A FOOD POLICY FOR THE STATE OF MAINE

Report of a Study by the

JOINT STANDING COMMITTEE ON AGRICULTURE

to the

111th Maine Legislature

January, 1984

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Sen. Edgar E. Erwin (Chair)
Rep. Stephanie Locke
Rep. Richard E. McCollister
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Rep. Carl B. Smith

Additional Members of the Full Committee:

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Rep. John M. Michael (Chair) Appointed to replace Chairman Mahany, September 7, 1983
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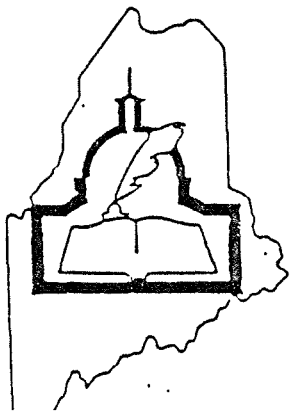

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INTRODUCTION

I. Genesis of the Study.

On December 17, 1982 the Joint Standing Committee on Agriculture submitted a final report of its interim review of the Food and Farmland Commission, which completed its work in June, 1979. The Legislative committee concluded its study assignment in the 110th Legislative Session by making the following major decision: /1/

> "The Committee has approved a proposal to independently study the question of food self-sufficiency for Maine and to work toward the development of a comprehensive and realistic food policy..."
>
> The Agriculture Committee decided upon this course of action because a major finding from the study review indicated that the food and farmland study commission had not completed one of its major goals: "to determine the degree of food self sufficiency within Maine and to develop an overall food policy..." /2/

While the Committee had intended to pursue the food policy issue on its own during the 1st Regular Session of the 111th, the legislative workload during that period left little time to do much more than prepare a study agenda. In the spring, the Committee submitted a study outline with a request to the Legislative Council for permission to make the development of a food policy a major study priority for the interim. The request was approved on May 25, 1983.

II. Background: Food and Farms

Troubled by supply shortages of fuel and interruptions in the distribution of other essential products, New England realized in the 1970's its vulnerable condition of dependence upon other regions of the country for basic items vital to the maintenance of life, such as food. In a report prepared by the New England Congressional Institute, the following facts were revealed:

> (1) Less than 50 years ago, New England provided 70% of its food on 150,000 farms, which used 40% of the land area of the region.
>
> (2) In 1980, New England produced roughly 30% of the total food consumed on about 30,000 farms, which managed only 12% of the land in the six State area.

The reasons for the decline in food production and the loss of both farms and farmland in New England reflect a profound alteration in the structure of agriculture after World War II and the development of a national food system. Whatever the reasons, complicated as they are, most New England states reacted to these disturbing trends by developing food policies which aimed at countering the deteriorating trend in their agricultural sectors and promoting the goal of greater food self-sufficiency. Even though the Maine Food and Farmland Study Commission openly advocated the goal of increased local food production for Maine, a food policy did not emerge from their considerable efforts to improve Maine

agriculture. To complete the work that needed to be done, the Agriculture Committee of the Maine Legislature needed to:

(1) Gather information on the degree of food self-sufficiency in Maine.

(2) Collect data on food production/consumption in New England.

(3) Determine the food production potential of Maine.

(4) Use the information generated as a foundation upon which to construct a realistic food policy for Maine.

III. Conduct of Study:

The study proceeded under the direction of the full committee which met in July, October, and December. Several meetings with the House and Senate Chairs were scheduled in between these meetings, and a Subcommittee met in November to review and comment on the preliminary draft of the Food Policy Statement.

At its October meeting, the committee received comprehensive information on the food production potential in Maine, the significance of agricultural contribution to the State economy, and the status of food production in New England. In addition, a film ("Growing Pains") produced by the Conservation Foundation of Washington, D.C. was shown which discussed the disturbing trends in farmland loss nationally by depicting the conversion pressures that are at work in various regions.

On October 6, a hearing was conducted by the Committee to entertain thoughts and suggestions from individuals and groups in Maine about the formulation of a food policy. A list of issues and considerations were formulated by staff, posing important questions to those who were specifically invited to testify.

The Committee on Agriculture and Office of Legislative Assistants received valuable assistance in the preparation and presentation of source material from 2 principal staff members of the Department of Agriculture, Food and Rural Resources: Barbara Gottschalk, Associate Commissioner and Kathy Sage, Research Associate.

Findings:

After assimilating the background information presented on the agricultural and growing capacity of Maine and New England, the Committee reached the conclusion that the experience of New England in the 70's should not necessarily determine the character of Maine's food policy in the 80's. Other New England states, especially Connecticut, Massachusetts and New Hampshire, which have experienced a serious decline in the strength of their agricultural sectors and a dramatic loss of farmland in the last 40 years, drafted food policies reflecting a widespread concern about the future availability of food at an affordable price.

"This concern started to gain momentum in 1973 with the oil embargo and has increased with severe weather conditions, increased cost for fuel to transport food into the state and the shift in the use of good farm

land from food production to other uses." /3/

Therefore, the food policies drafted by these states stress the dominant theme of food self-sufficiency for their states, while admitting at the same time that limiting factors such as poor soil quality, loss of farmland, and weather conditions make this an ambitious goal, to say the least.

Maine also experienced the trauma of the 70's and most of the deteriorative forces at work in New England affected the health of Maine's agricultural community to some degree, as well. Still, Maine is clearly the leading farm state in New england, generating 28% of all cash receipts for New England in both 1980 and 1981. More important, however, Maine still maintains a substantial land base of 1.6 million acres in agricultural production, even though abandonment and conversion of farmland has reduced the cropland inventory in active use another 1.4 m acres since 1945. If all the land lost to agriculture production over the past forty years could be reclaimed, Maine would be in a much better position to feed its population than the other New England states, which have a much more limited land resources and many more people to feed.

After assessing the data thoroughly, this study report reaches the conclusion that even Maine does not have the capacity, at present, to be food self-sufficient. Furthermore, strong opinions were voiced at the hearing on October 6 about the inadvisability of a food self-sufficiency strategy for Maine. Significant commercial segments of the agricultural community depend primarily upon out of state markets for sale of farm products. In the words of William Bell, spokesman for the Maine Poultry Federation, a food policy that primarily seeks to achieve food self-sufficiency could have the unintended effect of weakening our agricultural economy.

> "While our industry fully supports the concept of Maine citizens consuming as much Maine-grown or Maine-processed food as possible, we have serious reservations about campaigns which suggest a preference for Maine food over that of other New England states. Our industry's rationale is simple: Maine's market for broilers and eggs is New England. With its limited population base, Maine alone could not support poultry farms at anywhere near their present number--unless Maine consumers just ate chicken and eggs all day." /4/

The food policy developed from this study surmounts this debate by advocating more food production in Maine not only to satisfy out of state demand, but also to increase the availability of wholesome and nutritious food for Maine citizens. Maine has the production capacity to adequately do both jobs at once because of its land base and its proximity to tremendous market opportunities in the Northeast. Whether the challenge to meet Maine's food production potential is realized in the future depends upon overcoming certain production and marketing constraints, and it fundamentally hinges upon the continued availability of a land base adequate to sustain expanded effort.

A final sobering message was communicated by David Vail, Professor of Economics at Bowdoin College, who maintained in his address before the Committee that if Maine is to realize its production potential, it will not

happen simply because food production and distribution failures occur in other parts of the country. The national food system which has been established in the last 50 years is well organized and financially strong. It has a huge investment in sustaining the growing regions upon which it depends for production, and it will seek innovative ways to minimize marketing and distribution difficulties in order to maintain markets. Maine, in other words, must not wait around hoping to become the beneficiary of diminished strength in the national food system. The future of Maine agriculture and the success of a food policy will rest more fundamentally upon the determination of Maine people to support, expand and diversity its farm capacity.

Summary of the Food Policy:

The proposed Food Policy is a comprehensive document, divided into nine sections. The first, General Policy, resolves: That it is in the best interest of the State of Maine to support a food supply system that: 1.) Contributes positively to the nutritional, economic and social well-being of its citizenry and its rural communities; 2.) Enhances the availability, affordability, and quality of food for its citizens; 3.) Is economically efficient and environmentally appropriate; 4.) Is sustained by a structure that promotes a fair return to all participants; provides entrepreneurial freedom; and allows access to opportunity to participate in the food supply system.

What follows is a series of specific resolutions grouped under eight areas of concern: Rural Communities, Consumers, Production, Marketing, Finance, Farmland, Research and Education, and Structure. In all, there are some 31 specific statements. The policy seeks to ensure that State programs affecting food production, distribution, and consumption are conducted effectively and with consistency. Finally, the food policy seeks to strike a balance between the need to include basic principles and the need to provide specific guidance to administration of state programs.

Recommendations:

In order to assess the consistency of State programs with respect to the Food Policy, the Agriculture Committee recommends continued study to be conducted by the Agriculture Committee, drawing upon Legislative members of other interested committees where possible and soliciting assistance, where appropriate, from other state agencies and institutions. If approved, this study assignment will require submission of a report to the Legislature by January 1, 1985 which addresses:

(1) the relationship of those programs to the State Food Policy goals and objectives and the process by which these goals and objectives are considered in program development, implementation and review;

(2) the nature and extent of coordination of these programs with other relevant state programs, including a description of specific coordinative efforts;

(3) the commitment of resources provided by these programs to specific commodity or consumer groups and the process by which these resources are allocated to these groups;

(4) the adequacy of existing resources to effectively implement programs which are established to address directly the objectives of the food policy.

Recommendations will be issued along with the report to indicate measures needed to improve the coordination and implementation of programs.

The study will be staffed by the Legislative Assistants Office.

FOOTNOTES

(1) Final Report from the Committee on Agriculture, study of the food and farmland study commission, December 17, 1982, page 1.

(2) Ibid; page 2.

(3) Heckel, Maynard C., transmittal memorandum, Recommendations for a New Hampshire Food Policy, College of Life Sciences and Agriculture, University of New Hampshire, May, 1979.

(4) Bell, William, written testimony, Maine Poultry Federation, October, 1983, page 1.

RESOLVE, Establishing a Food Policy for Maine.

Preamble. Whereas, it is in the best interest of the State of Maine to ensure the availability of an adequate supply of wholesome and nutritious food to its citizens; and

Whereas, the State is currently dependent on imported food to supply over 70 percent of its food needs; and

Whereas, the encouragement of increased production of food in Maine would be beneficial in decreasing our reliance on out-of-state food sources, while enhancing rural economic development, and contributing positively to Maine's rural quality of life; and

Whereas, the State supports a broad range of programs which affect the production and distribution of food; and

Whereas, a Food Policy for Maine would provide the framework to ensure that state programs are conducted so as to optimize their effectiveness and ensure their consistency with state policy objectives; now, therefore, be it:

Sec. 1. General Policy. Resolved: That it is in the best interest of the State of Maine to support a food supply system that:

1. Contributes positively to the nutritional, economic and social well-being of its citizenry and its rural communities;

2. Enhances the availability, affordability, and quality of food for its citizens;

3. Is economically efficient and environmentally appropriate;

4. Is sustained by a structure that promotes a fair return to all participants; provides enterpreneurial freedom; and allows access to opportunity to participate in the food supply system.

Sec. 2. Rural Communities. Resolved: That the State shall:

1. Encourage and develop an agricultural and food industry that will contribute to appropriate economic growth and community vitality in the state and particularly in its rural communities.

2. Encourage production, processing and marketing systems that are accessible and affordable to Maine's dispersed rural population.

Sec. 3. Consumers. Resolved: That the State shall:

1. Ensure that all Maine citizens have the opportunity to avail themselves of a nutritious and balanced diet.

2. Encourage local and regional food production to the extent that it can efficiently supply nutritious and affordable food in order to enhance the availability and choice of food to its citizens.

3. Provide for an adequate understanding of proper nutrition by its citizens and ensure access to information about the nutritional content of foods in order to promote food choices that are healthful and that reduce the risk of disease caused by improper diet.

4. Encourage the growth and development of consumer food cooperatives in order to provide a range of choices for an affordable food supply.

5. Ensure an adequate system of food quality and safety control in order to protect citizens from poor quality, unwholesome or contaminated food.

Sec. 4. Production. Resolved: That the State shall:

1. Encourage the production of commodities that are suited to Maine's natural and human resources, that can be produced competitively in Maine, that exhibit marketing potential due to expanding consumption trends or competitive displacement of imported supplies, and that offer the best rate of return to the producer.

2. Encourage cost-effective production practices including the use of appropriate technology, conservation of energy resources, recycling of waste products, increased use of integrated pest management, and the use of crop varieties and livestock breeds that produce a quality product, offer disease resistance, and produce high yields under Maine conditions.

3. Encourage the awareness and use of production and processing practices that minimize exposure to health risks and accidental injury.

4. Ensure the adoption of production practices that conserve soil and water resources and protect the environment. To the extent that soil and water conservation practices needed for the long term maintenance of the soil resource are not cost-effective for producers in the short-run, support state and federal financial assistance for these measures.

5. Encourage the substitution of Maine produced production inputs including seed, feed, fertilizer, equipment, and services for imported inputs to the extent that this substitution is cost competitive, provides greater stability in production costs, and contributes to the viability of Maine's agricultural sector.

6. Encourage the diversification of Maine agriculture to the extent that it contributes positively to Maine's agricultural economy, provides stability in farm income, promotes better soil management and more efficient use of local resources and provides Maine consumers with a greater variety of locally produced food.

7. Assist in the development of an efficient service and supply infrastructure that promotes use of local resources to the extent that they are competitive; that minimizes costs to producers; that maintains an appropriately diverse agriculture; that meets the needs of both small scale and large commercial farm operations, and that supports the state economy.

8. Ensure that Maine producers have access to appropriate business and management training to enhance their ability to compete, and to ensure the most efficient use of labor, capital, technological, and other resources required for production.

Sec. 5. Marketing. Resolved: That the State shall:

1. Support the development of market structures that:

a. can efficiently and consistently provide supplies of agricultural products which meet the specifications demanded by wholesalers, retailers, and consumers in terms of quality, quantity, and packaging;

b. provide a fair price to the producers and reasonable prices to consumers;

c. provide organized and coordinated marketing, including the development of producer cooperatives and collective bargaining, in order to facilitate entry of small scale producers into wholesale markets and to strengthen the bargaining position of producers, to the extent that marketing opportunities and returns to producers as a whole are enhanced by these structures.

d. maximize marketing options through proper storage, appropriate agricultural and fish processing facilities, efficient and innovative methods of transportation, and other means.

2. Facilitate access to marketing opportunities by ensuring that producers have access to appropriate training and assistance programs to develop marketing skills.

3. Promote informed marketing decisions by ensuring the availability of adequate and timely market information to producers and other market participants.

4. Support an efficient transportation system in order to minimize transportation costs in the distribution of food products from producer to consumer.

Sec. 6. Finance. Resolved: That the State shall:

1. Ensure the availability, accessibility and affordability of equity and long-term credit to agricultural and fisheries enterprises that will contribute positively to Maine's agricultural and fisheries economies; that contribute to the development of commodities which meet the criteria defined by Sec. 4. subsection 1; and that possess the skills necessary to conduct a sound business operation.

2. To the extent that entrant farmers face particular constraints in obtaining appropriate financing due to the high capital costs of establishing a farm operation, establish incentives or subsidies that would provide reduced interest and encourage or establish special terms or other means that will allow credit-worthy new farmers to enter farming.

3. Encourage commercial banking and credit institutions to offer financing to credit-worthy food production and processing enterprises in order to reduce the state's dependence on federal sources of credit in this area.

Sec. 7. Farmland. Resolved: That the State shall:

1. Ensure an adequate and affordable supply of productive agricultural land to meet the needs of existing and future agricultural operations.

2. Protect agricultural lands, including lands currently used for food production and lands especially suited to food production, from conversion to development to the extent that such lands are so located and in such concentration as to form a critical mass capable of supporting the supply and market structures needed for a viable agricultural economy.

3. Protect agricultural operations from constraints on necessary agricultural practices due to encroachment of incompatible land uses into farming areas.

4. Enhance the economic viability of agricultural operations in order to arrest the abandonment of productive agricultural land and its subsequent reversion to forested land or development.

Sec. 8. Research and Education. Resolved: That the State shall:

1. Provide the research and development capabilities needed to:

a. keep abreast of the latest basic and applied research developed by the research community at large which has a bearing on Maine's food production capabilities and potential;

b. assess the nutritional status and needs of Maine citizens;

c. develop new varieties of crops and breeds of livestock suited to Maine's climate and soils;

d. ensure the future abundance of Maine's commercial fisheries;

e. develop new production techniques and technologies which enhance the yields and quality of Maine produced food;

f. develop new processing and storage techniques and technologies which are needed to keep Maine's food industry competitive and capable of responding to new market opportunities; and

g. assess emerging trends in consumer preferences, marketing structures, and market competition in order to maintain and enhance the marketability of Maine's commodities and to identify and respond to new marketing opportunities.

2. Provide the educational outreach needed to implement new techniques and technologies developed to assist in the production, processing and marketing of Maine produced food.

Sec. 9. Structure. Resolved: That the State shall:

1. Support and encourage owner-operated family and part-time farms to the extent that this provides efficiency in production, maintains entrepreneurial freedom, contributes to a healthy and competitive agricultural economy, enhances local economic growth and contributes to the social and political vitality of the state and its rural areas.

2. Ensure that the structure of the food industry provides an appropriate distribution of returns resulting in a fair price to the various participants, from producer to consumer, in order to maintain competition and stability within the system.

3. Ensure that the structure of the food industry facilities entry of new participants, in order to foster competition, innovation, and efficiency.

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MAINE'S FOOD PRODUCTION POTENTIAL

Clearly both Maine and New England are net importers of food. This may not appear surprising given that 5 percent of the U.S. population resides in the New England region, yet the region contains only 1 percent of the nation's farmland. The limited availability of farmland is in part, a function of the hilly terraine and rocky, shallow soils found in New England; but it is also a function of losses caused by conversion of agricultural lands to urban development, and abandonment.

A 1982 report to the New England Congressional Caucus states that although New England was never self-sufficient, it was only 45 years ago that the region produced 75 percent of its own food needs. Similarly Maine has witnessed a decline in farming since the 1940's which has only recently been arrested. Whether or not food production in Maine or New England could expand to supply a greater percentage of the region's needs depends upon (1) the economic conditions that affect farming both in New England and in competitive areas, and (2) the continued availability of suitable land.

1. ECONOMIC CONDITIONS

The present status of Maine's agricultural economy is summarized in the following paragraphs which first provide an overview of the significance of agricultural activity to the state's economy, and then review of the competitive market position of various Maine agricultural commodities.

Present Status

CASH FARM RECEIPTS: One of the most frequent measures of farm economic activity is cash farm receipts. This is the gross income received by farmers for the raw goods produced, and is therefore, the most basic measure of "farm economics." It reflects yields and prices both of which can vary greatly from year to year. In 1982 Maine cash farm receipts totalled $427 million. See attached table. This compares to the previous five year annual average of $431.7. Eggs, milk, potatoes and poultry dominates Maine's cash farm receipts, accounting for 76% of the total on 1982.

VALUE OF PROCESSED FOODS: In 1982 the value of processed Maine agricultural products is estimated to have totalled roughly $300 million, which included milk and dairy products valued at over $100 million, fruits and vegetables, at roughly $130 million, and $70 in meat and poultry products.

Cash Receipts from Farm Marketings
Maine and New England
1981 - 1982

	1981		1982	
	Maine	New England	Maine	New England
Commodity	Thousand Dollars		Thousand Dollars	
hay	2,746	13,652	3,135	16,178
oats	5,576	---	--	--
potatoes	131,169	145,858	96,848	106,989
misc. vegetables	7,983	44,691	8,435	70,400
apples	11,504	42,226	15,517	56,637
blueberries	9,199	9,199	18,681	18,681
berries	790	52,747	1,034	6,969
misc. fruits	38	1,466	56	3,170
maple products	236	12,511	253	10,374
forest products	4,743	13,020	4,293	11,679
greenhouse & nursery	6,567	163,254	6,567	164,698
misc. crops	482	15,655	4,618	15,264
TOTAL CROPS	180,486	573,874	159,437	582,701
cattle & calves	9,755	74,566	20,523	88,686
hogs	2,419	14,038	539	16,112
sheep & lambs	292	941	445	1,374
dairy products	102,366	658,164	106,063	673,194
chickens	3,515	6,363	2,596	4,476
eggs	108,471	228,889	93,177	213,619
misc. poultry	52,680	64,748	24,205	35,965
misc. livestock	438	5,426	370	5,540
TOTAL LIVESTOCK	279,936	1,053,135	248,991	1,038,966
TOTAL CASH RECEIPTS	460,969	1,624,958	427,109	1,640,348

SIGNIFICANCE TO THE STATE ECONOMY: Agriculture is a capital, not labor, intensive industry. Technology has allowed agriculture to realize great gains in production while simultaneously reducing labor needs. A result of this increased productivity has been that for many commodities, the farm has become a high volume, low margin operation. This has kept prices to consumers reasonable. In fact, consumers in the U.S. pay less for their food than consumers in other nations.

Assessing the significance of agriculture to the state economy is complicated by these considerations. Although the net returns to farmers are not substantial, the economic activity they generate and sustain is quite significant. This activity results from the purchase of equipment, feed, seed, fertilizer, special services and banking, as well as the processing and and distribution of raw product.

Measures that examine only net returns to farmers, such as contribution to gross state product (a measure used by the recent State Planning Office/UMO study entitled "Maine, Fifty Years of Change 1940-1990), fall seriously short in relating the share of the state's economy attributable to agriculture. Agriculture's share of the $9.1 billion state economy in 1980 was shown to be only $139 million by this approach. That $139 million is the net return to farmers, not their total contribution to the state's economy.

The Department of Agriculture, Food and Rural Resources estimates the contribution agriculture makes to the state's economy as inclusive of the all products and services purchased in the production of the commodity, as well as the value added in manufacturing, distribution, and sale of the commodity and the various services related to this activity. In this way, the economic activity that would cease were agricultural production to cease in Maine is estimated. In 1982 that total activity is estimated as $1.5 to $1.8 billion.

Significance of Maine Agriculture to the State Economy 1982

	Million $
Value of the Raw Product (cash farm receipts)	430
Value Added by Manufacturing (approx. $155 million in raw product is processed further in Maine)	170
Total Value of Agricultural Products	$850
x Multiplier	x 2.5 to 3.0
= Total Economic Activity related to Agriculture	1.5 to 1.8

Maine's Competitive Market Position

The ability of Maine agriculture to maintain or increase this level of economic activity depends on its ability to effectively compete in the marketplace. The following brief summary of our competitive position and potential is excerpted largely from a report issued in October 1982 by the Department of Agriculture, Food and Rural Resources, entitled "Marketing Maine's Agricultural Commodities."

Poultry

It is clear from recent events in the Maine poultry industry and from the attached diagram and table that Maine's principal competition for Northeast markets derives from the South Atlantic producers. Broiler production in the Del-Mar-Va region specifically has grown rapidly, especially during the late 1970's when production in Maine began to falter. Producers in this region produced more than double the amount consumed in their own market and have successfully penetrated the Northeastern markets from Philadelphia to Maine. (Attachment 1)

Today Maine growers produce little more than the amount consumed in Maine; and New England-wide, our production meets only 14 percent of consumer demand. A substantial market for Maine poultry is available in New England if the poultry industry can successfully compete with its southern counterparts. (Attachment 2)

Eggs

Presently egg producers in Maine have a strong market in New England, which as a region, produces about as much as is consumed. The Mid-Atlantic region is also a market opportunity since production in that heavily populated area provides only 60 percent of the amount consumed. However, as with poultry, an excess production in the southern states, especially the South Atlantic states, poses as tough competition for this market. (Attachment 3)

Potatoes

For nearly 20 years Maine potato producers have been losing ground in their Northeastern and Southern markets. In both cases, Maine's share dropped by approximately 50% while the marketshare of its major competitor, Idaho, more than doubled. (Attachment 4)

An analysis by the Farm Credit Service concluded that the Maine potato industry could be viable and competitive if it addressed its serious market structure problems, most notably low quality packing and the dealer system of merchandising.

Milk

Maine's dairy industry, like the dairy industry in the vast majority of states, is highly regulated. As a result of this regulation, Maine producers receive a higher price for their product than producers in other New England states. Further, retail price regulations have served to keep out-of-state competitors from undercutting this price advantage.

A relatively recent trend to store-brand milk is changing the market structure of Maine's dairy industry and may cause some reduction and consolidation among dairies. This will likely bring about reduced blend prices to some producers whose ability to remain in business will depend on their ability to more efficiently manage their farms.

Similarly, the federal milk support program has added to the pressure to cut costs by extracting $1.00/cwt from all dairy farms in an attempt to cut production. This is likely to cause some dairy operations to go out of business; most likely the smallest farms.

Apples

Maine's competition in the apple market is Washington State, which, since the mid-1970's, has increased its share of the market in New York, Philadelphia, Baltimore-Washington, Maine, Chicago and Boston. Except for Boston, these increases came at the expense of local producers who enjoyed a large transportation cost advantage over their Washington competitors. In Boston, however, Maine producers not only maintained but increased their share of the market by a third, despite a doubling of the Washington state share of that market. It is obvious that a strong promotional effort and strict quality control measures will be needed if Maine is to continue to meet the competition from Washington producers for New England markets. (Attachment 5)

Blueberries

Maine's major competition in the blueberry market is the rapidly growing cultivated blueberry industry of Michigan and New Jersey. Because of higher yields per acre, these blueberries can be offered for sale at a considerably lower price than wild blueberries. Recognizing this, the Maine blueberry industry joined with its Canadian counterparts to form the Wild Blueberry Association of North America and has successfully created a product distinction between wild and cultivated blueberries, and have aggressively sought out new markets for this "premium" product. Their continued success will hinge on their ability to maintain a high quality product and to make improvements on the yields and production costs. This industry is one of Maine's growing agricultural industries. (Attachment 6)

Beef and Veal

The production and sale of beef in Maine is presently not a major industry, and is generally dominated by small and part-time operations. The small volume of Maine beef and the lack of in-state facilities to store and distribute the variety of beef products retailers demand on a year-round basis constrains this industry to marketing directly to consumers. Lack of grading facilities is another constraint that limits the profit ability of direct sales and the potential for wholesale marketing. (Attachments 7 and 8)

Commercial veal is produced presently by only a half dozen operations that sell live calves in the New York and New Jersey markets. There is no slaughter of commercial veal presently within the state.

Hogs and Pigs

Like beef operations, a majority of hog farms are part-time operations that sell live hogs directly to consumers who arrange for slaughtering. Carcasses or cuts sold directly to consumers must be butchered under federal inspection.

Feeder pig operations, although smaller in number, are generally larger in size and market both within Maine to commercial hog farms and consumers who wish to raise their own animal for slaughtering, and out-of-state, commonly in Pennsylvania. Lack of grading and inspection facilities are, as for beef, a constraint to this industry. (Attachment 9)

Lamb and Wool

As with other livestock operation, Maine's lamb producers are generally small and part-time, marketing directly to consumers. While this industry is constrained by a lack of slaughtering facilities, it is served by a state grading service for live lambs. Potential exists for expanded direct marketing and wholesale to the large New England market, given some assistance in cooperative marketing, quality control and competitive pricing. (Attachment 10)

Wool is generally marketed cooperatively through a statewide wool pool. Small quantities are marketed in Maine but industrial size lots are usually shipped out of state because facilities to clean raw wool are not now available in Maine.

Vegetables/Small Fruits

Vegetable production for use in processing is about one-third of the volume produced in 1950. Most food processing is now located in the Western United States due to natural advantages such as longer (or multiple) growing seasons, combined with low freight costs and subsidized irrigation systems. Despite this, pea processors in Aroostook County have demonstrated that relatively large-scale vegetable production can be managed in Maine, and their venture into broccoli looks promising. (Attachment 11)

A trend towards increased consumption of fresh fruits and vegetables has generated a growing small fruit and vegetable industry in Maine. As statistics indicate, Maine supplies very little of its own produce, but limits to realizing a greater share of this market include a short growing season, generally poor soil and rugged terrain. Consumer demand for fresh produce year round, combined with the existing food distribution system tend to reinforce our reliance on out-of-state suppliers. Nevertheless, some crops such as broccoli, cabbage, carrots, and some small fruits such as raspberries may be well suited to commercial production in Maine while not presenting insurmountable marketing difficulties. Likewise, there is opportunity for small-scale producers to serve the seasonal restaurant trade and other speciality markets.

2. AVAILABILITY OF LAND

Not only must Maine be competitive to expand agricultural production, it must also have an adequate land base. This section reviews the availability of land in Maine in its New England context, examining first the food and farmland needs of New England, followed by a review of Maine's capabilities to provide not only for its own needs but for the New England region.

To produce all the food needed in New England (excepting items that cannot be grown here) would require about 24 million acres of productive farmland. In 1978 roughly 10 million acres of farmland were reported in the Census of Agriculture for New England. Only 2.3 million acres of this were used as cropland. Since the mid-forties over 11 million acres of farmland were lost to conversion or abandonment in New England. Clearly, even if that loss had not occurred, it is doubtful whether New England could today provide for a major share of its own food needs.

Within Maine, there are currently 1.6 million acres of farmland, of which about half is in cropland or pasture. Estimated land needed to supply all of the State's food needs is approximately 2.0 million acres. Since 1945 roughly 1.4 million acres of cropland have been lost, primarily to abandonment. If all of this land could be reclaimed, and if the population of the state were to remain constant, it is possible that Maine could supply much of its own food needs. However, neither of these conditions are likely. Productive agricultural land, that defined as prime or of statewide importance, probably amounts to less than 1.5 million acres. In addition, Maine's population is growing, having increased 13.2 percent between 1970 and 1980.

In short, even Maine, which has only 8 percent of New England's population and a third of its available cropland does not have the capacity to be self-sufficient. What these figures do indicate, however, is the tremendous market that is available to local producers within Maine and New England. Certainly the potential for a substantial agricultural industry is there if certain production and marketing constraints can be overcome, and if land continues to be available for food production.

FARMLAND NEEDS AND AVAILABILITY

	Maine	New England
Population	1.1 million	12.2 million
Land needs for food[1/]	2 million	22 million
Existing farmland [2/]	1.6 million	10 million
- crop/pasture land	.7 million	2.3 million
Prime/Important Farmland	1-1.5 million acres	?

[1/] for self-sufficiency

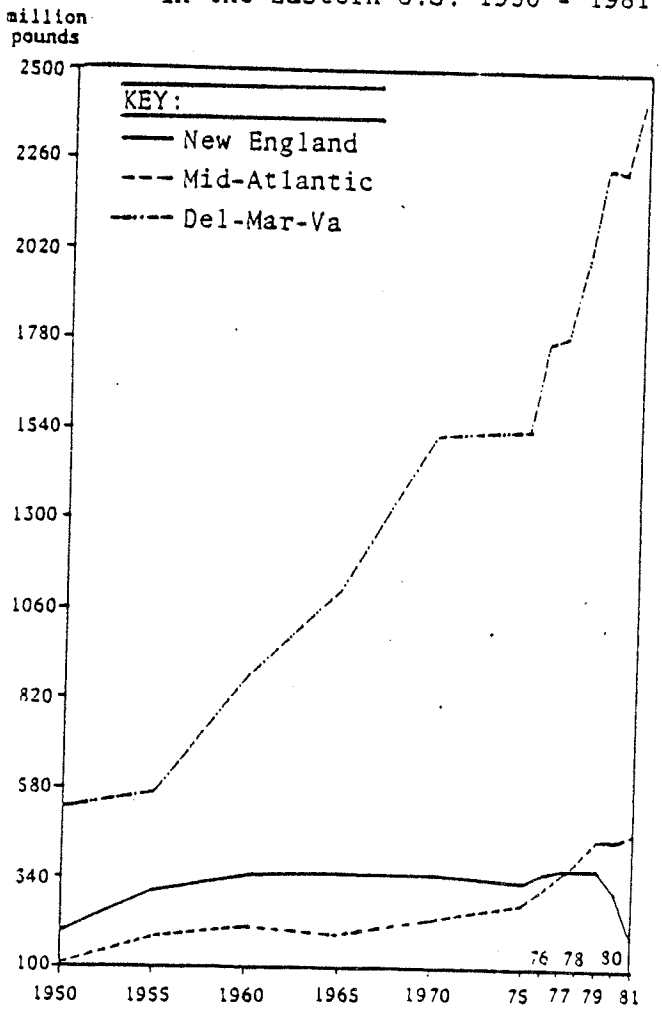
[2/] includes forested land

BG17/C

ATTACHMENTS

Attachment 1

Comparison of Broiler Production among Major Productions Areas in the Eastern U.S: 1950 - 1981



Source: See Table 1

Attachment 2

REGIONAL BROILER PRODUCTION AND CONSUMPTION 1980

	Northeast		South Atlantic	
	New England	Mid-Atlantic	Del-Mar-Va	Others
Production[1] (million lbs)	222.0	114.8	1602.8	3144.9
Consumption (million lbs)	584.1	1835.7	604.3	1435.7
Production as % of Consumption				
Regional	38	6	265	219
Atlantic[2] Region	5	3	36	71

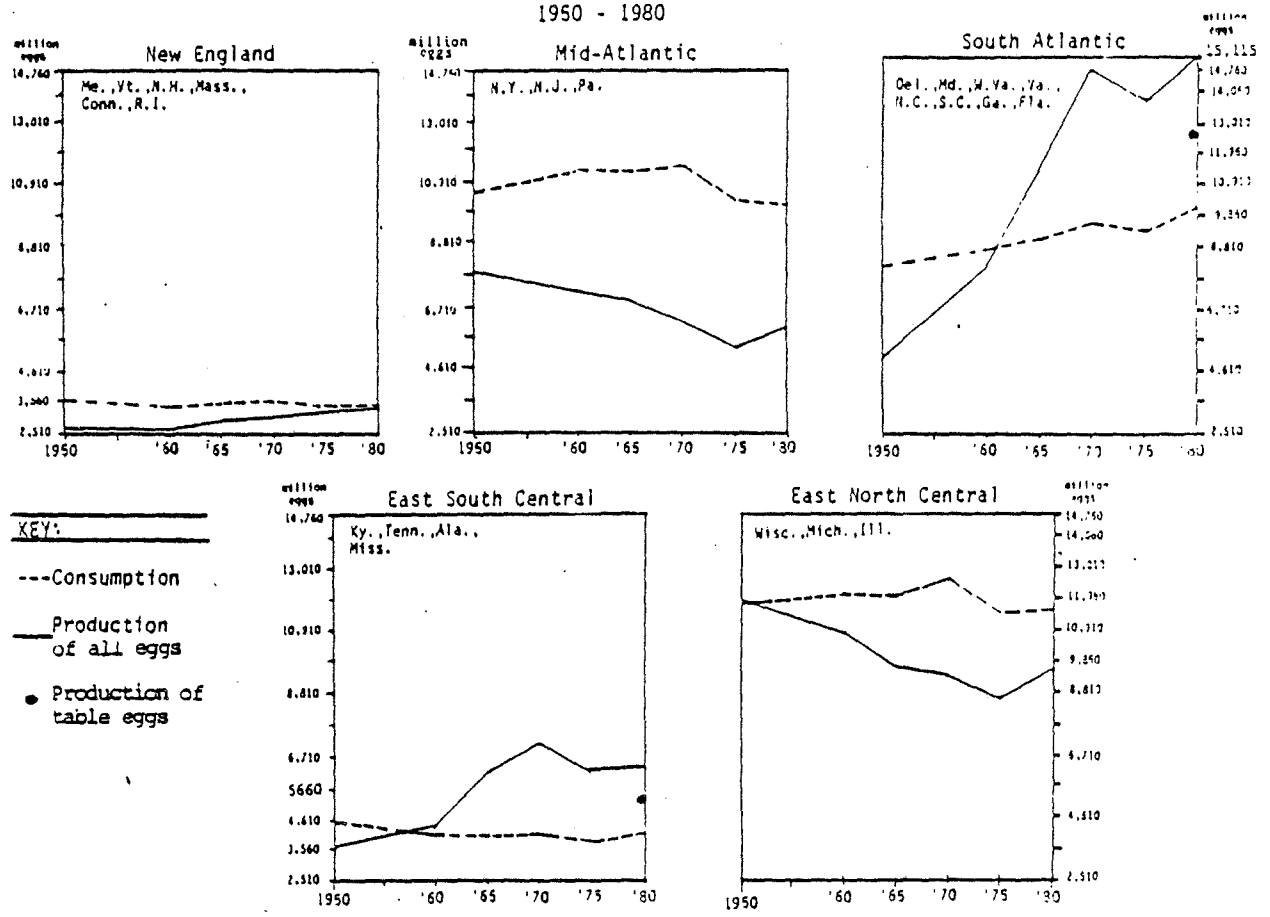
[1] dressed weight

[2] Regional production as a percentage of consumption in the entire Atlantic Region (Northeast and South Atlantic); total of figures exceeds 100% since total production exceeds consumption in the region.

Sources: Production calculated for dressed weight as 72% of live weight as reported in USDA Agricultural Statistics 1980; consumption calculated based on 1980 population figures (U.S. Bureau of Census) and regional per capita consumption figures provided by Robert Raunikar in "Targeting Markets for the 80's" published in Broiler Industry, April 1980.

Attachment 3

COMPARISON OF EGG PRODUCTION AND CONSUMPTION BY REGION
1950 - 1980



Sources: USDA "Agricultural Statistics", annual reports 1950-1965.
U.S. Crop Reporting Board, "Poultry Production, Disposition, and Income", Annual Bulletins 1977-1981.
U.S. Crop Reporting Board Statistical Bulletin No. 602 for 1970-1975
U. S. Census of population figures 1950 - 1980 used to calculate consumption

Attachment 4

POTATO UNLOADS AT NORTHEASTERN CITIES, SELECTED YEARS

	1963	1965	1970	1975	1978	1979	1980	1981
Total Unloads In 1,000 Cwt.	32,565	32,927	27,478	22,159	20,159	20,115	20,214	19,597
Market Share as Percent of Total Unloads								
California	7%	9%	9%	10%	9%	9%	10%	9%
Florida	4	3	4	4	4	4	3	4
Idaho	9	13	11	13	21	23	23	22
Maine	35	32	26	30	17	13	17	18
Michigan	5	4	10	8	9	9	9	7
Red River Valley	2	1	2	3	4	4	4	5
New York	18	18	16	11	12	13	11	12
Washington	2	2	3	3	3	4	3	3
Wisconsin	1	1	2	4	4	4	4	4
Other	17%	17%	17%	16%	17%	17%	16%	16%
Maine's Market Share as Percent of Total Unloads								
Albany	30%	33%	36%	37%	30%	20%	26%	28%
Baltimore/Washington	28	28	25	37	14	12	17	21
Boston	75	72	60	62	45	41	48	44
Buffalo	5	4	2	1	1	--	2	1
Cincinnati	5	16	5	5	2	1	3	3
Cleveland	20	18	13	17	9	7	13	14
Detroit	9	10	4	1	-	-	-	-
New York	45	34	34	32	17	11	17	22
Philadelphia	28	26	25	40	23	20	24	22
Pittsburgh	21	24	28	31	17	12	13	16
Providence	45%	36%	46%	44%	42%	29%	37%	21%

Source: "Fresh Fruit and Vegetable Unloads in Northeastern Cities," Market News Service, U.S. Department of Agriculture, Various Years.

POTATO UNLOADS AT SOUTHERN CITIES, SELECTED YEARS

	1963	1965	1970	1975	1978	1979	1980	1981
Total Unloads In 1,000 Cwt.	8,582	8,422	8,653	8,331	8,476	8,229	7,831	6,512
Market Share as Percent of Total Unloads								
California	5%	6%	3%	2%	1%	1%	1%	1%
Colorado	3	2	2	2	3	4	3	4
Florida	7	8	7	8	7	7	7	9
Idaho	13	8	12	14	21	23	24	24
Maine	7	12	6	6	3	2	5	3
Michigan	3	3	4	5	7	3	7	4
Red River Valley	11	6	15	17	17	15	17	13
New York	10	12	8	4	4	3	2	2
Washington	3	2	3	2	2	2	1	2
Wisconsin	10	10	13	18	18	17	18	18
Other	28%	31%	27%	22%	18%	23%	15%	20%
Maine's Market Share as Percent of Total Unloads								
Atlanta	7%	12%	5%	4%	1%	1%	4%	3%
Birmingham	1	3	1	-	-	-	5	-
Columbia	10	15	11	14	13	4	8	11
Louisville	14	24	5	3	-	-	1	1
Memphis	-	1	-	-	-	-	-	-
Miami	23	25	23	35	15	19	21	10
Nashville	1	10	2	1	-	-	-	-
New Orleans	1	7	-	-	-	-	-	-

Source: "Fresh Fruit and Vegetable Unloads in Southern Cities," Market News Service, U.S. Department of Agriculture, Various Years.

Attachment 5

APPLE UNLOADS (1000 cwt) AND % MARKET SHARE
Maine and Competitors - Major U.S. Markets

Origin	1974 (carlots)		1975 (carlots)		1978 (1000 cwt)		1980 (1000 cwt)		1981 (1000 cwt)	
	Lots	%	Lots	%	Unloads	%	Unloads	%	Unloads	%
					BOSTON					
Maine	172	12.4	107	6.7	81	14.2	78	12.1	132	16.9
Massachusetts	252	18.1	391	24.6	51	8.9	37	5.8	40	5.1
New York	213	15.3	278	17.5	110	19.3	131	20.4	113	14.5
Pennsylvania	12	0.9	8	0.5	0	0	1	0.2	1	0.1
Virginia	15	1.1	5	0.3	0	0	1	0.2	13	1.7
North Carolina	7	0.5	9	0.6	0	0	7	1.1	4	0.5
Michigan	0	0	0	0	0	0	1	0.2	2	0.3
Washington	285	20.5	303	19.1	199	34.9	227	35.3	320	41.0
Oregon	17	1.2	13	0.8	1	0.1	2	0.3	1	0.1
Idaho	2	0.1	1	0.1	0	0	1	0.2	0	0
Canada	21	1.5	26	1.6	5	0.9	2	0.3	4	0.5
					NEW YORK - NEWARK					
Maine	57	1.1	65	1.3	14	1.1	0	0	7	0.3
Massachusetts	49	1.0	57	1.1	9	0.7	8	0.4	13	0.6
New York	1930	39.1	2093	40.9	409	31.8	473	25.5	522	24.3
Pennsylvania	197	4.0	255	5.0	46	3.6	48	2.6	23	1.1
Virginia	322	6.5	317	6.2	17	1.3	6	0.3	60	2.8
North Carolina	42	0.9	24	0.5	5	0.4	10	0.5	8	0.3
Michigan	1	<0.1	2	<0.1	1	<0.1	0	0	3	0.1
Washington	1585	32.1	1648	32.2	696	54.2	1194	64.5	1329	61.8
Oregon	58	1.2	17	0.3	1	<0.1	2	0.1	18	0.8
Idaho	50	1.0	19	0.4	14	1.1	44	2.4	45	2.1
Canada	64	1.3	42	0.8	25	1.9	36	1.9	22	1.0

continued

APPLE UNLOADS (1000 cwt) AND % MARKET SHARE (cont'd)

Origin	1974* (carlots)		1975* (carlots)		1978 (1000 cwt)		1980 (1000 cwt)		1981 (1000 cwt)	
	Lots	%	Lots	%	Unloads	%	Unloads	%	Unloads	%
					PHILADELPHIA					
Maine	9	0.6	19	1.3	18	3.1	15	2.7	7	1.1
Massachusetts	11	0.7	18	1.2	0	0	8	1.4	7	1.1
New York	151	9.9	171	11.4	63	10.8	40	7.2	58	8.8
Pennsylvania	212	13.9	179	11.9	58	9.9	70	12.5	74	11.1
Virginia	186	12.2	169	11.3	20	3.4	24	4.3	40	6.0
North Carolina	18	1.2	9	0.6	11	1.9	8	1.4	7	1.1
Michigan	0	0	0	0	1	0.2	0	0	0	0
Washington	511	33.6	470	31.3	291	49.7	310	55.5	341	51.5
Oregon	16	1.1	12	0.8	3	0.5	3	0.5	11	1.7
Idaho	17	1.1	2	0.1	3	0.5	2	0.3	7	1.1
Canada	26	1.7	16	1.1	11	1.9	2	0.3	0	0
					BALTIMORE - WASHINGTON					
Maine	0	0	1	<0.1	0	0	3	0.9	3	0.7
Massachusetts	0	0	0	0	0	0	0	0	0	0
New York	55	4.1	84	5.8	25	5.9	12	3.6	17	4.1
Pennsylvania	290	21.5	271	18.6	39	9.2	35	10.4	48	11.4
Virginia	300	22.2	364	25.0	41	9.7	38	11.3	47	11.2
North Carolina	25	1.9	29	2.0	15	3.5	3	0.9	13	3.1
Michigan	0	0	3	0.2	2	0.5	0	0	0	0
Washington	436	32.3	377	25.9	214	50.5	185	55.2	231	55.1
Oregon	1	<0.1	2	0.1	3	0.7	0	0	4	1.0
Idaho	0	0	1	<0.1	3	0.7	3	0.9	0	0
Canada	1	<0.1	1	<0.1	0	0	0	0	0	0

*Two cities reported separately in these years.

continued

APPLE UNLOADS (1000 cwt) AND % MARKET SHARE (cont'd)

Origin	1974 (carlots)		1975 (carlots)		1978 (1000 cwt)		1980 (1000 cwt)		1981 (1000 cwt)	
	Lots	%	Lots	%	Unloads	%	Unloads	%	Unloads	%
					MIAMI					
Maine	99	11.6	108	11.5	31	7.3	8	1.7	25	9.0
Massachusetts	27	3.2	14	1.5	26	6.1	44	9.6	10	3.6
New York	95	11.2	96	10.2	74	17.4	43	9.3	30	10.8
Pennsylvania	12	1.4	13	1.4	3	0.7	1	0.2	0	0
Virginia	142	16.7	118	12.5	29	6.8	25	5.4	11	4.0
North Carolina	74	8.7	75	8.0	22	5.2	27	5.9	2	0.7
Michigan	52	6.1	89	9.4	27	6.4	18	3.9	5	1.8
Washington	294	34.6	358	38.0	183	43.0	276	60.0	183	66.1
Oregon	6	0.7	9	1.0	3	0.7	1	0.2	2	0.7
Idaho	2	0.2	6	0.6	0	0	2	0.4	3	1.1
Canada	0	0	4	0.4	9	2.1	4	0.9	4	1.4
					CHICAGO					
Maine	7	0.3	8	0.3	5	0.7	3	0.3	1	0.1
Massachusetts	43	2.0	57	2.2	20	2.7	10	1.0	7	0.6
New York	38	1.8	55	2.2	20	2.7	18	1.8	15	1.3
Pennsylvania	1	<0.1	6	0.2	0	0	0	0	0	0
Virginia	24	1.1	14	0.5	0	0	0	0	0	0
North Carolina	41	1.9	32	1.3	9	1.2	14	1.4	4	0.3
Michigan	391	18.2	534	20.9	121	16.4	150	15.0	134	11.8
Washington	1342	62.6	1546	60.4	475	64.2	717	71.6	894	79.0
Oregon	20	0.9	45	1.8	7	0.9	9	0.9	5	0.4
Idaho	33	1.5	24	0.9	9	1.2	12	1.2	12	1.1
Canada	13	0.6	11	0.4	11	1.5	3	0.3	3	0.3

Source: USDA Agricultural Marketing Service, Fruit and Vegetable Division "Fresh Fruit and Vegetable Unloads" (1981)

Attachment 6

BLUEBERRIES - YIELD IN POUNDS PER ACRE

	1977	1978	1979	1980
Maine[1/]	na	1,220	1,150	1,220
Michigan	na	2,810	4,140	4,360
New Jersey	na	2,860	3,000	3,210
North Carolina	na	2,310	2,330	1,990
Oregon	na	5,000	5,800	5,450
Washington	5,120	6,030	6,070	6,380

[1/] Low bush variety; other states are highbush blueberries.

Source: USDA Agricultural Statistics, Annual Reports 1978-1981.

Attachment 7

PRODUCTION OF STEERS AND BULLS
(500 lbs. and over)

	1970	1975	1978	1980	1981	1982
STEERS			- - - thousands - - -			
New England	18	15	15	13	13	16
Maine	5	2	4	2	3	3
Massachusetts	2	3	2	3	4	4
Vermont	6	3	3	3	2	4
New Hampshire	2	2	3	3	2	3
Connecticut	3	2	3	2	2	2
Rhode Island	-	-	-	-	-	-
Middle Atlantic	317	303	292	274	310	315
New York	42	36	39	28	35	35
New Jersey	5	7	6	6	6	5
Pennsylvania	270	260	247	240	269	275
BULLS						
New England	13	13	12	11	10	11
Maine	3	3	2	2	2	3
Massachusetts	2	2	2	2	2	2
Vermont	5	5	5	4	3	3
New Hampshire	1	1	1	1	1	1
Connecticut	2	2	2	2	2	2
Rhode Island	-	-	-	-	-	-
Middle Atlantic	68	93	69	64	67	70
New York	26	31	28	23	22	24
New Jersey	2	3	3	2	2	2
Pennsylvania	40	59	38	39	43	44

(-) indicates production less than 1,000 head.

Source: USDA "Agricultural Statistics" Annual Reports. 1982 figures from "Cattle" - Jan. 29, 1982 - USDA Crop Reporting Board, Statistical Reporting Service.

Attachment 8

SIZE DISTRIBUTION OF MAINE BEEF FARMS
1978

Beef Cow Inventories	# Farms
1-4	891
5-9	435
10-19	256
20-29	65
30-49	31
50-99	14
100-199	6
Total	1,698

Fattened Cattle Sold[1/]	
1-9	443
10-19	79
20-49	24
50-99	4
100-199	-
200-499	3
Total	553

[1/] Fattened on grain and concentrites.

Source: U.S. Census of Agriculture, Maine 1978

U.S. Department of Commerce, Bureau of Census

Attachment 9

HOG MARKETINGS (1000 head)

	1960	1965	1970	1975	1980
New England	193	161	141	121	173
Maine	18	15	11	8	21
New Hampshire	11	14	16	13	13
Vermont	7	11	8	6	32
Massachusetts	130	102	87	76	71
Connecticut	18	13	12	9	25
Rhode Island	9	6	7	9	10
Mid-Atlantic	865	694	959	954	1,178
New York	132	92	132	139	156
New Jersey	148	127	139	100	74
Pennsylvania	585	475	688	715	948

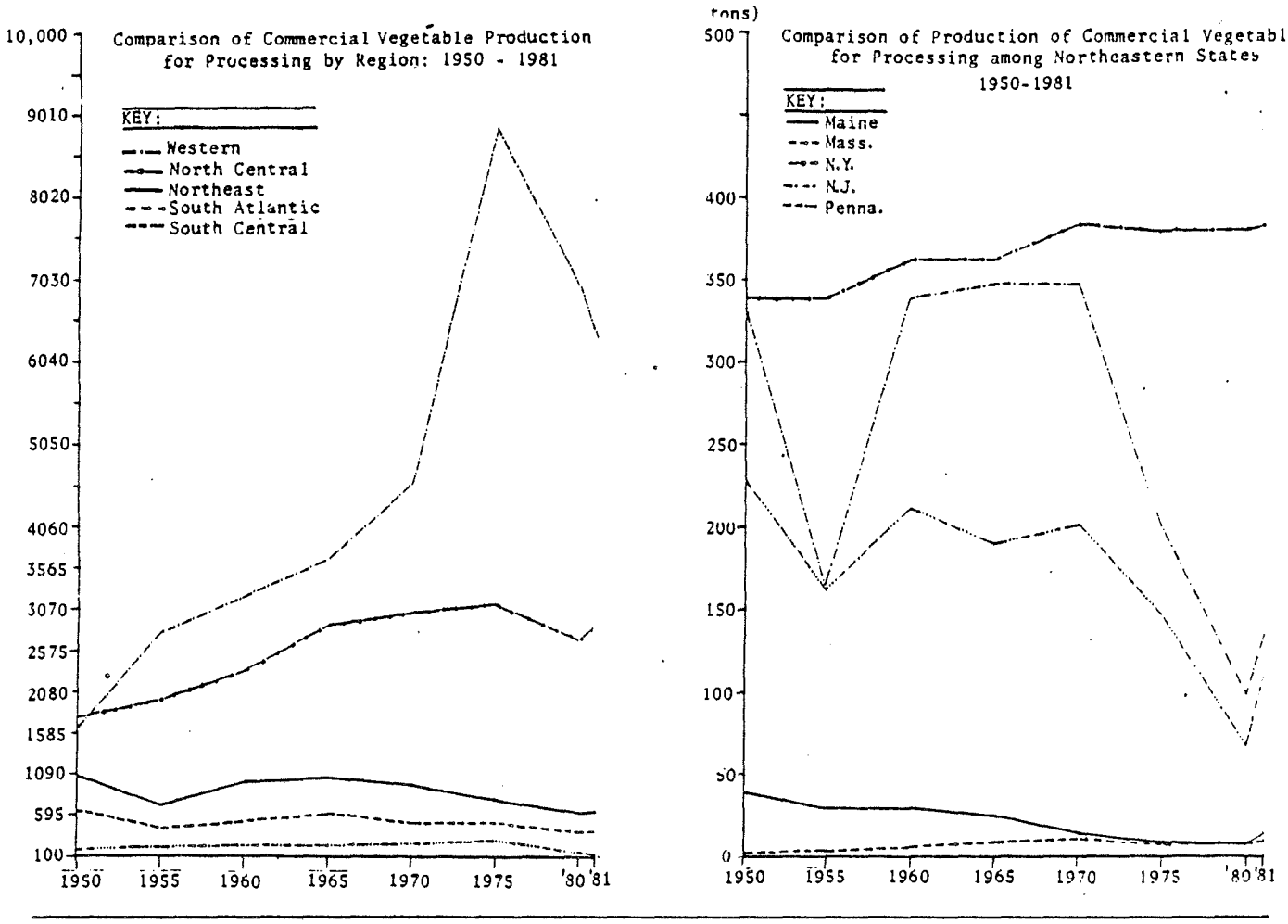
Source: USDA Agricultural Statistics (Annual Reports 1960-1980).

Attachment 10

	LAMB MARKETINGS (1000 head)				
	1960	1965	1970	1975	1980
New England					
Maine	13	12	6.0	5.0	5.0
New Hampshire	2	2	1.9	2.6	3.3
Vermont	5	4	2.2	2.3	3.1
Massachusetts	3	1	3.6	3.3	2.7
Connecticut	4	4	2.1	2.4	2.6
Rhode Island	1	2	0.7	0.2	---
Mid-Atlantic					
New York	86	87	51.0	38.0	26.0
New Jersey	8	5	3.2	3.7	4.3
Pennsylvania	100	102	75.0	64.0	51.0

Source: USDA Agricultural Statistics (Annual Reports 1960-1980).

Attachment 11



Source: USDA Statistical Reporting Service, as published in USDA Agricultural Statistics, annual volumes 1950-1981. 1981 figures from USDA Crop Reporting Board publication "Vegetables, 1981 Annual Summary" issued December 28, 1981.

ESTIMATED PRODUCTION AND CONSUMPTION OF FOOD IN MAINE

Commodity	Production (1000 lbs.)	Consumption[1/] (1000 lbs.)	% Imported for Maine Consumption[2/]
FOOD GROUP TOTALS			
Milk	670,000	653,589	42
Meat	6,066[3/]	175,017	97
Fish	145,640	26,802	0
Poultry	54,000	51,803	0
Eggs	209,803	29,419	0
Potatoes	3,201,000[4/]	65,406	0
Vegetables	60,309[5/]	169,548	78
Fruit	117,699[6/]	163,705	85
Flour, Cereal	na	65,174	100
Bakery Products	na	109,662	100
Juices	na	129,166	100
Soups	na	15,880	100
Sweets, Sugar	270	46,719	99
Fats, Oils	na	39,124	100
Nuts, Condiments	na	25,495	100
Baby Food	na	14,792	100
Beverages	na	216,259	100
% Imported, Basic Food Groups (Milk, Meat, Fish, Poultry, Eggs, Vegetables, Fruit, Flour, Cereal, Bakery)			60
% Imported, All Foods			70

Commodity	Production (1000 lbs.)	Consumption Fresh (1000 lbs.)	Consumption Processed (1000 lbs.)	Production as % of Consumption
FOOD GROUP BREAKDOWN				
Milk				
fluid	459,000[8/]	332,780	--	138
processed	211,000[9/]	--	320,809[10/]	66
Meat				
beef[11/]	4,297	100,191	--	4
pork[12/]	855	24,512	19,558	2
veal[13/]	600	2,384	--	25
lamb[14/]	314	2,182	--	1
luncheon	na	--	22,871	na
Poultry, Fish				
poultry	54,000[15/]	51,803	--	104
fish	145,640[16/]	18,806	7,996	543
Eggs[17/]	209,803	29,419	--	713
Potatoes[4/]	3,201,000	53,517	5,717	5404
Vegetables[5/]				
spinach	329	1,596	2,008	9
other greens	na	200		
broccoli	3,000	4,200	2,561	44
peppers	168	4,400	--	4
carrots	2,100	8,943	--	23
pumpkin	1,120	1,576	2,571	199
squash	8,244			
tomatoes	1,438	12,810	10,216	6
asparagus	10	2,750	141	0
lima beans	na	133	486	--
snap beans	2,139	1,430	8,587	21

Commodity	Production (1000 lbs.)	Consumption Fresh (1000 lbs.)	Consumption Processed (1000 lbs.)	Production as % of Consumption
dry beans	2,000	--	1,673	120
cabbage	2,960	7,456	--	40
lettuce	1,300	24,190	--	5
peas	20,000	555	7,590	246
celery	na	6,216	--	--
cucumbers	1,464	8,733	--	17
onions	na	8,999	--	--
beets	800	133	2,970	26
cauliflower	312	2,072	--	15
corn	11,892	4,377	8,807	90
turnips	1,800	276	--	652
other[6/]	na	5,441	15,453	--
Fruit[7/]				
citrus	na	45,406	622	--
apples	80,010	21,773	4,200	308
strawberries	1,398	5,873	775	21
bananas	na	24,666	--	--
cherries	na	1,440	552	--
cantaloupes	110	9,707	--	1
melons	na	19,179	--	--
peaches	30	3,755	2,893	0
pears	127	3,602	1,586	2
grapes	40	888	--	5
pineapple	na	1,673	1,739	--
plums	19	419	--	5
other berries	35,965	419	555	3693
raspberries	40	--	--	--
blueberries	35,925	--	--	--
other, mixed[6/]	na	--	6,263	--

na = not available

1/ Consumption (defined as food purchased, not home produced, for consumption) estimated for Maine using "Food Consumption: Households in the Northeast, Spring 1977" USDA Human Nutrition Information Service NFCS 1977-78 Report No. H-2 and 1980 population of Maine from the U.S.Census of Population, U.S. Department of Commerce.

2/ Indicates portion of food purchases which can not be supplied by Maine production; assumes in-state consumption of Maine produced commodities with the residual exported. In practice the local in-state market is not necessarily the primary market for Maine produced food, so that more is actually imported for consumption than the figures indicate. For example, Maine consumers purchase not only Maine apples but others imported for sale from other states, although Maine produces three times as many apples as are consumed in Maine.

3/ Sum of consumption of beef, pork, veal, and lamb (see notes 9-12).

4/ Production used as food.

5/ Estimated from acreage reported in the 1978 Census of Agriculture - Maine, by U.S. Dept. of Commerce, Bureau of Census; and estimated yields from statistics in the USDA Crop Reporting Board publication - "Vegetables - 1981 Annual Summary" (Dec. 1981), and from "Planning for Change" by Forest French and Edward Micka, University of Maine Cooperative Extension Service, Bulletin 643 (June 1981).

6/ Includes other fresh produce not listed; other processed includes mixed products and certain listed commodities for which data on amounts consumed in processed form are combined and reported as "other."

7/ Production of minor crops from 1978 Census of Agriculture; blueberries and apples as reported by New England Crop and Livestock Reporting Service.

8/ Includes milk sold out of state used as fluid milk.

9/ Includes milk produced in Maine and processed out of state. Approximately 54 million pounds are actually processed in Maine.

10/ Converted to fluid milk equivalent, except cream; butter not included.

11/ Includes all steers, 10% of bulls, and cull beef cows (estimated by number of beef cow replacements reported in January 1982), all of a size class of 500 lbs. or more. It does not include cull dairy cows or heifers. Assumes average liveweight of 1100 lbs. (average weight at slaughter in New England in 1980). Retail weight estimated as 42 percent of liveweight.

12/ 1982 hog marketings (2,850,000 lbs.) adjusted to retail weight. Assumes 70% waste.

13/ Industry estimate.

14/ 1982 lamb marketings (no. head x average liveweight in New England) adjusted to retail weight. Assumes 50% waste.

15/ Estimated production x 2.7 lb. average retail weight.

16/ 1980 fish landings in Maine.

17/ 1981 egg production (1.6 billion) converted to lbs. (assumes 30 dozen case weighs 47 lb.).

BG12/Q July 28, 1983

ESTIMATED FOOD CONSUMPTION IN NEW ENGLAND (Circa 1980)

FOOD GROUP TOTALS

	Production 1000 lbs.	Consumption 1000 lbs.	% Imported For N.E. Consumption
Milk, Cream, Cheese	4784521	5565733	14%
Fats, Oils			
Flour, Cereal			
Bakery Products			
Meat	54448	1218533	96%
Poultry, Fish	289141	705714	59%
Eggs (fresh equivalent)	439319	378733	0%
Sugar, Sweets			
Potatoes, Sweetpotatoes	2433400	618676	0%
Fresh Vegetables	300032	1533752	80%
Fresh Fruit	653283	1790162	63%
Commercially Canned Vegetables, Fruit			
Commercially Frozen Vegetables, Fruit			
Juice - Vegetable, Fruit	27000	1496114	93%
Dried Vegetables, Fruit			
Beverages			
Soups, Sauces, Gravies			
Nuts, Condiments, Leavenings			
Mixtures, Baby Food Mixtures			
Totals; Adjusted; All Foods	7105834	21611321	67%

FOOD GROUP BREAKDOWN (Selected)

MILK, CREAM, CHEESE			
Fresh Fluid Milk	4558800	3629724	0%
Processed Milk		366971	
Cream		68219	
Frozen Milk Dessert			
Cheese	95208	296400	68%
Butter	4327		
MEAT			
Beef	14355	1206771	99%
Pork (fresh)	37341	592800	94%
Pork (cured, smoked)			
Veal			
Lamb	2752	44695	94%
Variety Meat			
Lunch Meat			
Meat Substitutes			
POULTRY, FISH			
Poultry	289141	5565733	14%
Fish, Shellfish			

	Production 1000 lbs.	Consumption 1000 lbs.	% Imported For N.E. Consumption
Fish,. Fresh			
Fish, Processed			
POTATOES, SWEET POTATOES			
Potatoes, Fresh	2433400	618676	0%
Potatoes, Commercially Canned			
Potatoes, Commercially Frozen			
FRESH VEGETABLES			
Spinach	1253	16467	76%
Other Vegetables (Kale, Collards, Mustard Greens)	N/A	23524	
Broccoli	1182	56457	98%
Peppers	20678	54105	62%
Carrots	8900	103505	91%
Pumpkin, Winter Squash	N/A	N/A	
Tomatoes	21080	199952	89%
Asparagus	361	39990	99%
Lima Beans	100	2352	96%
Snap/Wax Beans	7784	58810	87%
Cabbage	29232	103505	72%
Lettuce	12440	298752	95%
Peas, Fresh	21549	7057	0%
Celery	405	70571	99%
Cucumbers	31452	98800	68%
Onions	6633	117619	94%
Beets	1269	7057	82%
Cauliflower	15525	28229	45%
Corn	1812	75276	97%
Turnips	41500	4705	0%
Other Vegetables	N/A		
FRESH FRUIT			
Grapefruit			
Lemons, Limes			
Oranges			
Cantaloupes	1620	134086	99%
Strawberries	6623	70571	92%
Apples	269655	275229	2%
Bananas		284638	
Cherries	2	37368	99%
Melons			
Peaches	4721	56547	91%
Pears	4949	37638	87%
Grapes	613	18819	97%
Pineapple	0	32933	100%
Plums	230	7057	97%
COMMERCIALLY CANNED VEGETABLES			

	Production 1000 lbs.	Consumption 1000 lbs.	% Imported For N.E. Consumption
Dark Green Vegetables		9410	
Deep Yellow Vegetables		18819	
Tomatoes		129381	
Asparagus		9410	
Baked Beans		82333	
Snap Beans		79981	
Beets		35286	
Corn		82333	
Green Peas		56457	
Other Vegetables		30581	
COMMERCIALLY CANNED FRUITS			
Citrus Fruits		7057	
Apples		47048	
Apricots		7057	
Cherries		4705	
Peaches		35286	
Pears		16467	
Pineapple		14114	
Mixed Fruit		25524	
Other Fruits		18819	
FROZEN VEGETABLES			
Dark Green Vegetables		47048	
Dark Green Leafy Vegetables		16467	
Broccoli		28229	
Deep Yellow Vegetables		7057	
Other Vegetables		105857	
Lima Beans		7057	
Snap Beans		21171	
Green Peas		21171	
Corn		18819	
Mixed Vegetables		18819	
Other Vegetables		18819	
FROZEN FRUIT			
Strawberries		7057	
Other Fruit		2352	
JUICE - VEGETABLE, FRUIT			
Vegetable Juice, Canned		94095	
Tomato Juice, Canned		51752	
Other Vegetable Juice, Canned		42343	
Vegetable Juice, Frozen			
Fruit Juice, Canned		277581	
Citrus Fruit Juice, Canned		134086	
Orange Juice, Canned		68219	
Grapefruit Juice, Canned		58810	
Other Fruit Juice, Canned		7057	
Noncitrus Fruit Juice, Canned		143495	
Apple Juice/Cider, Canned	27,000	72924	73%

	Production 1000 lbs.	Consumption 1000 lbs.	% Imported For N.E. Consumption
Grape Juice, Canned		30581	
Pineapple Juice, Canned		21171	
Other Noncitrus Fruit Juice, Canned		18819	
Fruit Juice, Frozen		207010	
Citrus Fruit Juice, Frozen		197600	
Orange Juice, Frozen		185838	
Other Citrus Fruit Juice, Frozen		11762	
Grape Juice, Frozen		7057	
Fruit Juice, Fresh		359914	
Citrus Fruit Juice, Fresh		322276	
DRIED VEGETABLES, FRUIT			
Vegetables		25876	
Beans	1813	18876	90%
Peas, Lentils	1038	7057	85%
Fruit		18819	
Prunes		4705	
Rasins		11762	

REMARKS BY CHRISTOS GIANOPOULOS
OCTOBER 5, 1983

New England is characterized in terms of its agricultural capacity as a region with a short land base, comprising only about 2% of land area of the United States and occupying less than 1% of the nation's farm land. Still, the region has a high population density with 12 million mouths to feed, and it produces about 1/3 of its total food requirements from 30 thousand farms tending 5 million acres of farmland.

Before the age of farm specialization which took strong hold after World War II, New England was in much better position to feed itself. Conservative estimates indicate that New England produced over 50% of its food requirements 50 years ago. It is a much different story today, because even though the region manages to supply 1/3 of its total food needs, it accomplishes this feat by producing a lot of a few specialized commodities such as milk, eggs, small fruit and very little of other foods such as vegetables and meat which were formally grown in significant quantities. New England imports 96% of its meat, 80 percent of its fresh vegetables and a whole lot of fresh fruit. For example, 99% of New England beef supply is imported, 98% of its broccoli, 94% of its onions, 95% of its lettuce, and 92% of its strawberries. These foods are suitable for production in our New England region, and many were grown here in significant quantities when the farm base was stronger and more diversified.

It's too complicated to trace a series of explanations back to explain why the New England farm lost its food growing capacity, but it certainly didn't happen overnight. As far back as the middle of the 19th century, New England farmers realized that the open land of the Midwest and West was better suited for

commercial production of grain and livestock. Many of these farmers formed part of vast "Yankee Exodus" which saw many young men and women leave to establish farms west of the appalachians. At that time, New England Agricultural Journals were full of material outlining the sides drawn in the debate: Many New England producers contended that in the name of efficiency, the New England farm must give up the notion that it could effectively compete with midwestern producers in livestock raising and grain production, while others contended that New England pride demanded that farmers of the area maintain their existing agricultural practices and grow as much food as they possibly could, overlooking the principle of comparative advantage. 1880 was the highwater mark in terms of the strength of the New England farm.

Skipping forward to the early part of the 20th century, listen to these figures which give you a clear idea of how fast the region's vegetable farms were losing ground in the period 1919-39. During this time increases in acreage for vegetable production in New England amounted to 18%, but at the same time increases in land devoted to vegetable production expanded at a phenomenal rate in the winter vegetable states: S. Carolina (356%), Florida (207%), Texas (490%) and California (179%).

For whatever good reason this happened, New England paid a price for the shift in food production to other regions. It lost most of its truck farms, and a lot of that farm land was converted to other use or abandoned. Furthermore, the modern food processing facilities that were established after the war were not built in New England, they were placed in regions where production was significant, concentrated, and expanding. Along with these changes, the country was experiencing the development

of a national food system whose principles were the following:

(1) Grow the food in areas where the comparative advantage is the greatest.

(2) Establish processing facilities where food production is concentrated.

(3) Process the food to add value and satisfy consumer demand.

(4) Ship the food great distances to the principal markets.

(5) Watch the consolidation of food companies merge under the control of fewer processing, wholesale and retail distribution concerns.

So, what exactly was the price New England paid in the last 50 years because of these historical trends:

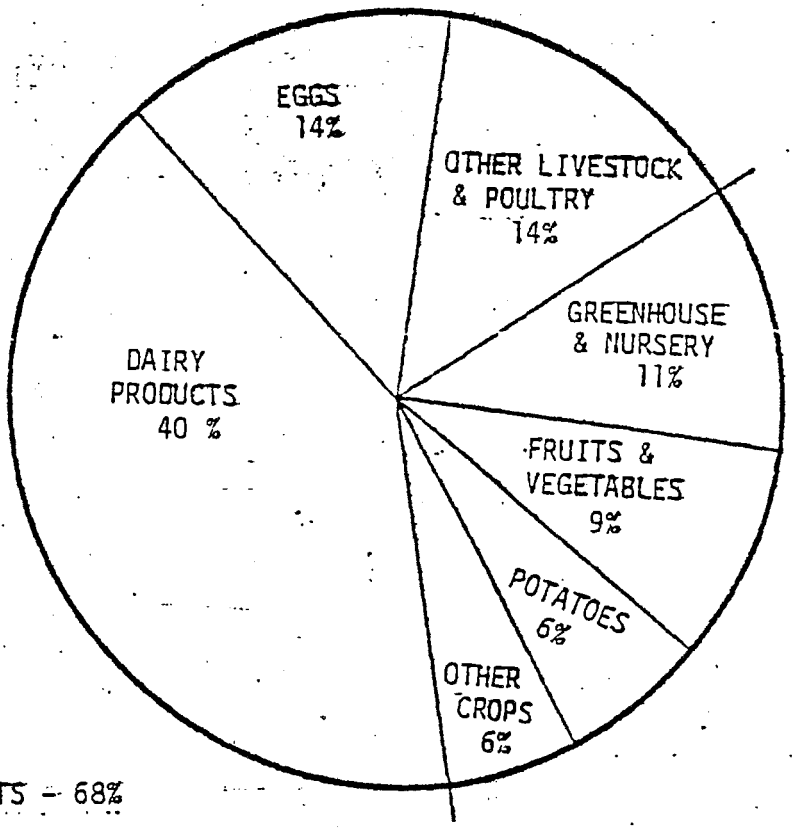
- It lost 75% of its farms.
- It lost almost 12 million acres of farmland because of abandonment on conversion.
- The farms that remained specialized, concentraing on foods that we could grow best or at least as well as other regions: milk, apples, blueberries, eggs, potatoes.
- It lost a lot of its small canning and processing facilities, and with the exception of the principal New England crops, it did not see the development of modern, large food processing facilities.

So that is a much condensed version of what happened. What is the status of New England agricluture in terms of its output measured in dollars? In 1980, New England farmers raised $1.5 billion of food. Maine is the leading New England State in cash receipts with 28% ($425 million) of the total for the region. Vermont is second with $378 million, Massachusetts third with $306 million, Connecticut fourth with $282 million, and New Hampshire, Rhode Island trail far behind with $97 million and $32 million respectively.

Forty percent of these revenues accrue from the sale of dairy products, 14% from eggs, and another 14% from other livestock and poultry, 6% from potatoes, 9% from fruits and vegetables, and remaining 17% from other crops, greenhouse, nursery.

Despite the numbers of obstacles that confront New England agriculture, I am confident and optimistic about an agricultural future for the region. I base my attitude on the perseverance of established New England farmers who still manage to compete effectively and upon the courage of new farmers who are struggling to establish productive and profitable farming units.

NEW ENGLAND CASH RECEIPTS - 1980



LIVESTOCK & PRODUCTS - 68%

CROPS - 32%

CASH RECEIPTS FROM FARM MARKETINGS - NEW ENGLAND, 1978-1980

Commodity	1978	1979	1980	Commodity	1978	1979	1980
	Thousand Dollars				*Thousand Dollars*		
Hay	11,370	12,250	12,342	Cattle & Calves	98,615	111,731	88,770
Tobacco	36,475	34,358	37,511	Hogs	13,460	14,956	14,989
Potatoes	88,033	106,751	94,242	Sheep & Lambs	967	1,034	1,144
Misc. Veg.	49,304	49,231	50,844	Dairy Products	491,814	550,657	611,831
Apples	44,206	41,345	45,465	Chickens	6,606	7,602	5,685
Berries	39,442	40,273	41,876	Eggs	194,945	214,937	213,427
Misc. Fruits	2,909	2,890	2,792	Misc. Poultry	103,799	103,173	91,936
Maple Products	6,622	8,100	6,273	Misc. Livestock	6,563	5,980	6,095
Forest Products	11,835	13,020	13,020	Total Livestock	916,769	1,010,070	1,033,877
Greenhouse & Nursery	158,253	173,845	167,359				
Misc. Crops	7,944	14,601	15,478	Total All Commodities NEW ENGLAND	1,373,162	1,506,734	1,521,079
Total Crops	456,393	496,664	487,202				

7/12/83

ESTIMATED FOOD CONSUMPTION IN NEW ENGLAND (1980)

FOOD GROUP TOTALS	Consumption (1000 lbs./year)	
	All Sources	Bought
Milk, Cream, Cheese	5,565,733	5,516,333
Fats, Oils	439,895	437,543
Flour, Cereal	724,533	717,476
Bakery Products	1,218,533	1,190,305
Meat	2,187,714	2,138,314
Poultry, Fish	997,410	922,133
Eggs (fresh equivalent)	378,733	374,029
Sugar, Sweets	517,524	498,705
Potatoes, Sweetpotatoes	736,295	724,533
Fresh Vegetables	1,533,752	1,425,543
Fresh Fruit	1,790,162	1,693,714
Commercially Canned Vegetables, Fruit	717,476	715,124
Commercially Frozen Vegetables, Fruit	169,371	169,371
Juice - Vegetable, Fruit	1,496,114	1,482,000
Dried Vegetables, Fruit	44,695	42,343
Beverages	2,507,638	2,474,705
Soups, Sauces, Gravies	176,429	169,371
Nuts, Condiments, Leavenings	242,295	228,181
Mixtures, Baby Food Mixtures	167,019	164,667
FOOD GROUP BREAKDOWN (Selected)		
MILK, CREAM, CHEESE		
Fresh Fluid Milk	3,629,724	3,596,790
Processed Milk	366,971	
Cream	68,219	62,219
Frozen Milk Dessert	298,752	
Cheese	296,400	
MEAT		
Beef	1,206,771	1,180,895
Pork (fresh)	592,800	581,038
Pork (cured, smoked)	239,943	232,886
Veal	42,343	
Lamb	44,695	
Variety Meat	42,343	
Lunch Meat	256,410	
Meat Substitutes	2,352	

	Consumption (1000 lbs./year)	
	All Sources	Bought
POULTRY, FISH		
Poultry	705,714	689,248
Fish, Shellfish	289,343	
Fish, Fresh	376,381	
Fish, Processed	4,705	
POTATOES, SWEET POTATOES		
Potatoes, Fresh	618,676	609,267
Potatoes, Commercially Canned	14,114	
Potatoes, Commercially Frozen	47,048	
FRESH VEGETABLES		
Spinach	16,467	16,467
Other Vegetables (Kale, Collards, Mustard Greens)	23,524	23,524
Broccoli	56,457	56,457
Peppers	54,105	51,752
Carrots	103,505	98,800
Pumpkin, Winter Squash		
Tomatoes	199,952	176,429
Asparagus	39,990	35,286
Lima Beans	2,352	
Snap/Wax Beans	58,810	39,990
Cabbage	103,505	101,152
Lettuce	298,752	286,990
Peas	7,057	4,705
Celery	70,571	70,571
Cucumbers	98,800	98,800
Onions	117,619	112,914
Beets	7,057	4,705
Cauliflower	28,229	25,876
Corn	75,276	65,867
Turnips	4,705	4,705
Other Vegetables	84,685	77,629
FRESH FRUIT		
Grapefruit	174,076	
Lemons, Limes	25,876	
Oranges	329,333	324,629
Cantaloupes	134,086	129,381
Strawberries	70,571	58,810
Apples	275,229	263,467
Bananas	284,638	
Cherries	37,638	32,933
Melons	230,533	225,829

	Consumption (1000 lbs./year)	
	All Sources	Bought
Peaches	56,457	49,400
Pears	37,638	35,286
Grapes	18,819	16,467
Pineapple	32,933	
Plums	7,057	7,057
COMMERCIALLY CANNED VEGETABLES		
Dark Green Vegetables	9,410	
Deep Yellow Vegetables	18,819	
Tomatoes	129,381	
Asparagus	9,410	
Baked Beans	82,333	
Snap Beans	79,981	
Beets	35,286	
Corn	82,333	
Green Peas	56,457	
Other Vegetables	30,581	
COMMERCIALLY CANNED FRUITS		
Citrus Fruits	7,057	
Apples	47,048	
Apricots	7,057	
Cherries	4,705	
Peaches	35,286	
Pears	16,467	
Pineapple	14,114	
Mixed Fruit	25,524	
Other Fruits	18,819	
FROZEN VEGETABLES		
Dark Green Vegetables	47,048	
Dark Green Leafy Vegetables	16,467	
Broccoli	28,229	
Deep Yellow Vegetables	7,057	
Other Vegetables	105,857	
Lima Beans	7,057	
Snap Beans	21,171	
Green Peas	21,171	
Corn	18,819	
Mixed Vegetables	18,819	
Other Vegetables	18,819	
FROZEN FRUIT		
Strawberries	7,057	
Other Fruit	2,352	

	Consumption (1000 lbs./year)	
	All Sources	Bought
JUICE - VEGETABLE, FRUIT		
Vegetable Juice, Canned	94,095	
Tomato Juice, Canned	51,752	
Other Vegetable Juice, Canned	42,343	
Vegetable Juice, Frozen		
Fruit Juice, Canned	277,581	
Citrus Fruit Juice, Canned	134,086	
Orange Juice, Canned	68,219	
Grapefruit Juice, Canned	58,810	
Other Fruit Juice, Canned	7,057	
Noncitrus Fruit Juice, Canned	143,495	143,495
Apple Juice/Cider, Canned	72,924	72,924
Grape Juice, Canned	30,581	30,581
Pineapple Juice, Canned	21,171	
Other Noncitrus Fruit Juice, Canned	18,819	
Fruit Juice, Frozen	207,010	
Citrus Fruit Juice, Frozen	197,600	
Orange Juice, Frozen	185,838	
Other Citrus Fruit Juice, Frozen	11,762	
Grape Juice, Frozen	7,057	
Fruit Juice, Fresh	359,914	
Citrus Fruit Juice, Fresh	322,276	
DRIED VEGETABLES, FRUIT		
Vegetables	25,876	
Beans	18,819	
Peas, Lentils	7,057	
Fruit	18,819	
Prunes	4,705	
Raisins	11,762	