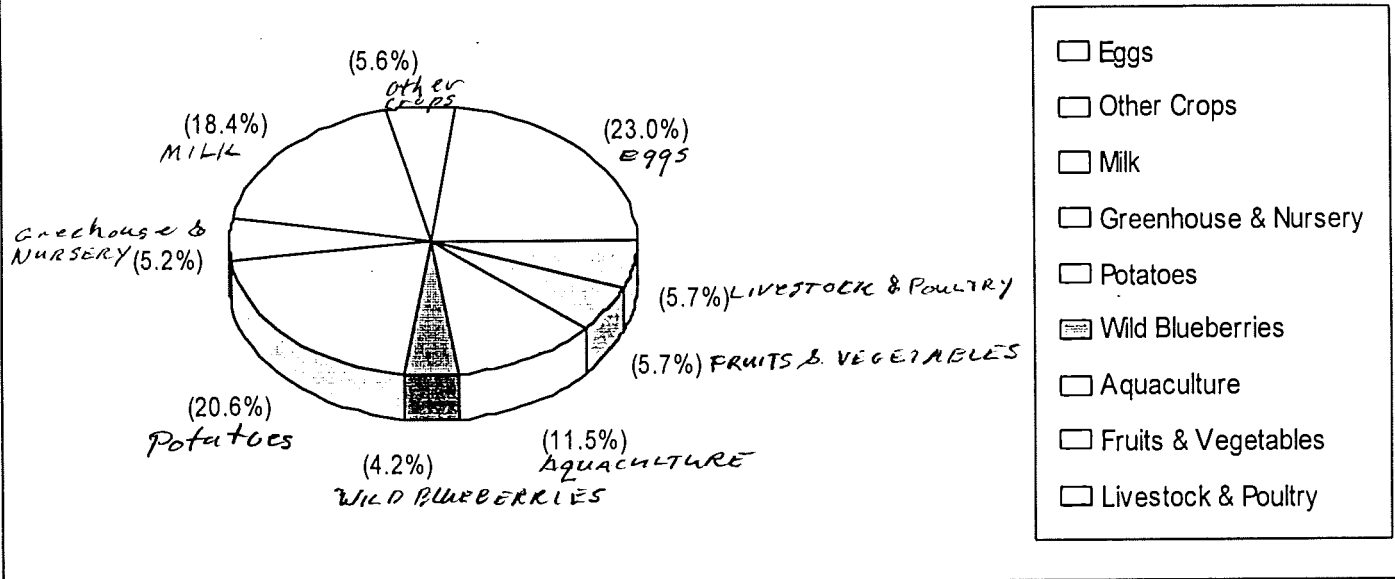
Apples	
Blueberries	
Cranberries	
Dairy	
Eggs	
Potatoes	



Maine Department of Agriculture,
Food & Rural Resources
1997

Figure 3. Maine Farmgate Receipts for Agriculture in 1995

Source: 1995 Cash Receipts



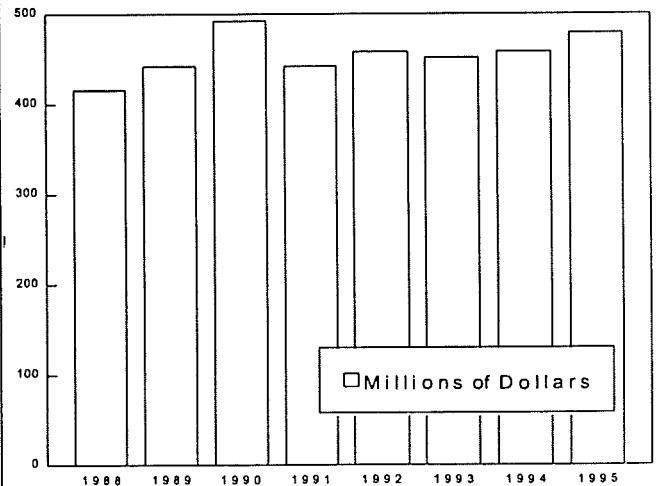
lion in 1995 (the latest year for which complete data is available). Figure 3 shows the percent each major commodity contributes to Maine's farmgate receipts (the price the producer receives for products sold, sometimes referred to as cash receipts) (1995 Cash Receipts, New England Agricultural Statistics Service, U.S.D.A.)

Maine's farmgate receipts (\$479 million) in 1995 were second in New England, only slightly behind Connecticut, which had farmgate receipts of \$484 million. Connecticut's higher ranking was due in large part to its substantial greenhouse and nursery industry. Otherwise, Maine led New England in farmgate receipts for food products. Figure 4 shows Maine's total farmgate receipts from its agricultural industries for the last 10 years (excluding aquaculture because of the lack of data prior to 1990) (New England Agricultural Statistics 1995-1996).

Farming has always been a risky enterprise due to the uncertainties of climate, biological factors such as insects and disease, and changing market conditions. Figure 5 shows the variation in net farm income over the last decade (New England Agricultural Statistics 1995-1996). Net farm income is the profit the farmer realizes; it is derived by subtracting farm production expenses from farmgate receipts for the farm products marketed. Over the last 10 years, net farm income has fluctuated from a low of \$69 million in 1986 to a high of \$149 million in 1992, a more than 100 percent difference. In 1992, the average net

Figure 4. Maine Cash Receipts 1988 Through 1995

Source: New England Agricultural Statistics 1995-1996

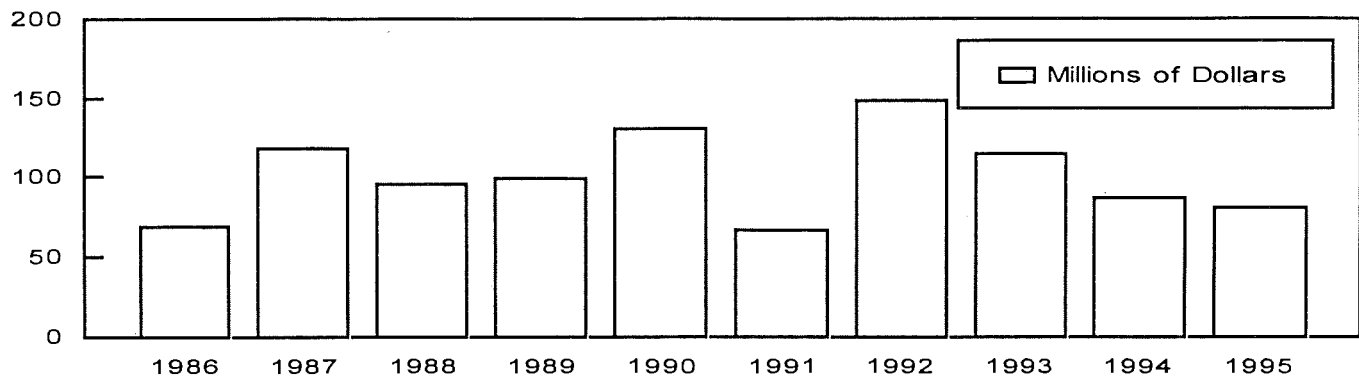


cash return from agricultural sales for Maine farms was \$12,600. Because of this relatively low and variable income, many farmers and members of farm families seek regular employment off the farm. Figure 6 shows percent of farms by market value of products sold in 1992.

It is estimated that there are 12,000 full-time farm family workers on Maine farms. Another 3,500 people are employed as farm laborers for most of the year. In total, there are 15,500 full-time workers on Maine farms (Background Paper on the Economic Contribution of Maine's

Figure 5. Net Farm Income

Source: New England Agricultural Statistics 1995-1996



Natural Resources Industries). An additional 25,000 people are employed seasonally or part-time (less than 150 days a year). Maine farms spend nearly \$70 million for hired and contract labor. In addition to salaries paid to farm laborers, Maine farms purchase a wide variety of goods and services, and provide raw materials used in other industries, which has a substantial ripple effect throughout the state's economy. Table 2 shows the number of people employed on the farm and in other agricultural industries in the state (Background

Paper on the Economic tribution of Maine's Natural Resources Industries). In total, nearly 67,000 Maine people are employed in agricultural and related industries.

Agriculture and farmland are important components of rural character. Rolling fields, croplands, orchards, and wild blueberry barrens enhance the scenic character of Maine's landscapes and increase the diversity of habitats available for use by wildlife. Undeniably, Maine's

TABLE 2.

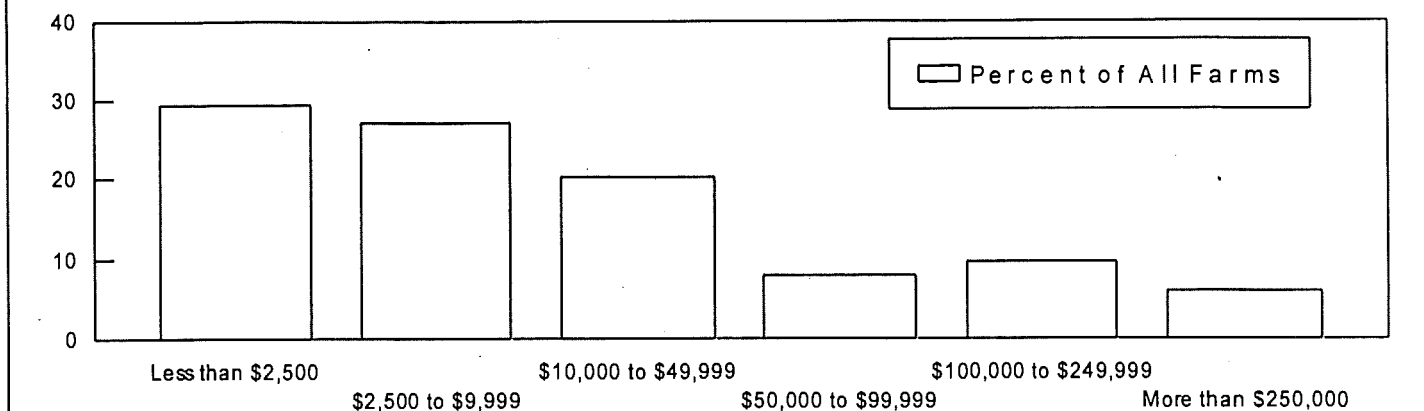
EMPLOYMENT IN MAINE'S AGRICULTURAL INDUSTRIES

Sector	Employment	Number of Jobs
On Farm	Farm-Family Workers	12000
	Farm Employees (Full Time)	3500
	Farm Employees (Seasonal/Part Time)	25000
	Sub Total	40,500
Agricultural Services	Proprietors/Self Employed	11016
	Wage & Salary Employees	2120
	Sub Total	13136
Manufacturing	Food Processing*	4109
	Textile/Apparel (est. share)	800
	Leather (Tanning)	1287
	Sub Total	6196
Wholesale Trades	Farm Machinery	370
	Farm Products - Raw	40
	Produce	3450
	Farm Supplies (Including Floriculture)	370
	Sub Total	4230
Retail Trade	Nursery/Gardening	260
	Food (Excluding Grocery Store)	1600
	Florist/Plants	760
	Sub Total	2620
	Total	66682

Note: Employment figures for manufacturing are the "average annual employed." The number fluctuates by nearly 2,000 between the highest and lowest month. Many of the other related industries have similar fluctuations throughout the year. * denotes the portion of employment in the sector that most directly relates to agricultural activities.

Figure 6. Maine Farms by Market Value of Products Sold in 1992

Source: 1992 Census of Agriculture



\$1.5 billion tourism industry is dependent on the natural beauty of our farms, as well as our forests, mountains, rivers, and coastal areas. And, Maine's agricultural heritage is an important part of how we define ourselves as "Mainers".

IV. THE CHANGING ROLE OF THE DEPARTMENT

In 1995, the department began an internal strategic planning process to better align department activities with available resources. Later that same year, the Governor's Productivity Realization Task Force began a similar government-wide process to provide more efficient and cost-effective delivery of services to each department's constituents and to the people of Maine. As a result of these processes, the department formulated a new vision and reorganized to more effectively meet its diverse responsibilities. The department's vision is *"To be an extraordinary resource to Maine agriculture and the people of Maine."*

In striving for this vision, the department was reorganized into two offices and four major divisions. The former bureau structure was eliminated in favor of creating an environment that encourages the offices and divisions to work together on various agricultural and food issues that often cross the boundaries of anyone unit's responsibilities.

The new offices and divisions are:

Office of Planning, Policy, Legislation & Information Services

Office of Agricultural, Natural & Rural Resources

Division of Animal Health & Industry

Division of Plant Industry

Division of Market & Production Development

Division of Quality Assurance & Regulations

The following briefly describes the scope of responsibilities of the new offices and divisions.

OFFICE OF PLANNING, POLICY, LEGISLATION & INFORMATION SERVICES

This office was established to provide support to other department units, the Commissioner's Office, agri-food business, and the public. Its role includes policy development, initiating and tracking legislation, and providing oversight of information and computer services, budget development and management, and communications. The Maine Milk Commission receives staff assistance from this office. This office is also the liaison with the Agricultural Bargaining Board and the Potato Marketing Improvement Committee.

OFFICE OF AGRICULTURAL, NATURAL & RURAL RESOURCES

This office was established to move the department into a proactive position on agricultural issues. It provides a broad range of technical support to assist farmers in implementing best management practices to protect natural resources in the most cost-effective and efficient manner. When needed it deploys a rapid response team to resolve nuisance complaints and other emergencies involving agriculture. This office also has administrative and staffing responsibility for the Board of Pesticides Control, which is a citizen-member board with 10 full-time staff, and is responsible for establishing policy regarding the sale and use of pesticides. With the available expertise, the office is implementing an integrated pest management program to improve the safety and effectiveness of pesticide use.

In addition, this office also is administratively responsible for the Maine Soil & Water Advisory Council, Aroostook Water & Soil Management Board, Biotechnology & Genetic Engineering Commission, Maine Seed Potato Board, Maine Potato Board, and the Maine Blueberry Commission.

DIVISION OF ANIMAL HEALTH & INDUSTRY

The division is responsible for a variety of programs pertaining to animal health and welfare, as well as human health. The division works to prevent the introduction and spread of contagious, infectious, and parasitic diseases among poultry and livestock, especially those diseases that can be transmitted to man either directly or indirectly. It also supervises and maintains the State-Federal diagnostic laboratory for disease control purposes to enable animals to move through interstate and international commerce. The division is charged with protecting the health of livestock through testing and surveillance programs conducted by the State veterinarians to quickly diagnose disease outbreaks. Another responsibility is to supervise and maintain the department's Milk Quality Laboratory where milk and milk products are tested as required by the Food and Drug Administration, and to evaluate and certify private milk laboratories operating in the state. Division personnel inspect all dairy farms to ensure compliance with the Interstate Milk Shipper Program. Division veterinarians conduct the Maine Milk Quality Program, working with dairy farmers to resolve problems with mastitis, milking equipment, and stray voltage which can affect cow behavior and milk production. The division also investigates complaints of animal abuse, and trains and certifies municipal animal control officers. Recently, the division has been asked by the Maine aquaculture industry to become involved in finfish health issues and disease control regulations.

DIVISION OF PLANT INDUSTRY

The division is responsible for a variety of programs pertaining to plant health, as it works to prevent the introduction and spread of injurious insects and diseases in Maine crops. The division protects the public from hazards associated with the sale, transport, or growing of weak, diseased, or insect-infested commercial plant stock. The State Apiarist within the division inspects bee hives for disease and the occurrence of Africanized honey bees (none of which have been found to date), and takes action to prevent the spread of these problems. The primary responsibilities of the division are to enforce the statutes relating to the certification of seed potatoes to ensure an adequate supply of foundation seed for the state's commercial seed potato producers; to inspect nurseries and

greenhouses; and to license beekeepers and to inspect their hives. Through the operation of the Porter Farm in Masardis, the division ensures the production of high quality, disease-free seed potatoes for Maine's potato industry. The division also conducts a potato disease testing program on a farm owned by the State of Maine in Homestead, Florida, where samples of Maine seed potatoes are grown and tested to ensure that they meet disease tolerances established by State rules.

DIVISION OF MARKET & PRODUCTION DEVELOPMENT

This division works cooperatively with producers to improve the production of existing commodities, researches and demonstrates the feasibility of new commodities, and assists producers with product marketing. The division provides information on commodity crop and livestock statistics. It supports research and demonstration of new production, storage, and processing technology, and helps producers apply for federal grants to enable these activities. Projects currently supported by the division include: reduction of noise caused by irrigation equipment, potato irrigation systems, blueberry interplanting, upland cranberry engineering design, flax production techniques, beef performance testing, and the Spirit of Maine Sheep Program which encourages the use of performance data to assist in the selection of sheep for Maine flocks. On the marketing side, the division works cooperatively with agricultural associations to identify priorities in marketing and develops joint ventures to pursue these marketing opportunities. The division also works with producers to educate them about the standards of quality needed to participate in national markets. It assists in opening new markets through cooperative marketing efforts that increase the volume of products that meet quality standards. To promote Maine products, the division develops posters, quality packaging, and source directories.

DIVISION OF QUALITY ASSURANCE & REGULATIONS

The Division of Quality Assurance and Regulations assists Maine agriculture, industry, and citizens by ensuring that a safe, high-quality, and adequate food supply is maintained; that weighing and measuring devices used in commerce are correct; and that instruments used in law enforcement are accurate. During the past year, the division capitalized on shrinking resources by cross-training staff to stretch its inspection capabilities and assisted businesses in the following areas:

Food Safety: In 1996, four members of the division

were trained as instructors in a Hazard Analysis Critical Control Point Program (HACCP) being promoted by federal and state agencies. This program teaches businesses processing food to be aware of potential sources of bacterial contamination and how to take actions to prevent contamination from the time raw materials are received until the finished product is shipped. These instructors are currently conducting training sessions around the state in conjunction with personnel from the federal Food and Drug Administration, Maine Department of Marine Resources, University of Maine Cooperative Extension, and members of the seafood industry.

Maple Syrup: During the 1996 maple syrup season, the division worked with Maine's maple syrup producers and the Maine Department of Human Services to identify potential problems with lead in finished maple products. Product samples were taken from nearly all producers and tested for lead, and follow-up tests were conducted at any establishments that showed high lead levels. Fortunately, no significant problems were found and no chronic recurrences were identified.

Cider Producers: The division inspected apple cider producers and provided guidelines to them on good manufacturing practices for producing safe, fresh apple cider. This education process will continue to ensure that e-coli and other contaminants do not get into Maine's cider products. The division will continue to monitor the industry and provide assistance as necessary.

Metrology Laboratory: The Weights and Measures Unit and the Metrology Laboratory have been working toward incorporating the requirements of the International Standards Organization into device and artifact testing and calibration to ensure that businesses and industries requiring these measures will remain competitive in domestic and foreign markets. The Metrology Laboratory is progressing rapidly to high accuracy echelon I mass accreditation by the federal government's National Institute of Standards and Technology (NIST). This will enable the department to calibrate its primary metric and avoirdupois mass standards in house, and will save approximately \$15,000 every five years on federally mandated, highly accurate calibration services, currently available only at the NIST.

The unit has up-graded its heavy-duty scale testing apparatus by purchasing a new tractor and tri-axle trailer. This equipment tests large capacity truck scales close to the capacity at which they are used, resulting in more accurate equipment for all types of large bulk weighing transactions, such as fertilizer, liming materials, feed, and other

bulk commodities traded by agricultural, wood products, and other businesses throughout the state.

V. STRATEGIC PLANNING

In 1995, the department embarked on an effort to create a long-term strategic plan to provide a framework to guide the delivery of services to Maine's agricultural community and its citizens. The strategic plan, which is nearing completion, has been developed by the department's staff in conjunction with the agricultural community, and discussed with the public. The plan recognizes that the department cannot be "all things to all people" in this era of shrinking budgets. Therefore, it identifies six high priority goals and nearly two dozen measurable objectives, which are the incremental steps necessary to attain the goals. The goals guide the department in carrying out its mission and, ultimately, to realize its vision. The strategic plan goals are to:

Create opportunities for success and expansion of Maine agriculture and food businesses.

Ensure the safety of consumers in the food that they eat and to protect the integrity of services they receive.

Ensure the health and well-being of Maine's agricultural plant and animal resources.

Ensure the public actively supports Maine agriculture.

Promote stewardship of Maine's agricultural and natural resources while protecting human health and the environment.

Ensure the Department operates in a manner that increases customer service and employee job satisfaction while delivering programs and services in a fiscally responsible manner.

The offices and divisions in the department will be mindful of these goals as they implement existing programs and develop new ones.

VI. PROMOTING GROWTH AND EXPANSION OF AGRICULTURAL ENTERPRISES

Most of the day-to-day activities of the department's offices and divisions do not make newspaper headlines. There are few great leaps forward! Rather, it is the consistent, devoted attention of the department's professional staff working with Maine's agricultural producers and food processors that results in improved production of crops and livestock, new commodities for waiting markets, assurance of safe food, integrity of commercial transactions, and protection of the environment. Listed below are some of the accomplishments of the department over the last two years.

Dairy Industry The 117th Legislature passed a re-

solve requiring the department to take various actions in support of the Maine dairy industry. The Office of Planning, Policy, Legislation and Information Services has coordinated this multi-faceted effort. One aspect of the resolve required the department to work with other state agencies, the University of Maine, and private interests to identify opportunities to create new value-added products using Maine-produced milk. In furtherance of this objective, a seminar on the "New Uses of Milk" was held at the University of Maine in Orono on October 8, 1996. Several findings resulted from the seminar, including that the only organization doing research on dairy products in the northeast--the Vermont-based Northeast Dairy Foods Research Center (NEDFRC)--is not responsive to Maine's dairy industry because research priorities are established by Dairy Management Inc. (DMI) to meet the needs of large, milk producing states. DMI is a federation of state and regional milk producer generic promotion organizations. The member states are primarily interested in the basic use of milk and not in new products, which is generally a small dairy state interest. Also, Maine's dairy industry does not have the infrastructure to support new product research, distribution, and marketing on its own. Recommendations to address this problem include having the department work with DMI to ensure that the Northeast Dairy Foods Research Center considers the interests of Maine when formulating its research agenda; and that the scope of research addresses new uses of milk and value-added milk products. Also, seminar participants recommended that the department help the Maine dairy industry develop the necessary infrastructure to enable it to speak with one voice in getting its research needs met by the University of Maine and NEDFRC.

Best Management Practices The departmental reorganization created the new Office of Agricultural, Natural and Rural Resources, pulling together functions and staff from former units of the department. This office provides a broad range of technical and support services, and serves as a repository of information and expertise to further adoption of agricultural practices that are efficient, profitable, and environmentally sound. The office takes a proactive approach to resolving environmental problems associated with agricultural practices. When a situation-- such as nitrate contamination of a well--comes to the department's attention, the unit sends an inter-disciplinary, rapid response team to investigate the problem and recommend a solution. Oftentimes the solution involves the implementation of a best management practice that has been demonstrated from past experience to prevent or alleviate an environmental problem. A variety of best management practices have been demonstrated to be cost-

effective in protecting surface and ground water resources from improper manure storage and spreading and soil tillage operations. A rapid response to these problems protects the public health and natural resources, and maintains goodwill for farmers with their neighbors.

Milk Quality Program The Division of Animal Health and Industry (formerly called the division of Veterinary Services) has assumed responsibility for the Dairy Inspection and Animal Welfare programs. One of the most popular programs of this division is the Milk Quality Program. Division veterinarians visit farms at the request of the farmer, practicing veterinarian, or dairy to ascertain the cause of mastitis or other milk quality problems. These visits are always made during milking to observe milking procedures and to obtain individual cow milk samples for culturing at the University of Maine. In addition, performance tests are conducted on milking equipment and a stray voltage check is also made. When culture results are received, division staff meet with the farmer to discuss the findings and to make recommendations. The range of problems encountered can include improperly functioning milking equipment, improper milking procedures, inadequate barn sanitation, and stray voltage. Stray voltage can contribute directly to production losses; for example current running through the water supply can cause cows to drink less water. Stray voltage can also cause behavior problems, such as discouraging cows from entering the milking parlor. Recently, stray voltage has received more attention both in Maine and at the national level. Division veterinarians have been working closely with the Maine Public Utilities Commission and power companies to mitigate this problem when encountered. During the ten years the program has been in operation, the division has visited three-quarters of the dairy farms in the state, resolving hundreds of problems and thereby improving milk production and quality, as well as profitability.

Disease and Insect Protection The department's Division of Plant Industry has responsibility for ensuring that Maine's agricultural commodities, such as potatoes, barley, wheat, and seeds, are free from disease and insects of quarantine significance, so that they can be exported to other countries. In 1995 and 1996, division staff issued certificates facilitating the export of \$2 million and \$2.4 million worth of commodities, respectively. Without this service, Maine producers would not be able to compete in world commodity markets. Another important service provided by the division is the screening of seed potatoes for late blight. Late blight, as its name suggests, appears late in the growing season and causes withering of the

potato plant foliage. It can reduce yield and causes potatoes in storage to rot. It can also infect potatoes used for seed, making them unsalable. The need for this screening became urgent with the recent appearance of a new, aggressive strain of late blight in Maine potatoes. Division staff examine 400 seed potatoes from each seed lot submitted by producers to determine the percentage (if any) infected with late blight. The screening program, which has been in operation for two years, helps producers decide if their seed lots are safe to sell or replant. It has been funded by grants from the U.S. Department of Agriculture and the Maine Cooperative Extension Service.

Marketing Products The department's Division of Market and Production Development supports the activities of Maine farmers, food processors, and agricultural associations. It coordinates special events, in conjunction with industry associations, such as Maine Maple Sunday, the New England Beef Expo, the Spirit of Maine Sheep Test, the Annual Wool Pool, and many others. Assistance is provided to Maine food businesses in promoting their products at local, national, and international trade shows, such as the New York Fancy Food and Confection Show, the Food Marketing Institute in Chicago, and the Maine Restaurant and Lodging Expo.

Developing New Products The Division of Market and Production Development works with producers to develop the technical expertise to grow and market new crops in Maine, such as cranberries and flax. The division developed a "Cranberry Growers Guide" for individuals interested in getting into this new and expanding industry in Maine. Over 50 guides were distributed to interested people in 1996. The division also hosted four workshops to foster awareness of existing and new markets for cranberries. The workshops resulted in Maine growers establishing new relationships with cranberry marketers in Massachusetts. The division is also exploring the potential for expanding fiber flax production to include new opportunities for both export and cottage industry development of finished products.

Mandatory Potato Inspections In July of 1996, the department initiated a mandatory inspection program for all Maine tablestock potatoes in consumer packs of 50 pounds or less. Also, new standards for potatoes packed under "premium Maine grade" require potatoes to be washed, to be more uniform in size, and to have fewer defects. These actions were taken because Maine was losing market share for tablestock potatoes during a period of growth in the market for this product. The provisions of the mandatory potato inspection program are enforced

by the Division of Quality Assurance and Regulations.

VII. LEGISLATIVE PROPOSALS

The department will submit six pieces of legislation to the 118th Legislative session, all of which amend existing statutes. The title and a brief synopsis of each bill is presented here.

AN ACT to Improve the Administration of Animal Welfare Laws -- This bill provides a rewrite of animal welfare laws to remove inconsistencies, clarify statutes, streamline enforcement, and make changes to reflect input from the Animal Welfare Advisory Committee.

AN ACT to Improve the Reporting of General Use Pesticide Sales -- The current statute requires all licensed general-use pesticide dealers to report sales of products in packages of one quart or larger and five pounds or greater in size. While this results in many reports being submitted, a substantial amount of pesticide sales are in small packages and exempt from the reporting requirements. Thus, there is no reliable reporting of general use pesticide sales. This bill would shift the reporting requirement primarily to wholesalers and a few large firms who distribute directly to their company stores. These companies should already have computerized sales data on all pesticides regardless of package size. This would remove the reporting burden for many small retailers in Maine and also significantly reduce the number of reports submitted by businesses and processed by the Board of Pesticides Control.

AN ACT to Clarify the Sanctions for Violating Laws Relating to Animal Pulling Events -- This bill is intended to clarify and eliminate inconsistencies in the law regarding suspensions from pulling events for those who violate this law.

AN ACT to Enhance the Potato Industry -- This bill gives the department authority to develop rules requiring inspection of all potatoes, including bulk shipments. Currently, authority only covers potatoes in 50 pound packages or less. The bill also extends the use of the accrued interest in the Potato Marketing Improvement Fund to include potato production research; raises the bonding levels for potato dealers, brokers and processors; and makes information regarding patented potato varieties confidential.

AN ACT to Improve the Efficiency of the Department of Agriculture, Food and Rural Resources -- Current statutes limit many of the licenses granted by the

Department of Agriculture, Food and Rural Resources to one year. This bill would allow, but not require, the department to grant multi-year licenses where appropriate.

AN ACT to Protect the Potato Industry from the Spread of Serious Disease -- This bill clarifies procedures needed to protect the Maine potato industry from the spread of diseases from potato cull piles and imported seed potatoes, and increases the penalties for planting non-certified seed potatoes.

VIII. THE FUTURE OF MAINE'S AGRICULTURAL INDUSTRIES

Making a living in agriculture is a dynamic and challenging enterprise. Not only do the vagaries of weather, insects, and disease pose production problems, but today's producers and food processors must compete in rapidly changing markets and avail themselves of the latest technological advances to stay competitive. A review of the last 10 years of net farm income data for all Maine farms shows that farmers experience dramatic fluctuations in income from year to year (see Figure 5). In fact, this is true of agriculture in general across the range of commodities that we expect to find on our supermarket shelves. Fortunately, the allure and challenge of wresting a living from the soil and sea keeps producers filling our pantries.

The rapidity of technological and economic change clouds our view into the crystal ball, making the forecast for Maine's agricultural industries uncertain. Of necessity, we need to look at the near-term, the next 10 years. The four food crops that lead in cash receipts are eggs, potatoes, milk, and aquaculture products. Maine's brown egg production comes primarily from one large operation, and while management problems have plagued this business, it is likely that it will continue. The potato industry has experienced a significant decline over the last 30 years, with the number of acres producing potatoes reduced by half. However, it is expected that the remaining acres will continue in production because of strides made to both improve the quality of potatoes marketed and add value through processing. Maine ranks third nationally in the production of seed potatoes and leads the nation in sale to out-of-state markets. The seed quality assurance program instituted by the department will help to maintain the viability of this industry. The number of dairy farms in the state is likely to continue its slow rate of decline, in part due to the economic obstacles posed for those who want to enter the business. However, it should be noted that milk production has only decline by five percent over the last decade due to the increasing produc-

tion and efficiency of those remaining in the business. Cash receipts for Maine's relatively new aquaculture industry have continued to rise, and it is expected that this industry will maintain its steady growth.

While some traditional products may experience declines, new crops are succeeding for Maine farmers. Acres planted to grains are expected to increase because the demand by Canadian hog and poultry growers for Maine-grown grains is rising. Currently, 1500 acres of flax is grown in Maine, and a processing mill is making linen thread from the flax and is working on producing a yarn. Acres planted to cranberries are increasing, and it is possible that in the near future cranberries will rival apples in economic importance for the state. Cash receipts for greenhouse and nursery operations have also experienced a steady increase, and this trend is expected to continue.

Maine's agriculture industries must now compete in a world economy driven by rapidly changing technological innovations. For Maine's producers to stay competitive, they must continue to produce high quality products efficiently at competitive prices; and producing and processing products for niche markets will be an important survival strategy. Agriculture will continue to be a significant component of the Maine economy into the next century, and will likely continue to diversify to meet the demand for new products. The Maine Department of Agriculture, Food and Rural Resources will work closely with Maine producers to ensure that programs, technical services, and regulations effectively serve producers as well as consumers in the new world economy.

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