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*Agriculture - Economic Aspects
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INTEGRATION IN THE DAIRY BUSINESS

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The implications of the topic assumes there is integration in the dairy industry. As an approach to this subject it is desirable to discuss a few of the more important changes that are occurring in the dairy business in the New England area. This topic could be considered from the marketing side of the business, or as the changes appear in the production field. Certainly there are significant adjustments under way in both production and distribution. The primary pressures causing the changes are directly related to the cost-price squeeze. It is not necessary to spend much time on the reasons for these increases in cost, only to emphasize they are becoming more acute. It is important for the businessman be he farmer or milk handler to find ways to deal with this problem. The successful handler and dairyman are taking steps to meet these new situations. Briefly then, the successful operator must take every practical step to find new methods to operate his business. There are experiments in new ways of doing the job; some of these are successful and will continue, others will be abandoned or modified.

I am not sure of the exact meaning of integration in this industry, but it probably means finding new and better ways to do the job of production and marketing, new and better ways to provide the type of service demanded by the consumer and likewise, adjusting to the changing role of government as it relates to this industry. It certainly must mean finding methods which will give the greatest efficiency.

The changes occurring in the milk industry could in this short discussion be approached from the side of distribution. Such a discussion might well include: sharp decrease in the number of handlers, increase in volume of milk and by-products handled, decrease in the number of milk receiving stations, increase in the number of bulk farm tanks and their effect in improving quality, increase in quantity of milk sold through super-markets, change in size and form of containers, increased demand for by-products, and the many things that are under way to take advantage of the findings of research and technological advances which aid in providing a better product with the least cost. These are only a partial list of innovations in the processing and distribution side of the business.

Integration in the poultry business has taken on a much more dramatic and revolutionary form. Broilers and turkeys apparently are well suited to the type of integration where capital management and a part of the marketing process can be unified. There are very apparent possible economies in this type business operation. These changes in the broiler and turkey business, it may be observed, are not peculiar to New England. It is evidently a change in the industry affecting all growing sections of the United States. The Federal Reserve Board recently discussed this most interesting program as it concerns the egg industry in New England.

The dairy industry cannot be expected to follow poultry for there are inherent differences in the two enterprises which will lead to quite different methods. Their primary objectives are the same--to find the most practical and workable means to reduce costs--to do the job most efficiently. Each industry is endeavoring to find the most efficient way to meet consumer demands in the form, quality, and package which will give the greatest sales.

Complete integration does not seem likely in the dairy business in New England in the immediate future. This does not mean, however, there are not important changes now under way. Among the adjustments are larger farm units, greater use of mechanization and labor saving devices, substantial increases in capital requirements, and perhaps most importantly, greater management skill. The trend is definitely to larger business units on the farm. There will be continued steps taken to bring the producer and dealer closer together. The financing of bulk tanks, for example, has been accomplished by the dealer, the bank, and the producer jointly developing a workable program.

What is happening in New England.

In appraising the New England market, it must be remembered that 70 percent of the milk to supply the Boston market comes from Vermont and a small section of Eastern New York. The northern states will probably continue to be the principal source of fluid milk. As the demand increases in southern New England, more of this milk must come from the north country.

One of the most important changes is the trend to larger herds and higher production. In 1936 the average daily production per shipper was about 120 pounds, or 2 cans of milk. It is now estimated production will average 440 pounds, or about 5 cans. This is a striking increase of two and one-half times in 20 years. In this same period, it is estimated the number of cows in the average herd has increased from 12 to 25. The greatest increase in production per herd in any of the New England states is in Connecticut where in the last 6 years, production has reached a high for this area, rising nearly 60 percent.

This trend to larger herds and fewer farms has been stepped up rapidly in the last two or three years, and there appears to be no reason why this accelerated rate will not continue for some time.

This leads to the question of the most economical size farm unit. Many farm management specialists seem to think in terms of about a two-man operation. Research studies have suggested from 60 to 70 cows may best be suited to Vermont or New York. The trend to larger and fewer herds has a long way to go before it reaches an average of 60 cows. There are some who believe the larger herd of 500 or more cows may be suited to New England. Such operations are successful in Southern California and Florida. Perhaps in the years ahead such specialization will prove efficient here, but there are few examples to indicate it will be generally adopted in the northeast. It is nevertheless a possibility. From my own point of view, the family type farm will probably furnish the greater part of New England's milk for a long time, but the family farm operation will be a much larger unit in years ahead. The producer-distributor has been a part of the milk picture for a long time. Gradually they have decreased in number and those remaining are for the most part larger operators. Here, of course, production and marketing are under the same management and control.

Farm tanks and pipeline milkers have contributed to the ease of increasing the size of the herd. The farm tank in particular has been an important factor in influencing farmers to keep a few more cows. These are another illustration of the greater capital required on the farm. The number of tanks has increased markedly in the last two years. It is not unlikely that most of

the milk in New England will be handled in this manner in five years. The farm tank is but one of the new costs involved in milk production that influences the small farmer either to discontinue in the milk business or to purchase more cows.

In many instances, farm buildings have been a factor that has made expansion slow. There is much interest today in remodelling the old barn or in building a new one where labor-saving equipment and practice can step up the efficiency on the farm. Well planned loose housing units with a milking parlor have greatly reduced the man hours needed to handle a dairy herd. The cost of building a new modern conventional style barn may well run to five or 600 dollars per cow. A carefully planned pole type barn with milking parlor is being constructed for \$250 to \$300 per animal. Of course, the investment per animal in a barn is less for the larger herd, say for 60 cows, than for one of half that size. This is due to the rather large proportion of cost that goes in the milking parlor.

While milk production has been increasing more than 3 percent annually, fluid milk sales are increasing, but at a slower rate. A part of the job of promoting sales which was formerly considered primarily a responsibility of distribution is now carried in part by producers. Excellent educational programs and sales promotion are now financed and managed by producers' organizations.

The forage program has always been considered an important feature of milk production in New England. The Green Pasture Program has tended to dramatize the significance of the benefits of well-managed pastures and their contribution to milk production. It has also been a factor in providing better hay. The widening of the program to embrace a more complete roughage supply is another way to reduce costs of feed. There is increased interest in zero pastures and this may well be a continuing and gaining interest. The economic significance of the pasture program to cost of milk production is one reason why there is a maximum size of the average herd.

I have attempted to hit a few of the high points of the factors relating to milk production. To summarize, there is an accelerating trend toward fewer but larger herds. More efficient feeding and herd management, artificial insemination, and other technical developments are among the most important factors contributing to higher producing cows.

With the increase in size of the farm unit, there are other factors that are important in the future dairy practice. Labor-saving equipment, farm tanks and other capital investments present increased financing problems. The capital is substantial for a unit with 60 cows, but the capital for complete integration of production and marketing would certainly seriously restrict such expansion. The milk distributor who could consider such a capital investment would be willing to assume a tremendous responsibility and risk. Perhaps if milk supplies relative to demand should become less, there may well be a need for the dealer to invest in production.

Greater attention is now being given to low-cost housing. Barns must be remodelled to care for larger herds and to provide labor-saving equipment. Loose housing or pole barns are not as widely adopted in New England as in some dairy sections. New ideas for barn construction will receive increased attention. Research and farm experience indicates this is a most important aspect of dairy farm management. Two years' experience by the C. H. Hood Foundation in this field

demonstrates farmers are keenly interested in more efficient housing. Then, too, there are dozens of new barns constructed each year. Some of these will be pole constructions. It would appear if these are well-planned barns and well managed, the production per man can be increased.

Reference should be made to the part government is playing in the dairy picture. It is not necessary to discuss Federal and State price control programs. They seem well-established and doing a splendid job. We sometimes forget that more than 40 percent of the milk priced under Federal orders is surplus or Class II milk. The price of this milk is directly related to butter and non-fat dry milk. Each of these is under the price support program of the United States Department of Agriculture. Certainly butter would be lower without supports and the bottom would fall out of the powder market without supports.

In conclusion, I have attempted to indicate there is an expansion in size of herds with higher-producing cows, more cows per man is evident, there is better use of tillable land for forage, substantial more capital is required for the farmer, quality standards are being tightened, bulk milk tanks will continue to increase in number. All of these factors mean the dairyman of today must be a skillful manager. He must study and be prepared to take advantage of the new methods of operation. The job of the dairyman will continue to become more involved and require greater management skills.