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## RECENT AND FUTURE DEVELOPMENTS IN THE DUTCH DAIRY CHAIN

Dairy farms, processing industry, distribution and  
consumers

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## ABSTRACT

### RECENT AND FUTURE DEVELOPMENTS IN THE DUTCH DAIRY CHAIN; DAIRY FARMS, PROCESSING INDUSTRY, DISTRIBUTION AND CONSUMERS

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This study analyses the recent and future developments, both within and between the various segments of the Dutch dairy chain. These developments have mainly been induced by changes in the external dairy environment.

The market for milk and dairy products is becoming increasingly fragmented, because of changes in moments and places of consumption, the individualistic behaviour of consumers, and the demand for variety.

The developments in the dairy farm structure can, mainly under influence of the quota system, be characterized by concentration and less specialization; a process that is expected to continue.

In the last decade, a tremendous concentration process has taken place in the structure of the processing industry, dominated by the cooperative sector. The largest cooperative enterprises pursue a capital-intensive strategy, based on a mixture of cost leadership, product differentiation, product diversification, and market development.

To finance their strategies dairy cooperatives until now have chosen the members' financing model, although Friesland Frico Domo recently made the first step in the direction of a PLC model. These and other developments have stimulated a more market-oriented business relation approach between members and their cooperative.

The distribution of milk and dairy products via supermarket organizations will increase in importance. To increase their competitive position and to meet consumer demand for variety they will cooperate with the dairy processing industry in the development of new products.

Dairy chain/Netherlands/Developments/Trends

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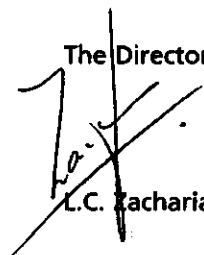
## PREFACE

This study is a reprint of a contribution the authors have made to a conference organized by the Università Cattolica del Sacro Cuore in Cremona, Italy, called 'Demand evolution, structural change and firm strategies in the European dairy market' in September 1994. The aim of the conference was to study recent and future developments in consumer behaviour and the demand for dairy products; structure and organization of the dairy industry and the distribution channels, and their strategies to cope with the changing environment in various European countries. Research teams from Italy, France, Spain, Germany, the United Kingdom and the Netherlands were invited to submit a paper analyzing the developments in the dairy chain in their country. A comparative analysis of the various contributions will reveal some common developments and trends in the European dairy sector. The proceedings of this conference will be published in 1995 by FrancoAngeli in a book called 'The European Dairy Industry: Consumption changes, vertical relations and firm strategies', edited by Renato Pieri and Daniele Rama. However, to make the information on the developments in the dairy chain in the Netherlands available in an earlier stage, it is separately published by LEI-DLO.

Because the aim of this study has been derived from the conference's, developments in the part of the chain that provides dairy farms with inputs (breeding, foodstuffs, etc.), and developments in import and export in all parts of the chain have not been treated in this study.

The authors would like to thank Drs. K.J. Poppe, Ir. A.J. Reinhard, and Ir. H. Rutten (all from LEI-DLO) for their valuable comments on an earlier draft. The usual disclaimer applies. Finally, the authors thank Drs. Z.N. Abdulla for his editorial comments.

The Hague, January 1995

The Director,  
  
L.C. Zachariasse

## SUMMARY

In September 1994 a symposium was organized in Cremona, Italy. The topic was the analysis of 'Recent and future developments in consumer behaviour and the demand for dairy products; structure and organization of the dairy industry and the distribution channels, and their strategies to cope with the changing environment in various European countries'. Before the publication of all contributions by the organizing institute, the Dutch country-report is published by LEI-DLO.

The analysis of the dairy sector starts with a discussion of some general trends in the market that are considered to be important. The following developments are stipulated: saturation of the market, growing demand for dietary and healthy food, smaller packages, convenience food, eating outside the home and a growing fragmentation of the market. Similar trends can be perceived in milk and dairy consumption. The consumption of whole milk and whole milk products decreased and that of skimmed milk and skimmed milk products increased. Nowadays cheese is consumed not only with bread, but also as a snack and with hot meals. Furthermore, there is a growing demand for sour desserts, based on yoghurt. With respect to health, novel milk products (cheese produced with vegetable fat) and functional milk products (drinking milk enriched with extra calcium) have been (and still are) developed.

These market developments are a result of demographic changes (less population growth, higher life expectancy, and smaller households), economic changes (income growth, more working housewives) and changes in lifestyle and values (simpler food preparation, more variation in foodstuffs, eating for pleasure).

The structure of the different segments in the dairy chain has changed too, mainly due to changes in the external environment of the chain. The introduction of the quota system in 1984 for instance ended the growth in the number of dairy cows. Moreover, the decrease in the number of cows has speeded up, because farmers tried to reduce their production costs by reducing the number of cows while maintaining or increasing the yield level per cow. Nevertheless, the enlargement of dairy farms continued, because farmers bought or leased production rights. Nowadays 35% of all farms have a herd size of over 50 cows.

In the structure of the processing industry, a tremendous concentration process has taken place in the last decade. For instance, the number of dairy factories decreased from over 200 in 1975 to 86 in 1993. Likewise, the number of dairy enterprises decreased from 84 to 22. The market share of the 13 cooperatives is 84% and that of the three largest cooperative enterprises about 80%, leading to the conclusion that the

sector is highly concentrated. The perceived developments are not at an end yet and are mainly influenced by developments in the external dairy environment such as the introduction of the quota system, the recent changes in the Common Agricultural Policy, the GATT agreement, the change from a producer's market to a buyer's market and the increasing market power of wholesalers and retailers. Dairy companies have responded to these changes by developing strategies aimed at product differentiation, market development and product diversification and by cost leadership. Although both the large dairy cooperatives, the small dairy enterprises and the private dairy companies pursue the same mixture of strategies, the latter two act on considerably less capital intensive scale than the large dairy cooperatives.

A development in the distribution segment of milk and dairy products is the growing importance of general stores. These stores are highly concentrated. The market share of the existing five nationwide supermarket chains for foodstuffs is over 50% and that of regional chains (30) about 25%. The number of specialized milk and dairy stores has continually diminished in previous years to about 4,000 in 1992. About 800 of them are specialized cheese stores. The market share of supermarket chains for milk and dairy products was 65% in 1993 and for cheese 49%. For cheese, specialized stores and consumer markets are more important. Their share in the cheese market share in 1993 was 9% and 12.5% respectively. For milk and dairy products the market share was only 0.2% and 5.4%. Recently the large supermarket chains have started an internationalization process. They have formed international alliances to increase their market power.

The changes in the external dairy environment and in the various segments of the dairy chain also have influenced the relations between the segments. Currently the relation between member farmers and cooperative dairy enterprises can be characterized in several ways. First there is a delivery obligation. Secondly, there is no obligation for entrance fees or obliged purchase of shares, although there are resignation obligations with respect to resignation period, terms for repayment of members' capital and a resignation fee. Furthermore, voting power is related to the milk quantity delivered, although limited to a certain point and a member's liability for losses and bankruptcy of the cooperative is limited to the amount of milk money received. Finally, the members are also financing the cooperative. The amount of members' capital differs in the three largest dairy cooperatives from 37% to 55% of total capital. The relations between dairy farmers and private dairy enterprises is restricted to the supplier-buyer business relation.

To enable the execution of their capital intensive strategies, the large dairy cooperatives need more risk-bearing capital. To meet this need, until now, Dutch dairy cooperatives have chosen the members' financing model instead of the Public Limited Company (PLC) model as the latter raises the possibility of conflicting interests between members and nonmember shareholders. A trend in this respect is the move from

yearly additions to the general reserves (the 'dead hand') to the introduction of various new types of members' capital accounts (such as certificates, members' participation units, members' reserves etc.), thereby breathing new life into the members' financing model. This will stimulate a more market-oriented business relation approach between members and their cooperative, in which a distinction will be made between the milk price as a payment for raw materials and allowances for the supply of equity. A preeminent example of this tendency are the recent proposals of Friesland Frico Domo to enter into partnership in 1995, resulting in a system very similar to the PLC model, although not in its ultimate form. In that new system farmers will receive a fixed price decoupled from the results of the company, members' loans will be abolished and instead farmers can voluntarily buy B-shares. The cooperative owns the so-called A-shares of the company. Dividend is paid on both shares.

Other developments in the relation between member farmers and dairy cooperatives are, among others, the increased application of summer milk levy/winter milk premium schemes by dairy companies, aiming at easing the problem of over-capacity. Furthermore, incentives are introduced to stimulate farmers to adapt their production process more to the preferences of the consumer.

The relation between the processing industry on the one hand and wholesalers and retailers on the other is generally a straightforward one in the sense that, to a large extent, dairy processing enterprises are selling the fresh milk and dairy products directly to retailers. The products are sold under trademarks and at market prices. For products that can be stored the dairy companies often have subsidiaries for storage and selling. Most independent wholesalers are found in the distribution of cheese, especially cheese produced by farmers.

To summarize, recent and future developments in the Dutch dairy chain can be depicted by a few key issues: the fragmentation of the market of milk and dairy products, concentration of dairy cows on fewer but larger farms, an enormous concentration in the dairy processing industry, the capital-intensive strategies pursued by the large dairy cooperatives, the growing importance of supermarket organizations for the distribution of milk and dairy products and, finally, the more market-oriented business approach in the relation between member farmers and cooperative dairy enterprises.

# 1. INTRODUCTION

The agribusiness chain in the dairy industry in the Netherlands consists of various links as is shown in the figure in appendix 1. The first link in the chain concerns breeding organizations, producers of foodstuffs (roughage and concentrates), etc. that supply dairy farmers with the necessary inputs to produce raw milk. The raw milk is subsequently sold to the processing industry, which develops, produces and sells dairy products. These products finally find their way to the consumer by means of wholesalers and retailers. The coordination of the chain is mainly provided for by the processing industry, which forms the link between the producers of milk and (by way of wholesalers and retailers) the consumers. Due to developments in the external environment, such as the quota system, the CAP reform, the finalized GATT agreement, increased competition, and the changes in the socio-economic characteristics of the consumer market, the constituting parts of the dairy chain had to conform to the changed circumstances. In the Netherlands rapid changes took place not only within the links of the chain but also in the relations between the various links. Again the processing industry plays a central role in this context. Therefore, in this paper the main focus of attention will be on the processing industry and its relations with dairy farmers on the one hand and with wholesalers, retailers, and consumers on the other hand. For a description of the first stage in the chain (input supply and breeding) in the Netherlands we refer to Bijman et al. (1995, forthcoming).

Because of the development from a producer's market to a buyer's market, in chapter two we will start with a socio-economic description of the consumer market in the Netherlands and especially the development in the consumption patterns of dairy products. Chapter three subsequently describes the current structure, recent developments and trends of the various other links in the dairy chain, followed in chapter four by a similar analysis of the relations between the various links, all in coherence with the changes in the external dairy environment. Finally, in chapter five some conclusions are provided.



## 2. CONSUMER MARKET

### 2.1 Introduction

Our description of the dairy chain starts with the market because the market is very important for the success and failure of a chain and changes in the market have much influence on the development of the chain. A model used by Wikström (1986) explains the demand for foodstuffs (quantity and quality) by external factors (technology, economy, politics) and internal factors (demography, income, basic values). A lot of changes in the Dutch consumer market have an economic or demographic background. This requires the introduction of the main developments with respect to demographics (section 2.2) and economics (section 2.3) first. Afterwards we will deal in more detail with evolutions in basic values (section 2.4). In section 2.5 the trends in milk and dairy consumption are given and analyzed.

The Dutch dairy industry exports a lot of products (cheese, butter, condensed milk, cream, whole and skimmed milk). The objective of the study is to give a picture of the Dutch situation. Therefore the developments in the export market are not discussed.

### 2.2 Demographic trends

Table 2.1 gives an overview of the main demographic developments in the Netherlands. It shows a rather fast growing population. In recent years this growth has slowed down to about 0.6% a year. For this reason and because of the lack of consumption growth per head, it is expected that in the near future the growth in the consumption of milk and dairy products will be low. Half of this growth is due to ethnic groups. Their share in the total population was 3.4% in 1980, 4.2% in 1985 and is expected to grow to 7.2% by the year 2000. The consumption pattern of the ethnic groups is not the same as the pattern depicted in this chapter. Asians for instance hardly drink any milk. However, there is no detailed information about the nature and direction of these differences.

The lower growth rate of the population results in a smaller share of young people in the total population. On the other hand the average life expectancy for men increased from 72.1 years in 1976 - 1980 to 74.3 in 1992 and from 78.6 years to 80.3 for women in the same period. This development will result in a population with a growing importance for elderly people. Subsequently, the concern about healthiness of foodstuffs and diets will rise. The demand for meat, vegetables and fruits, which are in general considered to be healthy, will increase. The same goes for

**Table 2.1 Demographic trends**

|   | 1980 | 1985 | 1990 | 2000 |
|---|------|------|------|------|
| Number of inhabitants (x million)         | 14.1 | 14.5 | 14.9 | 16.0 |
| Percentage people                         |      |      |      |      |
| - 0 - 19 years old                        | 33.2 | 28.2 | 25.6 | 24.6 |
| - 65 years and older                      | 11.5 | 12.0 | 12.8 | 13.6 |
| Number of households (x million)          | 5.0  | 5.6  | 6.1  | 6.8  |
| Average number of persons per household   | 2.78 | 2.54 | 2.41 | 2.36 |
| Percentage of households with one person  | 21.6 | 27.7 | 29.3 | 33.0 |
| Percentage of households with two persons | 29.0 | 32.0 | 33.0 | 36.0 |

Source: Central Bureau of Statistics (CBS), 1994.

the demand for dietary food and for smaller packages. Another important demographic development is the growing number of households and especially of single and two person households. The growing number of smaller households has increased the demand for convenience food and for eating out, in restaurants and canteens.

## 2.3 Economic trends

The average net income per household increased from NLG 37,900,- in 1980 to NLG 47,800,- in 1991 (see table 2.2). This means a growth of about 1% a year. One reason for this growth is the increasing number of working housewives. The number of working women increased from 2.0

**Table 2.2 Average income per household and its spending**

|                                       | 1980   | 1985   | 1990   | 1991   |
|---------------------------------------|--------|--------|--------|--------|
| Average net income (NLG) *)           | 37,900 | 40,900 | 45,800 | 47,800 |
| Total expenses (NLG)                  | 33,782 | 37,760 | 40,107 | 41,998 |
| Percentage spent on:                  |        |        |        |        |
| - food                                | 21.0   | 18.7   | 18.5   | 18.0   |
| - housing                             | 29.8   | 32.4   | 32.0   | 33.0   |
| - clothing, shoes                     | 8.6    | 7.3    | 7.0    | 6.7    |
| - hygiene and medical care            | 12.7   | 14.0   | 13.9   | 13.8   |
| - education, recreation and transport | 26.4   | 26.1   | 27.0   | 26.9   |
| - others                              | 1.4    | 1.5    | 1.6    | 1.7    |

\*) Including income from the use of the own home and not corrected for inflation.

Source: CBS, 1994.

million in 1985 to 2.9 million in 1992. Double-income households demand more luxury products, with a higher added value. They particularly ask for more products that can be prepared in a microwave oven. The number of households with a microwave oven increased from 2% in 1987 to 22% in 1991. The growth in income further resulted in a lower percentage of total income spent on food, clothing and shoes. The expenses for housing and for hygiene and medical care, however, have increased in importance.

Table 2.3 shows that the percentage of household income spent on milk and dairy products has also diminished from 1980 to 1991. Such a relationship between income and costs for milk and dairy products indicates a saturated market.

*Table 2.3 Percentage of household income spent on milk and dairy products*

|   | 1980 | 1985 | 1990 | 1991 |
|---|------|------|------|------|
| Percentage of total household income spent on milk and dairy products | 2.7  | 2.5  | 2.3  | 2.3  |

Source: CBS, 1994.

The percentage of total income spent on milk and dairy products varies according to the income of a household. In 1991 this percentage was highest (2.4%) for households with medium incomes (NLG 42,400 - 61,500) and lowest (2.0%) for high income households (NLG 61,500 and more). For households with an income of NLG 28,400 - 42,500, the percentage is 2.3.

The percentage of income spent on milk and dairy products also differs according to size of the household, namely from 1.9% for single person households to 2.7% for households with four persons and more.

## 2.4 Trends in lifestyle and values

Lifestyle and values also explain consumption behaviour of consumers. Important trends in this field are (Nelson, 1991):

- de-ritualization of food habits (less family meals, skipping meals, more autonomy for children in choosing what to eat);
- need to simplify the preparation of food and convenience of eating (more snacks, cold meals, prepared meals, the use of microwave ovens);
- desire for refined foods and for foreign, cosmopolitan, and ethnic foods (e.g. Italian dishes and the use of curry);

- desire for physical and mental well-being, resulting in a trend towards lighter meals and to more dietary meals (less fat, sugar, meat) and in a diversity in the choice of foods and in more vegetarian dishes. Furthermore the consumers demand natural and fresh foods and have doubts about foodstuffs produced with help of biotechnology and about foodstuffs preserved by controlled atmospheres);
- desire for greater conviviality attached to food with more eating outdoors and more preparation of meals at home for friends.

These trends in consumer demand have led to a growing fragmentation of markets, especially with respect to safety, healthiness, environment, animal welfare, naturalness, convenience and variety (NRLO, 1994).

## 2.5 Trends in milk and dairy consumption

Market research has shown that consumers value milk and dairy products with respect to healthiness, naturalness, flavour and price. Table 2.4 gives an overview of the products that are bought. It shows that the most important products are: whole milk, milk with a lowered fat content, yoghurt, chocolate milk, desserts with whole milk and with skimmed milk, and cheese. Although the changes may differ considerably from year to year and may even be opposite, table 2.4 also shows the following important trends in consumption: the diminishing of whole milk consumption and the growing consumption of milk with a lowered fat content, yoghurts etc., skimmed milk, and cheese. The growth in

*Table 2.4 Human consumption of dairy products (kg) per head*

|  | 1980 | 1985 | 1990 | 1993 |
|--|------|------|------|------|
| Cream  | 2.7  | 2.7  | 2.9  | 2.3  |
| Butter   | 3.6  | 4.0  | 3.4  | 3.3  |
| Cheese   | 12.2 | 12.7 | 13.6 | 14.1 |
| Curd   | 0.9  | 1.1  | 1.6  | 1.7  |
| Milk powder  | 1.4  | 1.4  | 1.3  | 1.3  |
| Condensed milk   | 9.8  | 9.7  | 8.2  | 7.4  |
| Whole milk   | 38.8 | 30.3 | 20.3 | 15.3 |
| Milk with a lowered fat content                        | 27.5 | 34.8 | 41.3 | 41.3 |
| Skimmed milk   | 1.6  | 1.2  | 1.0  | 1.2  |
| Yoghurt, chocolate milk and desserts with whole milk   | 21.0 | 20.5 | 20.2 | 19.8 |
| Yoghurt, chocolate milk and desserts with skimmed milk | 14.4 | 16.5 | 18.6 | 17.9 |
| Buttermilk and buttermilk desserts                     | 10.6 | 9.3  | 11.3 | 9.4  |

Source: Produktschap voor Zuivel, several years.

importance of milk with a lowered fat content and skimmed milk products has in recent years come to an end. The trend was the result of the wish of many consumers to lower their fat intake, especially of saturated fatty acids.

Cheese is valued by consumers for quality and wholesome image, made with natural ingredients without additives such as colouring agents and preservatives. Cheese consumption largely consists of Gouda cheese (in 1993 about 67%). The importance of Gouda is diminishing in favour of new Dutch cheeses and imported cheeses.

Nowadays cheese is consumed at different moments of the day. Ninety per cent of Dutch consumers use cheese as sandwich filling, 43% as a snack, 10% with hot meals, 9% in a toasted ham and cheese sandwich and 2% in salads. In the Netherlands cheese is rarely used as a dessert. Cheese and sausages belong to the most important snacks together with biscuits and fruit. Cheese and sausages are consumed as snacks by 73% of all households, biscuits by 79% and fruit by 91%. The average household uses seven different types of snacks. Elderly people eat less snacks than young people.

The consumption of desserts shows a trend towards desserts based on yoghurt (sour desserts) and away from porridges and custards (sweet desserts). The assortment in both segments is constantly being renewed. New types of desserts, new flavours and new yoghurt cultures are the main direction of renewal. Further there is a growth in the consumption of dairy drinks, based on yoghurt.

The importance of healthiness has led to the development of so-called novel and functional foods. The increase in the consumption of milk with additional calcium is important. This product is aimed particularly at mothers with young children and at elderly women. Recently a new type of yoghurt has been introduced that has a positive effect on the purification of the body and the natural resistance against illnesses. Examples of novel food are cheeses made of vegetable fat instead of milk fat and the so-called spreads. In the Netherlands they are no large commercial success, because they do not fit in the important trend towards natural food. For the same reason and because of the opposition of consumers against the use of hormones, the Dutch dairy industry is against the use of BST.

Trademarks are frequently used, especially for milk, desserts, dairy drinks and to a lesser extent for butter and cheese. The use of trademarks is increasing because it is a basis for consumer loyalty. In the Netherlands most milk is sold pasteurized (60%), around 30% is UHT milk and the remainder is sterilized. This has partly to do with the large number of households that have a refrigerator.

A market with growth potentials is that of restaurants and canteens. The growing incomes and the increasing number of housewives working outside the home will increase the demand for eating out. In this market there are possibilities for all types of milk and dairy products.

In order to create a safeguard against accidents and maintain the good image of milk and dairy products an increasing number of firms have certified their production process (ISO 9000 etc.). This certification of production processes to eliminate shortcomings will be extended to the primary production process and the production of fodder. It gives consumers additional quality guarantees.

### 3. STRUCTURE AND DEVELOPMENTS IN THE VARIOUS SEGMENTS OF THE DUTCH DAIRY CHAIN

#### 3.1 Introduction

In this chapter the current structure and recent and expected developments in the various segments of the dairy chain will be described and analyzed. A description of the development of the relations between the various segments will be described in the next chapter. In section 3.2 we will start with a description of the current situation and developments in the dairy farm structure in the Netherlands, followed in section 3.3 by a similar analysis of the processing industry. Finally, in section 3.4 the structure and developments in the distribution (wholesalers, retailers) are discussed.

#### 3.2 Dairy farms

The development of the dairy farm structure in the Netherlands is strongly influenced by the introduction of the quota system in 1984.

*Table 3.1 Development of characteristics of dairy farms in the period 1975-1992*

|                               | 1975    | 1983    | 1985    | 1990    | 1993    |
|-------------------------------|---------|---------|---------|---------|---------|
| <i>Absolute figures</i>       |         |         |         |         |         |
| Milk cows (*1,000)            | 2,218   | 2,526   | 2,367   | 1,878   | 1,747   |
| Milk production (*1,000 tons) | 10,286  | 13,207  | 12,525  | 11,273  | 11,030  |
| No. of dairy farms            | 91,560  | 61,148  | 57,995  | 46,977  | 40,525  |
| <i>Ratios</i>                 |         |         |         |         |         |
| Average dairy herd/farm       | 24.2    | 41.3    | 40.8    | 40.0    | 43.1    |
| Average production/farm       | 112,342 | 215,984 | 215,967 | 239,968 | 272,178 |
| Average yield/cow             | 4,650   | 5,305   | 5,371   | 6,069   | 6,325   |

Source: LEI and CBS, 1984, 1993, 1994.

Table 3.1 shows that until the introduction of this system Dutch dairy farming could be characterized by enlargement and by consolidation (Eleveld and Giesen, 1993). The total number of farms declined

steadily from 1975 to 1983, although the total number of cows increased in this period, resulting in a considerable increase in herd size per farm from 24.2 in 1975 to over 41 in 1983 and a striking increase in average production per farm in the same period by more than 90%. This process of increase in scale is also clear from table 3.2, as the percentage of farms with a herd size of over 50 cows increased considerably, whereas the farms with less than 30 cows substantially decreased. However, the aforementioned developments were disrupted by the introduction of the quota system in 1984, which therefore acted as a turning point in many respects.

*Table 3.2 Distribution of dairy farms for various years according to herd size*

| Year | Herd size (dairy cows) |       |       |       |       |        |       |
|------|------------------------|-------|-------|-------|-------|--------|-------|
|      | ≤ 10                   | 10-20 | 20-30 | 30-50 | 50-70 | 70-100 | ≥ 100 |
| 1975 | 23                     | 25.1  | 21    | 21.2  | 6.7   | 2.2    | 0.7   |
| 1983 | 14.8                   | 12.0  | 15.4  | 23.5  | 17.9  | 11.6   | 4.8   |
| 1985 | 13.7                   | 11.9  | 15.2  | 25.7  | 18.6  | 10.9   | 4.0   |
| 1990 | 11.3                   | 12.1  | 15.5  | 30.6  | 18.2  | 9.0    | 3.3   |
| 1993 | 9.3                    | 11.0  | 13.8  | 30.6  | 20.7  | 10.8   | 3.8   |

Source: LEI and CBS, 1984, 1993, 1994.

National milk production in 1993 was 16.5% lower than in 1983. Theoretically farmers could adjust their farm business to the forced cut in milk production in at least three ways (Poppe, 1993):

1. farm enlargement by buying production rights;
2. cost reduction by reducing concentrates per cow and consequently lower yields per cow;
3. cost reduction by reducing the number of cows, while maintaining or increasing yield levels.

Dutch dairy farmers mainly resorted to the first and the last possibility. Starting with the latter one, table 3.1 shows that the Dutch dairy farmers chose to reduce the herd size considerably as opposed to the time before introduction of the quota system when herd sizes increased. In 1993 the number of dairy cows was almost 31% smaller than in 1983. Milk production per cow increased in that period by more than 19% from 5,305 kg in 1983 to 6,325 kg in 1993. Although from 1983 onwards the number of dairy farms also decreased (an average 4% annually), the average herd size per farm remained more or less constant. The use of concentrates per cow remained on a high level (in total 2,000 kg per



cow), also because the cereal policy of the EC led to lower prices of concentrates.

Profitability and income improved especially in the first years after the introduction of the quota system, mainly due to the improved milk price and the plummeting of feed prices. The highest incomes were achieved in 1989/1990, whereas in the following two years the incomes declined considerably as a result of lower milk prices. The income situation has recently improved again.

Despite these relatively positive developments in the short run, many farmers decided to stop milk production. This seemingly contradictory development can be explained by the permission to sell or lease quotas in the Netherlands since 1986. On the one hand these trading possibilities provided dairy farmers with another opportunity to adjust their farm business to the forced cut in milk production. On the other hand, however, many farmers were forced to make a long-term decision of either stopping production and selling the quotas or of enlarging the farm business by buying quotas. The high prices for milk quotas that finally resulted, meant heavy investments for increased milk production, which made many farmers decide to stop dairy farming altogether.

Since 1986 milk quotas could be bought or sold with the restriction that for each 20,000 kg of quotas transferred, at least 1 hectare of land should be transferred as well. In recent years the possibility of leasing quotas has also been introduced. These developments created a large trade in quotas (with and without land). In the period 1984-1988 the volume of bought quotas increased from 50,000 tons to 300,000 tons. This volume fell down to 180,000 tons in 1989 (when the leasing of quotas was introduced) and has stabilized since (Poppe, 1993). The volume of lease contracts strongly increased during the last years. In the period 1989-1991 it increased from 124,000 to 297,000 tons, while in 1992/93 400,000 tons of milk were temporarily transferred. Almost 14,000 dairy farmers were involved in the transactions in 1992/93, which is over 30% of all dairy farmers (Jansen et al., 1993). Trading prices for quotas are influenced by the profitability and by the possibility of writing off the investment in the new quotas in fiscal accounts within a short period (eight years). The prices of purchased quotas increased from NLG 2.25 per kg of milk in 1986/87 to NLG 3.60 in 1991/92, while the lease price decreased from NLG 0.41 per kg in 1989/90 to NLG 0.36 per kg in 1991/92 (Poppe, 1993).

To summarize one could say that the aforementioned developments both before and after the introduction of the quota system have led to a concentration of the dairy farm structure in the Netherlands. Table 3.2 shows that currently 35.3% of all farms have a herd size of over fifty cows, while these farms own over 57% of all dairy cows. Especially after the introduction of the quota system, by buying quotas continuing farms

have enlarged. The Dutch quota system without 'skimming' 1) of transferred quotas is very attractive from an economic point of view as it leads to an optimal allocation of production rights. Only farms with a high margin per kg of milk, a relatively high supply of own roughage, etc., are able to pay the currently high quota prices (Poppe, 1993). It is also very advantageous to farmers who want to leave the farm business. The disadvantages, however, are that for young farmers who have to buy a farm, it is very hard to start the farm business and that the cost price of milk has increased, which has a negative effect on the competitiveness of the Dutch dairy industry. Some farmers' organizations now lobby for a quota system which involves skimming. They are also in favour of restricting ownerships of leased quotas, preventing retired farmers from possessing and leasing quotas. Nevertheless, the expectation is that the developments that have occurred in recent years will continue and have a positive outcome if the proposed reduction in milk quotas by 1% for the years 1993/94 and 1994/95 is carried through. This outcome is also expected because of the fact that in the Netherlands many dairy farms in areas with a high density of cattle stock are increasingly compelled to invest in manure storage and manure processing methods that are less harmful to the environment.

### 3.3 The processing industry

#### 3.3.1 Current structure

In 1993 there were 28 dairy companies of which 22 were processing companies (see table 3.3). The other 6 only collect the milk. Thirteen processing companies are cooperatives, while the other 9 are private companies. These processing cooperatives in 1993 processed 84% of the total milk production. Moreover, the cooperative sector itself is also highly concentrated. The three largest dairy processing cooperatives (Campina Melkunie, Coberco, and Friesland Frico Domo) control about 80% of the Dutch milk supply. The other dairy cooperatives (of which the 'Zuid Oost Hoek' was the largest in 1993 with 357 million kg of processed milk) control only about 4% of the total milk supply, and the private dairy companies (of which the largest was Nestlé Mid-West in 1993 with 333 million kg) process 16% of the total milk supply. The private companies work either as independent dairy companies (Menken, Nutricia) or are part of larger companies (Nestlé, Vijfheerenlanden and Salland; the latter two are both part of Wessanen).

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1) 'Skimming' refers to a quota system in which part of each kg of milk traded is transferred to a national reserve. This national reserve can be used for quota cuts as forced by the EU, to help starting farmers, etc. Belgium, for instance, applies this system of skimming quota.

**Table 3.3** *Developments in the number of dairy companies and the number of dairy factories in the period 1975-1992*

|                                      | 1975 | 1980 | 1983 | 1990 | 1993 |
|--------------------------------------|------|------|------|------|------|
| Number of dairy factories            | 221  | 153  | 138  | 95   | 86   |
| Number of processing dairy companies | 84   | 57   | 46   | 30   | 22   |

Source: Produktschap voor Zuivel, 1993, 1994.

**Table 3.4** *The three largest dairy cooperatives of the Netherlands in 1992*

|   | Campina<br>Melkunie | Coberco | Friesland F.D. |
|---|---------------------|---------|----------------|
| Total turnover (NLG)  | 5,601.6             | 3,696.9 | 4,041.5        |
| Dairy turnover in %   | 100                 | 95      | 100            |
| Turnover realized abroad (in %) *)                          | 46                  | 50      | 66             |
| Total processed milk (x million kg)                         | 3,510.2             | 2,548.0 | 2,136.1        |
| Milk directly from dairy farms (in %)                       | 83.2                | 100     | 85.4           |
| No. of employees  | 7,230               | 4,089   | 6,457          |
| Share of total milk production in<br>the Netherlands (in %) | 32.0                | 24.0    | 23.4           |

\*) Figures of 1991.

Source: Jansen et al., 1993; Valk and Zwanenberg, 1993.

The three largest dairy companies in the Netherlands are all among the ten leading dairy cooperatives in Europe (Valk and Zwanenberg, 1993) and the top fifteen of the world. Some figures of the three cooperatives are given in table 3.4 for the year 1992. The figures in this table show that, with the exception of Coberco which also produces some soft drinks, the cooperatives realize 100% of their turnover in the dairy business. Moreover, it is striking that a large percentage of turnover is realized abroad, and that Friesland Frico Domo and Campina Melkunie buy 15 and 17% respectively of their milk from third parties.

### 3.3.2 Developments in the dairy industry environment

Although the aforementioned concentration process already started in the seventies (see table 3.3), it was boosted by the developments in the dairy environment that occurred in the last decade and with which the dairy cooperatives have to cope:

1. the introduction of the milk quota system in 1984;
2. the recent changes in the Common Agricultural Policy (CAP) with respect to dairy;

3. the GATT agreement;
4. the developments in Central and Eastern Europe and third countries;
5. the change from producer's market to buyer's market;
6. increasing market power of wholesalers and retailers.

The introduction of the dairy quota system has led to an overcapacity for the dairy companies. This overcapacity problem can be solved by closing down factories or by buying milk from third parties. This relative shortage also has increased the individual farmer's power in his relationship with the cooperative, a point to which we will return later in chapter 4.

The EU Common Agricultural Policy will change increasingly from a price supporting intervention system, import levies, and export restitutions to a system of income support without market regulation (Hamsvoort, Van der, 1993). The most recent changes in the CAP regarding dairy policy underline this development, such as the proposal for another 1% reduction in the milk quotas and (the already agreed) reduction in the intervention price for butter of 2.5% for both 1993/94 and 1994/1995.

This more market-oriented approach has been boosted by the recently signed GATT agreement (April 1994). In this agreement especially the reduction in export subsidies and export quantities of 36 and 21% respectively for the period 1994-2000, based on the period 1986-1990, is a hurdle for the Dutch dairy industry (Berkum, Van, 1994; Hamsvoort, Van der, 1994). In particular the fact that the commitments on exports must be realized for four different dairy product groups (butter and butter oil, skimmed milk powder, cheese, and other dairy products) without the possibility of switching between groups, confronts the Netherlands with a huge problem with respect to the export of cheese. Already in the first year of implementation, the agreement will lead to a reduction in the export of Dutch cheese to third countries as a result of the large increase in cheese exports in the base period 1986-1990.

The developments in Central and Eastern Europe are mainly a challenge for the European dairy industry. Because of lack of alternatives in the past, the consumption of fresh milk and butter was relatively high in these countries. However, after the revolution in which the fixed low prices as set by the governments were decontrolled in most countries, resulting in significant price rises, consumption has fallen sharply (Roelfsema, 1992). For the long term, however, the expectation is that consumers will adopt a more Western spending pattern and that both production and demand can start growing rapidly. Possibilities for a sales market for EU dairy products, however, are expected to be limited. First of all it is likely that only added value products will offer structural export opportunities. Secondly, possibilities for export may be further restricted because a number of Western dairy companies have entered into strategic partnerships and/or set up production facilities in the Cen-

tral and Eastern European countries (Roelfsema, 1992). On the other hand the Central and Eastern European countries themselves may become competitors in the world market for bulk products, which implies that the extent to which these products will enter the market of the EU will depend on the permitted access to this market. Until now only few steps have been taken by the EU in this direction. With respect to developments outside Europe, milk production is expected to expand in the near future in North America (among other things because of the widespread use of the BST hormone), Australia and New Zealand (because of the low cost structure) and in Asia (because of the growing domestic consumption of dairy products due to population growth). In the latter region the largest growth in consumption is also expected, which could be a challenge for the European dairy companies.

As explained in chapter two the market for the consumption of dairy products is saturated in the Netherlands, mainly due to economic and demographic factors. Therefore the production cannot be focused any more on simply producing the highest possible volume. There will be competition between the various dairy products for the existing consumer market. A saturated market is a buyer's market in which the market power is in the hands of the consumer.

The last important change in the dairy environment mentioned, is the increasing power of wholesalers and retailers in the dairy chain. Wholesalers try to obtain well-known European brands or try to develop their own brands in such a way as to make them European brands. On the retail level in particular, a tremendous concentration is taking place. Dairy companies therefore face the danger of being manoeuvred into a dependent position.

### 3.3.3 Strategies

Dairy companies have to develop strategies in order to cope with the aforementioned changes in the dairy environment. In general three strategies can be distinguished, each using different strategic elements (Verheijen et al., 1994):

1. product differentiation;
2. market development and product diversification;
3. cost leadership.

Product differentiation can be used in a stagnating consumer market and aims at developing and introducing new products, often with a higher added value. It can be achieved by introducing specific product characteristics, using a specific technology and specific qualities with respect to sales and services. An often used strategic element to achieve this is the development of renowned brand names.

The second strategy focuses on the development of new markets with products from the existing product range and/or on products specially developed or produced for the new markets (product diversifi-

cation). Market segmentation is an important element used in this strategy. Market segmentation in this respect refers to the splitting up of markets consisting of consumers with different preferences to better respond to the wishes of different consumers.

The last strategy, cost leadership, 'aims at achieving lower costs than competitors but without reducing product or service quality. Economies of scale, careful cost control and high productivity all contribute to this strategy' (Verheijen et al., 1994: 60). Important elements in this strategy are therefore concentration and internationalization, and internal costs rationalization. Possible routes for concentration and internationalization are takeovers, joint ventures, participation, cooperation, franchise agreements, license agreements, and/or sales offices. Concentration in this respect refers to domestic cooperation agreements, and internationalization to cooperation agreements abroad (Hamsvoort, Van der, 1993). Enlargement by concentration and internationalization is however not only used to reach a sufficient scale to keep down production costs per unit of output. Also because of the quota system, increase in scale is only possible by internationalization and concentration. Moreover, it provides advantages in terms of overhead costs such as those for research and product development, which help the adaptability to consumer demand. And finally, a large-scale operation is necessary to be able to exert, among others, countervailing power vis-à-vis wholesalers and retailers (Roelfsema, 1992).

Internal costs rationalization and efficiency improvements are strategic elements that are especially interesting in a situation of fixed and even reduced milk quotas and possibly few opportunities for enlargement. Reducing the production costs in combination with an unchanged or even declining turnover can maintain the profits.

Most dairy companies also follow a strategy of optimizing the product portfolio, i.e., the production of products outside the dairy sector or several different product groups within the dairy sector to spread the risk.

In the Netherlands the three largest dairy cooperatives, Campina Melkunie, Coberco and Friesland Frico Domo follow a mixture of the three strategies simultaneously, with priorities depending on the products and the markets (Hamsvoort, Van der, 1993). Campina Melkunie in this respect aims at strengthening the market position of the existing brands and at the extension of existing positions in the traditional and industrial dairy products. Friesland Frico Domo also intends to open new markets. Moreover all three companies aim at product differentiation by developing and maintaining strong brand names and the development of new products.

Also, the strategy of cost leadership is intensively worked on in all three companies, with special focus on concentration and internationalization and internal cost rationalization. An overview of the types and number of cooperation agreements realized by the three largest dairy

cooperatives in the Netherlands, both home and abroad, is given in table 3.5.

Table 3.5 shows that the three cooperatives mainly try to realize takeovers, participation agreements and the establishment of sales offices abroad. The other types of agreements seem less popular. Although table 3.5 shows that scale enlargement has already taken place, it is not yet at an end.

*Table 3.5 Overview of type and number of domestic and foreign cooperation agreements of the three largest Dutch dairy cooperatives until 1991*

| Cooperation agreement            | Campina<br>Melkunie | Coberco | Friesland<br>Frico D. |
|----------------------------------|---------------------|---------|-----------------------|
| Takeovers                        |                     |         |                       |
| Domestic                         | 0                   | 5       | 10                    |
| Abroad                           | 3                   | 2       | 5                     |
| Participation                    |                     |         |                       |
| Domestic                         | 1                   | 0       | 12                    |
| Abroad                           | 0                   | 5       | 14                    |
| Joint ventures                   |                     |         |                       |
| Domestic                         | 0                   | 0       | 0                     |
| Abroad                           | 3                   | 0       | 0                     |
| Cooperation                      |                     |         |                       |
| Domestic                         | 0                   | 0       | 0                     |
| Abroad                           | 0                   | 0       | 0                     |
| Franchise and License agreements |                     |         |                       |
| Domestic                         | 0                   | 0       | 0                     |
| Abroad                           | 1                   | 0       | 0                     |
| Sales offices                    |                     |         |                       |
| Domestic                         | 0                   | 0       | 0                     |
| Abroad                           | 6                   | 3       | 5                     |

Source: Adapted from Valk and Zwanenberg, 1993.

With respect to internal cost rationalization, in the Netherlands many factories have been closed down since the introduction of the quota system. Especially the number of butter factories declined, from 48 in 1983 to 14 in 1992 (Produktschap voor Zuivel, 1993). This rationalization process is also taking place in the Netherlands' three largest dairy cooperatives. Campina Melkunie for instance launched a reorganization plan called 'Reallocation 1992' which will, among others, result in the closing down of a few factories and the loss of 792 jobs. Friesland Frisco set up a reorganization plan in 1992 in the cheese division, which means a loss of 1,218 jobs.

Optimization of the product portfolio is also a strategic element used by the three large dairy companies. Not by producing products outside the dairy sector (although Coberco realizes 5% of its turnover in the soft drink sector), but by producing different product groups within the dairy sector, as shown in table 3.6.

*Table 3.6 Milk destination in percentage of total processed milk*

| Product             | Dairy company       |         |                       |
|---------------------|---------------------|---------|-----------------------|
|                     | Campina<br>Melkunie | Coberco | Friesland<br>Frico D. |
| Cheese              | 39.3                | 49.3    | 50.3                  |
| Butter              | 2.2                 | 2.0     | 1.7                   |
| Condensed milk      | 0.7                 | 6.2     | 22.4                  |
| Consumption milk    | 25.3                | 13.8    | 7.7                   |
| Skimmed milk powder | 0.0                 | 13.2    | 1.1                   |
| Whole milk powder   | 3.9                 | 9.7     | 13.8                  |
| Special products    | 28.6                | 5.8     | 3.0                   |

Source: Ittersum, Van, et al., 1994.

Table 3.6 also shows that, besides spreading the risks, the three large dairy cooperatives have chosen to focus on added value products such as cheese, consumption milk and special products and to leave the intervention products of butter and skimmed milk powder. For instance Campina and Melkunie in 1987 (before their merger) only used respectively 1.9 and 4.1% of their milk intake for the production of special products (Claassen en Eijssen, 1988), while this amount has increased to 29.0% in 1992.

The small dairy cooperatives and the private dairy companies in the Netherlands follow a different strategy to face the changes in the dairy environment. Although they also follow a mixture of the three strategies, this is done on a less intensified scale, as they cannot dispose of the necessary money to increase scale by internationalization, intensified product development, development of renowned brand names, etc. They mainly try to achieve the strategy of cost leadership by internal cost rationalization and arranging domestic cooperation agreements. Product differentiation is restricted to quality improvement and to trying to be alert and flexible to adapt to the changes in the market, while the strategy of market development and product diversification is aimed at the development of new markets.

With respect to product diversification the small dairy cooperatives and the private dairy companies are often highly specialized and mainly focused on one product group. For instance Acmesa, D.O.C. and Vijf-



heerenlanden, among others, concentrate almost solely on cheese production, while Nutricia (baby food) and Menken Dairy Food have fully specialized in the production of special products. The long-term expectation for especially the small dairy cooperatives is that they will follow the above (low cost) strategy and will try to survive as long as possible. If they do not succeed, they will probably be taken over by one of the three large dairy cooperatives. For the private dairy companies the situation is different. As they are mainly part of larger companies (Nestlé and Wessanen) for which dairy is only one product segment, these companies will continue as long as is profitable, or probably shut down if otherwise.

### 3.4 Distribution: wholesalers and retailers

#### 3.4.1 General trends

Table 3.7 shows the fast growing market share of general stores (supermarkets) that sell at least the following product groups: detergents and cleaning products, coffee and tea, drinks, preserves, sweets, starch products, toiletries, and soups or sauces.

A consumer's preference for a certain supermarket is based on the quality and the price of the products. Also, the quality of the fresh products offered and the broad assortment are important. Most supermarkets sell products that meet the environmental concern of consumers. For instance, milk is sold in bottles and tetra-packs; a few but increasing number of supermarkets also sell so-called 'eco-milk'.

According to the study of the Nationale Investerings Bank (1994), the success of supermarket organizations is based on several factors. First, their large scale (the number and scale of supermarkets), gives them market power. Secondly, their market position is based on their formula (price-quality relation, private labels, etc.). Finally, there are their internal organization and management (service, logistics, etc.).

The nationwide chains (5) make up the most important segment of general stores. Their market share is 50% of that of all general stores; the market share of regional chains (30) is 25%. The market share of other general stores (15) such as voluntary subsidiaries of wholesaling firms is also 25%.

*Table 3.7 The market shares of different types of retail stores in percentages*

|                    | 1985 | 1990 | 1995 |
|--------------------|------|------|------|
| General stores     | 58   | 61.5 | 65   |
| Specialized stores | 42   | 38.5 | 35   |

Source: Prodis, 1991.

The importance of general stores is not the same for the whole assortment they sell. The market share of supermarkets is the highest (74%) for dry products. For fresh products it is about average (62%). The importance of fresh products in the assortment sold by supermarkets is however still increasing.

In table 3.8 the market share of supermarkets for the different types of fresh products is given. The highest market share for supermarkets is for dairy products and eggs.

The number of specialty shops for milk and dairy products has steadily diminished to about 4,000 in 1992. Of this number about 3,000 have one store, about 500 have more than one and the remainder are ambulant stores. Most of these milk and dairy stores are mobile shops, which also sell groceries and other fresh products such as vegetables and fruit. Their strong point is that in practice they deliver the products at the door of the consumer. The costs of this service however lead to higher prices than in supermarkets. About 800 of all milk and dairy stores are specialized cheese stores. Two hundred of them belong to chains and another 200 are owned by concessionaires that have their own cheese shop in a supermarket.

*Table 3.8 Market shares of supermarkets and other stores for different types of fresh products in percentages in 1993*

|   | Supermarket | Specialty shop | Others |
|---|-------------|----------------|--------|
| Bread (NLG 4 billion)                           | 46          | 47             | 7      |
| Meat (NLG 9 billion)                            | 60          | 37             | 3      |
| Potatoes, vegetables, fruits<br>(NLG 6 billion) | 60          | 23             | 17     |
| Dairy and eggs (NLG 5 billion)                  | 86          | 14             | 10     |

Source: Nationale Investerings Bank, 1994.

### 3.4.2 Developments: milk and dairy products

In table 3.9 the type of stores where consumers buy milk and dairy products is given. It shows the increasing importance of chain stores and voluntary subsidiaries.

The stores where consumers buy cheese are slightly different from the picture given in table 3.9. More than other dairy products, cheese is bought in dairy (cheese) stores (8.9%) and on markets (12.5%). However, for cheese the same trends as for other dairy products can be observed, namely a growing market share for chain stores and voluntary subsidiaries (see table 3.10).

*Table 3.9 Household purchases of milk and milk products per type of retail store*

|                        | 1985 | 1990 | 1993 |
|------------------------|------|------|------|
| Chain stores           | 53.8 | 60.5 | 65.0 |
| Voluntary subsidiaries | 17.7 | 22.4 | 25.8 |
| Dairy store            | 1.4  | 0.6  | 0.2  |
| Ambulant retailers     | 17.2 | 9.1  | 5.4  |
| Producers              | 2.9  | 1.9  | 1.6  |
| Others                 | 7.0  | 5.5  | 2.0  |

Source: Produktschap voor Zuivel, several years.

*Table 3.10 Household purchase of cheese per type of retail store*

|                        | 1985 | 1990 | 1993 |
|------------------------|------|------|------|
| Chain stores           | 40.3 | 46.0 | 49.4 |
| Voluntary subsidiaries | 12.1 | 14.5 | 16.6 |
| Dairy store            | 13.1 | 10.3 | 8.9  |
| Ambulant retailers     | 5.7  | 2.9  | 2.4  |
| Producers              | 1.3  | 1.1  | 1.4  |
| Market                 | 13.8 | 13.7 | 12.5 |
| Others                 | 13.7 | 11.6 | 8.9  |

Source: Produktschap voor Zuivel, several years.

As far as retail techniques are concerned, there are several chains of discount stores and milk is sometimes sold at very low prices (even record low prices) to attract new customers. The possibilities for such actions have increased by the withdrawal of the minimum price regulation for consumption milk last year. There also are chain stores that sell milk under private labels. The market share of dairy and chocolate milk under private labels has increased from 9.4% in 1990 to 13.6% in 1992.

Internationalization is very important for chains. An increasing number of chains own chains abroad (e.g., Ahold owns chains in the USA and in the Czech Republic, Aldi has stores in Germany, Belgium, Austria, Denmark, France, UK and USA too, while Unigro has stores in Belgium and Spain). More important, however, are the international alliances of chains, because of the increase in the market share and the market power of the chains involved. The most important result however is the exchange of information concerning knowledge, store design, logistics, formula and automation. Ahold e.g., is a member of the European Retail Alliance in Brussels and of AMS Marketing Service Zug. Vended has an

alliance with Eurogroup, Integro with Asko Germany ('O Lacy's trademark) and Unigro with Spar Handels AG Hamburg and with HKG-Gedelfi.

The environmental concern among consumers and the decreasing number of persons in an average household has resulted in an adaptation of packaging such as the single portion packaging of creamers, smaller packaging of desserts, 1,5 and 2 litre cartons for fresh milk, and lighter packages. Recently, a light bottle made of polycarbonates has been introduced in Germany that can be used more than once and is less polluting than a bottle of glass. There are also changes in the traditional round shapes of packages, enabling a better utilization of shelf space in stores and a cut in the costs of transport.

## 4. STRUCTURE AND DEVELOPMENTS IN THE RELATIONS BETWEEN THE VARIOUS SEGMENTS OF THE DAIRY CHAIN

### 4.1 Introduction

In the previous chapter a description has been given of the developments in the various segments of the dairy chain as induced by the changes in the (mainly external) dairy environment. These changes and developments, however, also have their impact on the relations between the segments in the chain. Therefore in this chapter the structure and developments in the relations between the segments in the dairy chain will be described and analyzed. In section 4.2 this will be done for the relation between dairy farmers and the processing industry, while in section 4.3 this procedure will be repeated for the relation between the processing industry and wholesalers and retailers.

### 4.2 Dairy farmers and the processing industry

#### 4.2.1 Current structure

The relation between dairy farmers and the processing industry differs according to whether a dairy cooperative or a privately owned dairy company is involved. This difference in relationship is mainly caused by the difference in objective and ownership of the two types of companies. The objective of cooperative dairy enterprises can be defined as 'the provision of a constant outlet for the members' full milk production at the highest possible price, both in the short term and in the long term' (Verheijen et al., 1994:59). Private dairy companies on the contrary 'aim at maximizing return on investments, both in the short term and in the long term' (Verheijen et al., 1994:59).

The other important difference mentioned, is the issue of ownership. While in dairy cooperatives members not only provide milk but also risk-bearing capital (and therefore own the company), privately owned dairy companies are financed by shareholders<sup>1</sup>).

Bearing the characteristic differences in mind as mentioned above, we will start by discussing the relationship between members and dairy cooperatives in the Netherlands. In the Netherlands most farmers are a member of a cooperative as this will ensure their delivery to the dairy

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1 Although in cooperatives also mixed forms are possible, i.e., capital both provided by members and shareholders, such as the Irish systems with A- and B-shares. Nevertheless, they do not exist in the Netherlands as yet.

company. All members are also suppliers of milk, while of the suppliers 95% is also a member. The relationship between member and cooperative can be depicted by the following characteristics (Hamsvoort, Van der, 1993; Zwanenberg and van Selling, 1993):

1. delivery obligation;
2. voting power;
3. entrance fees or obliged shares;
4. resignation obligations;
5. members' liability;
6. members' financing.

As the rules with respect to the above characteristics are usually similarly applied by most cooperatives in the Netherlands, the relation between members and their cooperatives will be discussed mainly on a national level. Members are obliged to deliver all their milk to the dairy cooperative (except own milk consumption and cheese production), while for the cooperative on the other hand there is an obligation to process the full supply of members' milk. Occasionally, this also requires the processing of milk into less profitable products (Verheijen et al., 1994). Voting power in the Netherlands is generally related to the milk quantity, although limited to a maximum. This means that the more milk a farmer has, the more voting power. However, the precise relation between number of votes and milk quantity differs per cooperative. Campina Melkunie for instance applies the system of one vote for the first 100,000 kg and an extra vote for each extra unit of 20,000 kg with a maximum of 25 votes. Coberco however uses the system of one vote per member plus an extra vote for each 50,000 kg.

The Dutch dairy cooperatives generally apply neither an entrance fee nor an obliged purchase of shares, as opposed to almost all other countries in the EU. Only Campina Melkunie applies members' participation units, i.e., farmers have to buy participation units to be allowed to deliver their milk to the company. Farmers who own these units receive an extra premium on top of the milk price. In 1993 this premium was NLG 1.60 per member title. The price difference depends on the demand for milk and is fixed by Campina Melkunie. Moreover, the members' participation units are marketable among farmers. Another way of binding farmers to their cooperatives are the resignation obligations, which are an indication of the extent to which cooperatives hamper farmers to leave the cooperative and deliver their milk elsewhere. Resignation obligations in the Netherlands consist of three elements: a resignation period, terms for repayment of member's capital and finally the payment of a resignation fee. In most Dutch dairy cooperatives a member has to send a letter of resignation three to six months before leaving. If he resigns because he stops farming, he receives his members' capital almost immediately, whereas if he leaves in order to deliver the milk to another dairy company, he gets his money back according to the appointed terms, which means that it is spread over a period of ten to fifteen years.

The resignation fee he has to pay is according to a certain rate of the received milk money over the past five years. A member leaving Coberco for instance has to pay 2% of the five-year period milk money, which total amount is reduced by 10% for each year longer than seven years he has been a member. Campina Melkunie changed its resignation policy in January 1994 in that resignation without paying a resignation fee is only possible after six months. The members' participation units can be sold to the company for NLG 10.- per unit (the nominal price).

Members' liability refers to the statutory or legally fixed potential risk to which the farmer is exposed in case of losses or a bankruptcy of a cooperative. The larger the farmer's liability, the tighter the link to his cooperative. In the Netherlands the liability is limited in scale to the amount of milk money received over the preceding five-year period. This percentage varies between 2% (Campina Melkunie) and 4% (Coberco). Only one of the six largest dairy cooperatives exemplifies an unlimited liability. With respect to members' financing in the Netherlands only 90% of the total milk price is paid in advance to the dairy farmers. After the end of the financial year, when the results of the cooperative are known, the members decide which part of the surplus is paid in cash to the farmer and which part remains in the company either as an addition to the general reserves or as an addition to members' accounts. In the Netherlands a large part of total capital within dairy cooperatives is provided for by members. In 1991 for instance, the amount of members' capital as a percentage of total capital for Campina Melkunie, Coberco and Friesland Frico Domo was 53.6, 37.3 and 54.7% respectively.

The relationship between dairy farmers and a private company is much less complicated and is restricted to the supplier - buyer's business relation. Bearing the aim of privately owned dairy enterprises in mind, they are not obliged to purchase and process all milk offered. Instead, only that quantity of milk is bought that will achieve the highest return on investment. As there is not voting power and there are no entrance fees, resignation obligations, or financial obligations, private companies generally pay a higher milk price than the cooperative dairy companies to attract enough farmers and to be able to choose from among them.

#### 4.2.2 Developments

Developments that have recently taken place in the mentioned relation between dairy farmers and dairy cooperatives in the Netherlands relate completely to the changes in the external dairy environment discussed earlier. To enable the successful following of the chosen strategies, dairy companies need to find a way to finance their activities. The special objectives and structure of cooperatives make the financing of their activities more complex than is the case for private companies. When ownership in the cooperative falls into the hands of nonmembers, a conflict of interests could exist between the members of the cooperatives who want the highest potential milk price and the nonmember

shareholders who want the highest return on their investment. However, 100% member ownership implies that members have to provide the necessary funds. In this respect it is nowadays difficult to appeal to the members because the investments (environment, quotas) are also increasing for the dairy farmers themselves. A related development, which can be a threat to the financial position of dairy cooperatives, is that under EU regulation the rules with respect to resignation obligations have been eased so that the farmers are now more free to leave a cooperative and deliver their milk elsewhere. This may not only be a problem for the financial position only, but also for the utilization of the overcapacity. The latter reason is probably even more important since, excepting a few dairy cooperatives, private dairy companies increasingly try to countervail the development that makes switching between dairy companies easier for farmers, by introducing quantity premiums to keep big farmers inside. In 1992, for instance, 12 out of 22 dairy processing companies applied a quantity premium (of which 9 were private), while in 1988 only 8 (7 of which were private) out of 25 applied for a quantity premium (Claassen en Eijssen, 1988; Jansen et al., 1993).

The need for extra risk-bearing capital or guarantee capital for the dairy cooperatives can mainly be financed by following one of two routes: the members' financing model or the Public Limited Company (PLC) model. The advantage of the latter model is that the enterprise is no longer dependent on the financial contribution of its members and therefore can raise more money more quickly from the capital market. The disadvantage of the PLC model, however, is that the ultimate objective of the dairy cooperatives is compromised as the nonmember shareholders will require a maximization of profits with high dividends and a milk price for farmers that is as low as possible (Verheijen et al., 1994). The PLC model has been adopted by four of the major dairy cooperatives in Ireland. Despite the advantage of the PLC model of raising money easier and quicker, Dutch dairy cooperatives until now have chosen for the members' financing model. In that respect, the three largest dairy companies in particular have introduced several new types of members' capital accounts besides the traditional one, such as certificates, members' participation units, members' reserves, etc., each having other characteristics, such as being revolving or not, earning an interest rate or not, etc. Because of farmers' own financial needs, a major point of discussion in the formation of capital in the cooperatives has been the general reserves, also known as capital in the 'dead hand'. This capital, namely, becomes the property of the cooperative and is not registered under anyone's name. If a dairy farmer cancels his membership this capital is left in the cooperative. Therefore part of the financial reorganization in the large Dutch cooperatives has been and still is the switch from general reserves to members' accounts to make the relation between member and cooperative closer. Despite the advantages of the members' financing model, the disadvantage is that the scope for extending the financial position is much more limited than with the PLC



model. Friesland Frico Domo recognized this problem and recently proposed (October 1994) radical changes to its members with respect to the financing model and the milk payment system. The company intends to enter into partnership in 1995, which in practice appears to be a system very similar to the PLC model, although not in its ultimate form in the sense that the organization will not (yet) go to the exchange market but will stay under the cooperative umbrella. If the plans are approved, in 1995 farmers will receive a fixed milk price decoupled from the results of the company. The milk price will equal the average of the milk prices paid out by the five dairy companies that pay most. Members' loans will be abolished and instead farmers can voluntarily buy so-called B-shares while the cooperative buys A-shares. Dividend is paid on both shares, depending on the results of the company (Anonymous, 1994).

A consequence of the financial developments in the Dutch dairy industry and especially the development within Friesland Frico Domo is that in some cooperatives this has led to a distinction between the price that the farmer receives for the milk and the allowance that he gets for the supply of equity.

Another development is related to the problem of using overcapacity caused by the introduction of the quota system. Due to the large milk production in summer and the low production in winter, a large processing capacity was needed in summer, while in winter there was large overcapacity, which led to too high costs. Therefore, an increasing number of dairy companies introduced a summer milk levy/winter milk premium scheme to stimulate farmers to even out the delivery pattern. For instance, Coberco's summer milk/winter milk ratio decreased in the period 1988-1992 by 12.8% from 1.33 to 1.16. The largest improvement was realized by a private company, called 'De Kievit' which realized a reduction of 21.3% in the same period (Jansen et al., 1993).

Finally, recent trends point in the direction of dairy companies that create incentives to stimulate farmers to adapt their production process more to consumer preferences and therefore to the dairy companies. Good examples are the ever-increasing hygienic requirements of milk and the fact that the price ratio of fat and protein has in the last decade gradually changed in favour of protein as a reaction to consumer behaviour.

To summarize, one can say that recent trends and future developments in the business relation between dairy farmers and dairy cooperatives will be more market-oriented, in which a distinction will be made between the milk price as a payment for raw materials and the allowance for the supply of equity. Moreover, dairy farmers will be more free to switch from one company to the other, while on the other hand dairy companies will try to countervail this movement by creating advantages for large farmers (such as quantity premiums). Also, stimulations will be given to dairy farmers to adapt the production process of dairy farmers to the wishes of the consumers.

### 4.3 The processing industry and wholesalers and retailers

In the distribution of day-fresh milk and dairy products wholesale traders hardly have any role. The chain stores and the voluntary subsidiaries get these products directly from the dairy companies. These products are sold almost entirely under the trademark of the dairy company at market prices. Dairy company and retail organization enter into an agreement on the general conditions, such as promotion, service and quantity rebates before delivery starts. In a store mostly one trademark of dairy products is sold. The dairy companies are competing with each other by promoting their trademark and by the service given to the retailer, such as a customer-friendly order and communication system or the use of packaging that saves shelf space.

For products that can be stored for some time and for import and export, the dairy companies often have subsidiary firms or firms in which they participate to carry out these tasks. Coberco for instance has 'Coberco dairies' for the export of preserved milk, 'Noordam' as a wholesaler, 'Coberco Omefa' for industrial products and dietetic food and 'Riedel' for soft drinks. Most independent wholesalers are found in the distribution of cheese, especially in the distribution of cheese produced by farmers themselves. The price of farm cheese is determined on markets and those of industrial cheese on the cheese exchange market.

For the distribution among restaurants and canteens several cooperatives have bought wholesaling firms to gain access to these buyers. Moreover, dairy products can be incorporated in a total assortment.

For the future, the expectation is that the competition between dairy companies will intensify and become more international. Trade-marks and logistic service will be the main competitive areas. Given these developments, the importance of generic promotion (Frau Antje) will diminish, while that of company promotion will increase. To produce the products their target markets want, most dairy companies will involve retailing organizations in their product development activities.

## 5. CONCLUSIONS

In this study the structure, recent developments and trends in both the links and the relations between them in the Dutch dairy chain have been described and analyzed. Since the market decides the success and failure of a chain and since changes in the market have considerable influence on the development of the chain, we started with a description of the developments in the factors that cause the changes in the market.

With respect to market trends, we may conclude that the market of milk and dairy products is becoming increasingly fragmented, because of different consumption moments and places, the more individualistic behaviour of consumers, and the demand for variety. Furthermore, the restaurant and canteen segment will increase in importance and the demand for products with more added value.

The development of the dairy farm structure in the Netherlands is strongly influenced by the introduction of the quota system in 1984. Before the quota system, it was characterized by enlargement and consolidation; after 1984 it was characterized by concentration and less specialization. The total herd size and the number of dairy farms decreased, the yield per cow increased, while the average herd size per farm remained almost constant. Enlargement became possible with the introduction of possibilities for trading quotas. Although the trading system without skimming is economically efficient and advantageous for the existing farmers, it can be a problem for successors, a reason the system is debated in the Netherlands.

In the last decade, a tremendous concentration process has taken place in the structure of the processing industry, dominated by the cooperative sector, especially by the three largest dairy cooperatives, responsible for over 80% of the milk. The strategies the largest dairy cooperatives use to cope with the changing dairy environment (quotas, CAP reform, GATT, Central and Eastern Europe, consumer market, etc.) seem a mixture of cost leadership (e.g., internal cost rationalization and increase in scale by takeovers, mergers, etc.), product differentiation (e.g., new added value products, brand names), and market development and product diversification (e.g., market segmentation). To increase scale by concentration and internationalization mainly takeovers, participation agreements and the establishment of sales offices abroad are the main strategic elements. Also, spreading the risk by optimizing the product portfolio is eagerly applied by the largest Dutch dairy cooperatives.

The small Dutch dairy cooperatives and the private companies follow the same mixture of strategies as the large ones but on a much less intensified scale. The small dairy cooperatives will try to pay the highest possible milk price and their aim will be continuation and independency.

When the latter is not possible any more the expectation is that they will be taken over by one of the larger dairy cooperatives. Private dairy companies are mainly part of larger companies of which dairy is only one segment. Their aim is maximization of the return on investment. If profits are gone, they will probably simply shut down.

To finance their strategies the largest dairy cooperatives have chosen the members' financing model instead of the PLC model (as has been done by Irish cooperatives), since the latter raises the possibility of conflicting interests between members and nonmember shareholders. A trend in this respect is the move from yearly additions to the general reserves (the 'dead hand') to the introduction of several members' accounts. This will stimulate a more businesslike approach between members and their cooperative that is also more market-oriented, in which a distinction will be made between the milk price as a payment for raw materials and allowances for the supply of equity. A prime example of this tendency are the recent proposals of Friesland Frico Domo to enter into a partnership. Another incentive given for such a more businesslike approach are the eased resignation obligations under EU regulation, which will help farmers switch from one processing company to another. Quantity premiums are increasingly introduced by dairy cooperatives to countervail this development.

The relation between farmers and private dairy companies is restricted to the supplier-buyer relation.

Finally, with respect to the distribution part of the chain, it can be concluded that the distribution of milk and dairy products via supermarket organizations will increase in importance. These organizations will increase their market power by buying through common international organizations. Furthermore, they will pay much more attention to the logistic and environmental effects of packages used by dairy companies. To increase their competitive position and to meet consumer demand for variety they will cooperate with dairy companies in the development of new products.

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## APPENDIXES



Appendix 1 Overview of the agribusiness chain in the dairy sector

