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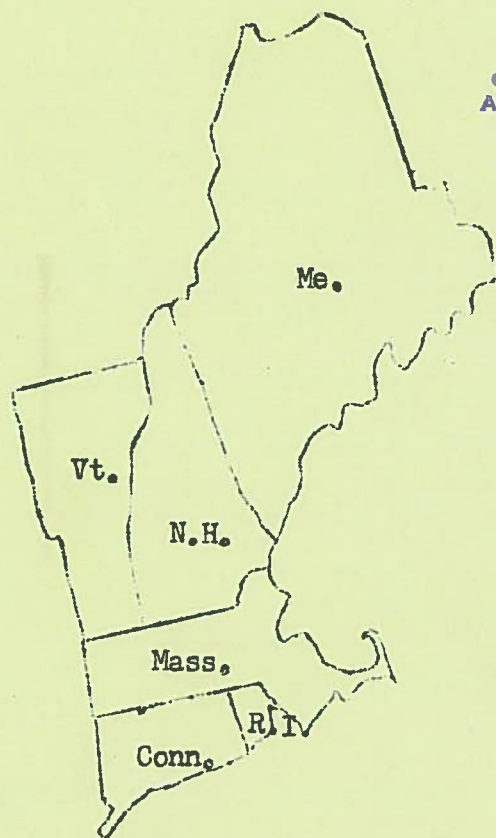
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CURRENT RESEARCH IN AGRICULTURAL ADJUSTMENTS IN NEW ENGLAND

Structure and Organization of the Maine Broiler Industry

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Beginning in 1945, and at periodic intervals of about 5 years since then the Maine Agricultural Experiment Station has made studies dealing with the economics of broiler production. In 1945 when the Maine broiler industry was in its early stages of development Perry and Dow ^{1/} conducted what is probably the first complete economic study of broiler production in Maine. Then in 1950 Savage ^{2/} made an economic analysis of broiler production in Maine, and more recently in 1955 Saunders ^{3/} conducted a study of contract and independent broiler production. In 1957 Saunders ^{4/} obtained operating statements from all the major grower-processors in Maine covering both their growing and processing operations. In 1959 Littlefield and Merchant ^{5/} published a report dealing with the competitive position of major commercial broiler areas that supply broilers to the New York City market. These studies conducted periodically over the years have provided basic input-output data which show the adjustments taking place in the Maine broiler industry, and serve as a basis for analyzing possible future trends.

^{1/} Perry, Alvah L. and Dow, George F., Costs and Returns in Broiler Production, Maine Agricultural Experiment Station, Bulletin 441, December 1945.

^{2/} Savage, Willard, Unpublished data on capital investment, costs and returns in producing broilers, 1950-51.

^{3/} Saunders, Richard, Contract Broiler Growing in Maine, Maine Agricultural Experiment Station, Bulletin 571, May 1958.

^{4/} Saunders, Richard, Impact of the Broiler Industry on Maine's Economy, MAINE FARM RESEARCH, Maine Agricultural Experiment Station, July 1958.

^{5/} Littlefield, Elwood R., and Merchant, Charles H., Competition Among Areas in Supplying Broilers to the New York Market, Maine Agricultural Experiment Station, Bulletin 582, April 1959.

The Current Status

In 1958 the six New England states produced a total of 111,354,000

broilers (table 1). New England accounted for 6.7 percent of the total broiler production in the United States. About half the broilers produced in New England were grown in Maine.

Table 1. COMMERCIAL BROILER PRODUCTION IN NEW ENGLAND, 1958

State	Number produced	Per cent
Maine	56,475,000	50.7
Connecticut	30,356,000	27.3
Massachusetts	13,982,000	12.6
New Hampshire	7,864,000	7.1
Rhode Island	1,700,000	1.5
Vermont	977,000	.8
Total	111,354,000	100.0
United States	1,659,636,000	
Percent New England of United States total	6.7	

At the present time there are five broiler growers in Maine. A broiler grower as defined here is the individual or firm who has title to the birds, invests the major part of the capital required to grow broilers, makes the management decisions, and assumes the risks. Each of the five broiler growers in Maine own hatching egg supply flocks, hatcheries, own broiler farms, and rent others, own trucking operations to assemble their birds for processing, and own and operate processing plants. One grower, in addition, owns and operates a feed mill, while the others purchase feed on a manufactured cost-plus basis.

The five Maine broiler growers are not only similar in organization, but are also similar in size. They each hatch, grow, and process around 12 million broilers a year, and have annual gross sales in the neighborhood of \$10 million. The capital investment of each of the growers runs around \$1 million. They employ about 300 persons each and rent around 200 contract farms with an average capacity of about 12,000 broilers per lot. Each grower has a staff of about 10 broiler farm management specialists to supervise their 200 or so contract farms. This figures out to be about one supervisor for every 20 farms. Several growers employ a veterinarian and nutritionist on a full-time basis, and have their own research and diagnostic laboratories.

Some Recent Adjustments

Five years ago in 1954 there were 10 broiler growers in Maine producing a total of 27 million broilers a year. Today in 1959 there are five growers producing about 60 million. Compared with 5 years ago one-

half of the number of growers are producing twice the number of broilers. This represents a fourfold increase in production per firm during the past 5 years.

In addition to the increases in output per firm that have occurred in recent years, substantial progress has been made by each of these growers in the area of product refinement. During this period the transition from New York dressing to evisceration has been completed. This change has required substantial additional capital investments in eviscerating facilities. Also, during the past 5 years these growers have acquired hatching egg supply flocks, hatcheries, and feed mills. This too has meant large capital outlays.

Substantial changes have also taken place in the contract growing operations of Maine broiler firms during recent years. Five years ago in 1954 there were about 1,000 contract flocks in Maine each raising about 30,000 broilers a year. The average size flock then was about 10,000 birds, and three lots were grown a year. Today in 1959 there are about 1200 contract growing units each raising an average of about 50,000 birds a year. The average size flock now is about 12,000 birds per lot, and usually four lots are grown a year. In other words, during the last 5 years there has been about a 20 percent increase in the number of growing units and a 66 percent increase in the annual production per unit.

Along with the increased production per growing unit there have been, as you well know, substantial improvements in production efficiency. For example, 5 years ago to grow a 3½ pound broiler to market age it required 11 weeks and 11 pounds of feed. Today it takes 9 weeks and 9 pounds of feed to grow a 3½ pound broiler. Feed conversion ratios for a 3½ pound broiler have been reduced from 3.0 to 2.5 in 5 years. Mortality rates have dropped from 4 percent to 2 percent.

With these improvements in production efficiency and increased in size of operations, it has been possible to decrease production costs at the rate of 1 cent per pound per year during the past 5 years. In 1954 the average total cost to produce a 3½ pound broiler in Maine averaged 23 cents per pound live weight, whereas the current 1959 cost averages about 18¢ per pound including chicks, feed, fuel, litter, lights, medication, contract grower labor, rent for buildings and equipment, flock supervision, taxes, and insurance on the birds and office expense.

Prices received for live broilers at the farm have declined about the same amount and at about the rate as have production costs—from the 23 cent level in 1954 to around 18 cents for the current year. This amounts to a 22 percent decline in prices. Grower payments, on the other hand, have been reduced only 15 percent during this period—from 1 cent per bird per week to an average of .85 of a cent per bird per week.

Some Current Adjustments

In spite of the prolonged price-cost squeeze in the broiler in-

dustry dating back to September 1958 broiler chick placements in Maine continue at an all time high running 2 percent above a year ago at this time. Total chick placements for the 22 major commercial broiler areas is down 7 percent from a year ago. The five grower-processors in Maine are still going strong after 10 months of prices at and below costs of production and with no relief in sight for the remainder of the current year. Belts are being tightened like they were never tightened before in an attempt to cut costs all along the line.

Some grower-processors are standing firm. Others are cutting back volume and dropping high cost flocks, while others are maintaining volume, not dropping contract flocks, but requiring better facilities--insulation, concrete floors, and more efficient heating systems. One firm which has been on 100 percent evisceration and Federal Inspection for several years now and has one of the most modern plants you'll find anywhere in the country is now in the process of completely renovating its plant in order to refine its product further by installing a continuous cooling system and freezing and cooking facilities.

There have been no major changes in the level of contract grower payments recently. Some firms are still on the "penny per bird per week" guarantee while others are on a $\frac{1}{2}$ -cent minimum guarantee with incentive bonus arrangements.

Future Adjustments

The history of the broiler industry is one of innovation and change. Many changes have already taken place in the industry, and in all likelihood more will be forthcoming in the future. Some of the changes and adjustments that may be ahead are as follows:

- (1) Consolidations and mergers at a much faster rate than has been experienced so far.
- (2) A demise of the contract system in favor of completely controlled owner-integrated broiler factories adjacent to or in near proximity to processing plants located near consuming areas.
- (3) A movement in the direction of a more "total" integration of the production phases (includes processing) with the marketing and distribution phases.
- (4) Development and widespread use of regional and national brands of chicken.
- (5) Planned production (volume and quality) behind trademark or brand selling based on the market demand for a particular branded item.
- (6) Chicken priced on a manufactured cost-plus basis.
- (7) Less emphasis on price and more emphasis on other factors such

as quality, taste, flavor, and service in setting the price at the market place.

(8) Further refinement of chicken products in the form of prepared chicken dishes, precooked, deboned, and frozen.

(9) Less competition between and among competing broiler areas once the shakedown is complete and the transition to an industrial type of business enterprise has been made. Firms will be producing for a pre-determined market confined largely to their "natural" marketing area.

I would like to end this somewhat random commentary on adjustments in the broiler industry with this final observation.

As the broiler industry takes on more of the characteristics of an industrial business enterprise we might expect to find that many of the services now being performed by the land grant colleges, the USDA, and the State Departments of Agriculture will be taken over by the large-integrated broiler firms who will do their own research, extension, and product promotion. The impact of adjustments in a changing agriculture on the state and Federal agencies who have been serving agriculture so well for so many years may very well be as great as the impact on the family farms of America.