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INTEGRATED PRODUCTION SYSTEMS - LIVESTOCK
"DAIRY PRODUCTS IN DENMARK"

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With one company, Mejeriernes Mælkedisponeringselskab (The Dairies' Milk Allocation Company), controlling more than 80% of total Danish milk intake, Denmark possesses one of the most integrated milk production systems in the world. Another 11% of the Danish milk is collected by another 21 cooperative dairies, whilst a total of private dairies account for the remaining 8%. The rapid development of the Danish dairy industry since World War II can be attributed to Denmark's late entry into the European Community and to the formation of MD Foods in 1970. Increasing competition on the world markets through the concentration of the retail trade, as well as the milk quotas in the EC since 1984 have played an important part, forcing the dairy industry into an increasing degree of integration.

The Historical Development

The first cooperative dairy in Denmark was established in 1882 in the village of Hjedding in Jutland. Dairy farmers were tired of seeing the butter merchants making huge profits on exports of Danish butter to the British market and now wanted to take control of the production and, subsequently, also of the sales and marketing.

The idea spread rapidly, and soon every village had its own cooperative dairy, owned collectively by the farmers who supplied all their milk to the dairy.

At the highest there were more than 1,600 cooperative dairies in Denmark, and as late as in 1950 the number was 1,326. The number of dairy farmers in 1950 was 185,000 with a total production of 4,900 million kilos of milk.

At the same time the private dairies numbered 245. Their number more than halved during the next twenty years, whilst the number of cooperative dairies fell by almost 70% to 410. The move from horsedrawn wagons to motorised trucks and later on milk tankers was the reason for the development into fewer units.

In 1963 Denmark unsuccessfully applied for membership of the EC together with Great Britain. Following the French veto

against our application, the Danish Dairy Federation, which comprises all dairy interests in Denmark, ranging from milk producers over production to trade, introduced a plan to establish a national dairy company at its annual general meeting in October 1963.

The objective was to rationalise the Danish dairies into fewer and more efficient units and to initiate product development as well as sales and marketing. Promotion offices were soon established both in Europe and in North America, centered around the newly developed logo, the "Karoline" cow.

Whilst this could be handled by the Dairy Federation itself and did not involve the individual dairies, it proved very cumbersome to get the "Dairy Denmark", as it was called, off the ground. When dairies were asked to merge, the attitude was very negative, and for seven long years all talks proved fruitless.

In 1970 four regional dairy groups together with a handful of individual cooperative dairies put a stop to the Dairy Federation's unsuccessful efforts by establishing "Dairy Denmark" on their own, building upon the statutes that had been drawn up by the Federation, so that the aim remained the same, to gather all Danish cooperative milk into one company.

At its inception, Dairy Denmark accounted for 9% of the total Danish milk production. The company, which has meanwhile changed its name to MD Foods, now accounts for 66% of all Danish milk. Through an economically binding agreement with the number 2 Danish milk cooperative Kløver Mælk in the jointly owned "The Dairies' Milk Allocation Company", MD Foods directs 81% of total Danish milk production.

Growth through Mergers and Acquisitions

The growth of MD Foods during the past 23 years has taken place partly by mergers with other cooperative dairies and partly through acquisitions of a great number of privately owned companies both in the field of production and in wholesaling and exporting.

As MD Foods started to become visible and as smaller dairies found it more and more difficult to maintain a competitive milk price to their members, the wave of mergers swept the country.

During the years 1970 to 1990, the number of cooperative dairies fell from 410 to 28 and the number of private dairies fell from 114 to 25. Smaller dairies merged with bigger dairies, most of them with MD Foods. Most of the plants were closed and the production transferred to MD Foods' plants or scrapped if it was not profitable enough.

There was a growing amount of animosity towards MD Foods from the dairies that decided to merge with other dairy groups, and that is no doubt a contributory factor in the reluctance in Kløver Mælk to merge with MD Foods. Having rejected MD Foods once in favour of Kløver Mælk, those farmers feel that the time is not yet ripe for a full-scale merger. Instead the mutually binding agreement between the two companies is paving the way for the rationalisation of production and the milk allocation scheme that is now in operation. The aim is to optimize the milk price to the farmer at a time when CAP reform and a putative GATT agreement threaten the livelihood of the Danish milk producer.

A number of private dairy companies, both within production and within wholesaling and exports, have been acquired by MD Foods since the modest start in 1970.

Already six weeks after its start, MD Foods acquired the Høng group, Denmark's leading private manufacturer of specialty cheeses and a leading wholesaler and exporter of Danish cheeses. The difficulty in finding sources of finance for this acquisition taught the farmers the need for consolidation. Over the years, MD Foods has become a well-consolidated company and has been able to finance most of its investments through its own means.

Integration

Whilst the merging dairies were immediately integrated into MD Foods, the policy towards the acquisitions was somewhat different.

The privately owned production companies that were acquired became integrated immediately. In the case of butter and cheese, sales and marketing activities were transferred to joint sales companies that were owned by MD Foods in conjunction with other dairies. Market milk and fresh products for the Danish market were produced and marketed by a company owned jointly with the largest Danish retail chain, a consumer cooperative.

Even though production and sales and marketing were thus separated in different legal entities, there was a high degree of coordination of activities, especially as far as strategic planning was concerned. During the strategic planning work it became more and more obvious that the structure was blocking the way for a rational development into a market oriented single company.

The lack of market orientation was most obvious in the area of product development. Product development took place at dairy level, which meant that the individual dairy managers had a big influence on the products that were developed. The sales and marketing companies had to sell what the dairies produced and not vice versa.

There were problems as well with the sales and marketing companies in the group not being integrated with each other in a single company. Each of the companies acquired kept its own name and staff, and whilst a certain amount of coordination was attempted, the fact was that internal competition flourished.

Thus MD Foods was a well-integrated company on the production side, but a company with many faces towards the world on the sales side.

The company had been successful in realising the objective that was defined at the beginning, to increase production of cheeses and to become the most important marketer of Danish cheeses. Before MD Foods was established, the private wholesalers and exporters had totally dominated Danish cheese sales and the dairies had been at their mercy.

The publication of the EC Commission's White Paper on the European Single Market "Europe 1992" in 1985, coupled with the ever increasing concentration of the retail trade, became the two deciding factors in the integration process.

In 1987 the number of members of the joint cheese sales and marketing company had dropped to just two, and an agreement with the remaining other member to resign was reached, thus paving the way for a full integration of cheese production and sales. On the butter side an agreement was reached with the remaining members of the joint butter sales company Butterdane, so that sales and marketing could be integrated into the MD organisation.

On October 1st, 1987 a new divisionalised structure was introduced, where the divisional directors of each of the five divisions, cheese, home market, butter, protein and transport, are fully responsible for all activities within their division. This means that strategic decisions can now be implemented throughout the organisation, leaving no room for suboptimising as was the case before. Production and sales and marketing now all refer to the same person and are working together with the common goal of developing and producing products that consumers prefer.

Product development which had previously been conducted at dairy level has now been gathered in a new R&D facility in Aarhus. This facility has a permanent staff of 60 persons and operates together with staff from the divisions, production engineers, market researchers and economists, on about 100 projects at a time.

The facility comprises a model dairy equipped with all kinds of dairy machinery, so that all processes can be tested before production is being set up in full scale. Furthermore two complete laboratories form the basis for development of new products as well as the development of application techniques for customers in other branches of the food industry. Ingredients not only for the food industry, but in

growing number also for the pharmaceutical industry form a bigger and bigger part of the new products developed at the R&D centre.

The Role of the Dairy Farmer

92% of all Danish milk production is being processed by cooperatives. A Danish cooperative is a company where the dairy farmers are at the same time the suppliers of milk and also the owners of the company. As it was reported at the beginning, the Danish dairy cooperatives are building on a century-old tradition, and the dairies in existense in Denmark today can trace their history back to those first cooperative dairies.

In the EC today, milk production is restricted by the milk quotas which were introduced in 1984 to curb the increasing milk production in the EC. Since then milk production has been curtailed by almost 17%. This has hit many farmers hard, and many farmers have stopped milk production altogether.

The Danish Dairy Board, on behalf of the Danish Ministry of Agriculture, administers the Danish milk quotas in a way so that the quotas that become available when a farmer stops milk production can be allocated to others. This ensures that young farmers may establish themselves as milk producers, and older farmers may from time to time get extra quota, but there is never enough to go round. Demand is always much higher than the quota available for distribution.

As owners of the cooperatives, the farmers own their company collectively. No farmer has an individual share in the company, neither can he expect any part of the equity to be returned to him upon his resignation from the company. Similarly, a farmer joining the cooperative may do so without any entrance fee, all he has to do is to sign the statutes and some letters of guarantee.

The farmers of MD Foods control their company and their management though a number of boards, the most important being the Board of Representatives and the Supervisory Board.

For electorate purposes, MD Foods has established six regions in Denmark. Each region is split into districts, and the members in each district elect members to the Regional Assembly, based upon the milk production in each district.

The Regional Assembly elects a Regional Board, including a Regional Chairman who automatically becomes a member of the Supervisory Board.

Based upon the milk production in the region, the Regional Assembly also elects members to the Board of Representatives. The Board of Representatives at the moment

consists of 200 farmer representatives and 10 members elected by the Staff.

At the annual general meeting of the Board of Representatives, a further 7 members are elected to the Supervisory Board in a free fight among the members of the meeting. The staff members elect two of their 10 representatives to the Supervisory Board.

The Supervisory Board thus consists of 15 persons, the 6 regional chairmen, the 7 farmers elected at the annual general meeting, and the 2 staff members. The Supervisory Board is responsible for the appointment of the Management Board, which consists of 4 persons.

The electorate system ensures that the milk producers have full control of their own company and that they have equal opportunities of being elected to the institutions of the company. The highest authority is the Board of Representatives who have the power to change the statutes of the company, who must approve the accounts and approve the distribution of the surplus of the company at the end of the year.

Cooperation with Kløver Mælk

For several years MD Foods has had a share of the total Danish milk production of 66% and the number two Danish milk cooperative has 15%. For comparison, the share of the 3rd largest cooperative is just 2.5%, so the MD/Kløver joint ventures dominate the Danish milk industry.

As cooperatives, both companies are farmer owned and farmer controlled. It was also the farmers who decided that the competition between the two companies should be stopped, after it had escalated in late 1991.

For the reasons previously explained, the Kløver Mælk Supervisory Board, supported by their Board of Representatives, has decided that the time is not yet ripe for a full-scale merger. MD Foods has documented that considerable savings could be made by merging the two companies, but accepts that this must necessarily wait.

Instead two joint companies have been established, where the two companies own parts based upon their milk intake.

The Dairies' Milk Allocation Company is responsible for the allocation of the total milk collection from the two parent companies. The objective is to optimize the use of milk for those productions that yield the highest revenue, both short and long term. MD Foods' Transport Division is responsible for the collection of all milk, having chartered the milk tankers of Kløver Mælk, but milk from Kløver Mælk farmers still has to be collected by a Kløver Mælk milk tanker, so route planning is not optimal yet.

All sales departments report long term budgets and short term estimates to the Milk Allocation Company. Based upon its intimate knowledge of the milk quotas and the farm structure, the Milk Allocation Company forecasts the milk production at farm level and matches this with the production plans. The production plans are based upon the sales budgets and estimates with due regard to stock fluctuations.

With the aid of their computer programmes the small staff of the Milk Allocation Company handles the task of allocating a total of 3.6 billion kilos of milk to a total of 60 plants in a way so that the milk may be utilised in the best possible manner.

As a subsidiary to the Milk Allocation Company another joint company has been established under the name The Dairies' Production Company.

This company comprises all the plants belonging to MD Foods and to Kløver Mælk making products for the domestic market, a total of more than 40 plants.

The parent companies still own the buildings, whilst all machinery has been acquired by the joint company.

The purpose of The Dairies' Production Company is to rationalise production of all products for the Danish market, ranging from market milk to yoghurts, desserts, butter, spreads and cheese. A considerable rationalisation scheme is already underway, resulting in a number of products being centralised in one plant instead of two. It is estimated that considerable cost savings will be the result of this programme.

Conclusion

As it will appear, the Danish dairy industry may pride itself of being one of the most integrated industry structures in the world.

Through a quality premium payment to the farmer based upon the quality of his milk, through the processing of the milk in his own cooperative dairies into finished products being marketed by the dairies themselves, and through market oriented product development, there is a straight line from consumer to cow. In Denmark we have long left the old phrase "from soil to table", as all our activities start with the consumer and go back to the milk, which of course is also the way the money flows!