

Regoverning Markets

Small-scale producers in modern agrifood markets

Innovative Practice

Morocco

**A case study on the agricultural
cooperative COPAG**

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Institut Agronomique et Veterinaire Hassan II

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Regoverning Markets

Regoverning Markets is a multi-partner collaborative research programme analysing the growing concentration in the processing and retail sectors of national and regional agrifood systems and its impacts on rural livelihoods and communities in middle- and low-income countries. The aim of the programme is to provide strategic advice and guidance to the public sector, agrifood chain actors, civil society organizations and development agencies on approaches that can anticipate and manage the impacts of the dynamic changes in local and regional markets.

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Innovative Practice is a series of country case studies from the Regoverning Markets programme providing examples of specific innovation in connecting small-scale producers with dynamic markets at local or regional level. Based on significant fieldwork activities, the studies focus on four drivers of innovation: public policy principles, private business models, collective action strategies by small-scale farmers, and intervention strategies and methods of development agencies. The studies highlight policy lessons and working methods to guide public and private actors.

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Foreword

This report is based on the findings of a team composed of two researchers, Ait Akka Meki and El Amlı Lahcen, and two postgraduate research assistants, Abdelhassan Narjiss and Chaieb Bouchra.

The data and information in the report were gathered first hand during the study or drawn from previous work involving certain members of the team.

The study was conducted according to the methodology proposed in the 'Regoverning Markets' project document, taking account of the specifics of this particular case. It was coordinated by Rachid Haminaz and Sbai Abdelaziz, who were also closely involved in producing this report.

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1 Methodological framework

The liberalisation of trade is having a profound effect in rural Morocco, which is particularly evident in agriculture, where producers are restructuring their activities in order to deal with the new economic environment. As is so often the case, there are winners and losers in this process: here, the losers are mainly the most insecure, especially the landless and those most exposed to climatic hazards and the rules of the marketplace. Evidence of this can be seen in the rural exodus that annually erodes entire farming communities.

However, we are not suggesting that this is the end of agriculture in Morocco, as many people have benefited from the opening up to external markets, especially those that are on track for market integration. Political and economic decision-makers argue that this policy of agricultural modernisation will counter the negative effects of the free trade agreements Morocco has signed with the USA, the EU, Turkey, Egypt, and other countries.

There have been a number of changes on the domestic front since the economic introversion of the 1980s - rising incomes, an emergent middle class, accelerating urbanisation. A new model of consumption is developing too: the supermarket, which is becoming not just a place to shop, but a meeting point and diversion for Moroccan families.

As the supermarket supply system has had to adapt to the demand created by socio-economic change and global trade, trading groups have been set up to formalise relations with supermarket suppliers, and certain small and medium-sized producers have set about changing the way that they operate.

The milk and dairy sector is one branch of the food industry that has gone through the most rapid restructuring. This is partly due to the economic incentives offered by the State (the milk plan), but mainly to the organisational capacities of small and medium-sized producers.¹ Although many cooperatives coming into the market have failed, there have been a number of successes, the biggest of which is undoubtedly COPAG, an agricultural cooperative based in the region of Souss Massa.

This is the success story that we are investigating in this study, which has five main objectives:

- to consider the context and highlight the main innovations introduced by COPAG;

¹ For more information on this, see the history of the cooperative movement in Morocco.

- to identify how its partners along the value chain have adopted these innovations;
- to determine the indicators of small and medium-sized producers' integration into the retailing and distribution circuit through their organisation (COPAG);
- to identify the key factors in the success of COPAG's organisational and operational model;
- to learn from this model and possibly use the experience in other regions of Morocco.

In order to do this, we undertook a series of surveys and interviews with all those involved in the modern commercial supply chain, and analysed the dual role of small and medium-sized producers - who are both heads of multi-purpose enterprises and an important link in the supply chain. The cooperative is not only seen as a space for adding value and a means of introducing innovations upstream, but also as an arena for dialogue² to determine the best conditions for entry into a rapidly changing market.³ Finally, the retailing and distribution industry is considered as a powerful restructuring factor in the milk supply chain embodied by COPAG.

² See representative organs of the cooperative.

³ See country assessment report on the evolution of the retailing and distribution industry in Morocco.

2 Overview of the agricultural sector

2.1 The agricultural production system: a proving ground for integration

Although a good part of this study is devoted to looking at separate distribution chains, we felt that a more territorial approach would be useful too. Farmers manage whole farming systems rather than single production processes, which means that certain phenomena and constraints can only be explained in terms of how these farming systems are managed. Furthermore, not all cooperatives specialise in one crop: COPAG, for example, not only produces milk and dairy products, but is also involved in market gardening and provides other services as well.

Moreover, if we accept the hypothesis that Moroccan agriculture is heterogeneous in both its micro-regional potential and its structures and modes of organisation, it follows that there will be different opportunities for farmer organisations to evolve, that they will do so at varying rhythms, have different needs for organisational and management support and training, and that despite certain common trends, this support will need to be implemented differently from one region to the next.

We chose to study COPAG because it is a farmer organisation whose success is due to a set of specific key factors. It only operates within a particular socio-economic and cultural environment, and its success is very much the product of its geographic location and the agrarian structures, dynamic population, and cultural heritage of the region.

Although this study has a specific objective (see methodology), the lessons that can be learned from this experience only make sense if we understand how farms function and interact with the milk supply chain in which COPAG operates. This approach also allows us to explore what involving small-scale farmers in modern distribution chains actually entails, and to identify the point at which small and medium-sized farmers' appropriation (adoption) of innovations ties them irreversibly into these chains.

2.1.1 Diversity of Moroccan agriculture and farming systems

We will not dwell on the well-known regional diversity of Morocco here, but simply note that potential varies from north to south and east to west, and is accentuated by climatic variations and available water resources. This diversity has already been used as an argument for differentiated regional development programmes to encourage and organise farmers (such as those in the southern region of Taroudant where COPAG operates), and will be a determining factor in the implementation of Component Three of the Regoverning Markets project.

This study will focus on another type of diversity: intra-regional diversity. Each area supports many kinds of farm and farming systems, as in our study zone, where production systems range from subsistence level to the ultra-modern. The operations run by COPAG members are a good illustration of this point.

2.1.2 Farming systems: the framework for analysing integration

We started with the principle that each farmer manages a production system made up of permanently interacting sub-systems that are shaped by factors such as available land, production, income, marketing, sales strategies, etc.

Two key factors in the functioning of a farming system are labour and liquidity. Many small-scale farms like the ones we came across during our survey in Taroudant use non-transferable labour that can only be deployed within the system (children and the elderly), while part of the workforce is often also employed elsewhere, bringing in revenue from outside the system. A farm's capacity to evolve is frequently determined by cashflow, which explains why milk production is an important element in the overall system.

When we analyse milk producers' relationships with their cooperative, it can be seen that their 'milk money' is vital for many farms' cashflow. It usually comes in every eight or 15 days when the cooperative provides other services, and is used to cover the cost of feeding the household or its livestock at the end of the week, fortnight or month. Income from wheat or market gardening is more seasonal, and tends to be used for the cropping system (especially for buying inputs). It is this duality between plant and animal production that makes the process of integrating upstream and downstream activities (production, processing and distribution) sustainable.

As we shall see, COPAG fully reflects this integration, on the one hand serving as a forum to pass on and discuss signals from the market with small and medium-sized producers (regarding quality, product diversification, and consumer behaviour); and on the other using its market share to open up opportunities for members to expand their operations.

2.1.3 Useful agricultural land: a determining factor in integration

When we looked at the distribution of usable agricultural land (known as usable agricultural area, or UAA) across the study zone and among COPAG members, we found that this ranged from micro-farms that can barely support a family (hence the need for multiple activities) to much larger farms that need to call in waged labour.

Even this simple fact about the distribution of UAA tells us that the processes of integration and innovation will differ according to each case. What does a farmer

with two or three productive cows who delivers several litres of milk a day to a collection centre in the mountains have in common with someone who has 150 cows in his barn and his own refrigerated milk tank? Differentiated modes of organisation are required, so small-scale farmers are organised around cooperative milk collection centres (MCC), while large-scale farmers belong to COPAG as individual members. Because the system of representation in cooperatives does not allow decisions to be taken unilaterally, each group has an equal say in decisions about COPAG's strategy. However, our interviews did reveal an imbalance in the information these two groups receive, a point that will be raised later when we discuss COPAG's strategy for dealing with the retail and distribution industry in Morocco.

2.1.4 The 'commodity chain' approach and the 'territorial approach'

The best-structured supply chains at the moment are those with specialist organisations such as milk cooperatives, market gardening cooperatives, sugar-producing associations, and the cereal growers' Coopératives Agricoles Marocaines (CAM). These types of organisation should certainly be encouraged as possible precursors to professional apexes, which can give producers greater control over access to national and international markets.

However, as several interesting initiatives have shown, this kind of vertical organisation according to commodity chain cannot meet all producers' needs. For example, one cooperative created for the sole purpose of collecting milk is now gradually being built up into a multi-purpose operation whose members can get together to buy livestock feed. It has also acquired a mill to produce flour for human consumption and a grinder for livestock feed. Another milk cooperative also acts as a machinery-sharing syndicate (CUMA), buying equipment like silage makers for its members to use. These examples show how structures can start from a specialised base (such as a milk collection centre) and evolve to deal with diverse needs that are beyond the scope of a single commodity production chain, up to and including social needs. Hence COPAG's triple role: bringing small and medium-sized producers into the supply chain, acting as an agent for regional development, and serving as a conduit for innovative farming techniques.

Most groups set up as single-purpose organisations before diversifying into other areas, often starting with milk collection or selling market garden produce.⁴ Initially farmers are more 'suppliers' (of milk, vegetables, etc.) than active members of cooperatives, especially if the collection centre is set up by a partner (private or cooperative processors, or the government, via the Department for Agricultural Development) rather than as a farmers' initiative, and if equipment is paid for 'painlessly' by retaining several centimes per litre or kilo of produce. Milk

⁴ See motives for setting up COPAG.

production was already being developed in Souss-Massa before COPAG was set up: after state agencies introduced simple milk collection points using refrigerated tanks, farmers started to organise themselves, establishing management rules and deducting small amounts from the income from their milk.

Building on this system of deductions, the original group would get to the point where it could fund itself, and its initial function (collection) was gradually superseded. To begin with, such groups would stay within their commodity chain, with members getting together to buy livestock feed, other inputs, and equipment like grinders and silage makers. However, things soon reached the point where they could no longer develop within the framework of their original commodity chain. Milk was processed and marketed by private or cooperative structures, but many cooperatives folded due to pressure from (sometimes unfair) competition from the Centrale Laitière, a private group affiliated with Danone. COPAG managed to keep going, even though it was built on the remains of another milk cooperative, Halib-Souss.

Once a group has got to the point where it cannot invest any more in the original commodity chain or is unable to identify new niches, it starts investing other sectors - initially in other kinds of production, and then in sectors that have nothing to do with production, but are more to do with meeting economic, social and even cultural needs. This may entail buying a cereal grinder, setting up a grocery store, building a service station for farm machinery, opening a café, buying a minibus to take children to school or use as an ambulance, helping build a clinic, school or mosque, constructing a road or track, and helping cooperative members pay for a trip to Mecca.

This list is based on observations during our field surveys, and is by no means exhaustive. Nevertheless, it gives some indication of the range of needs these groups are trying to meet in addition to those of any given commodity chain; needs that are dictated by the specific farms and particular locality of the producers and households concerned.

We should also remember that farmers are not specialist producers within a single commodity chain, but managers of mixed, family farms. When we take any given area and look at the five- to ten-hectare farming systems within it integrating milk production, livestock fattening and diversified crop production (fodder crops, cereals, legumes, market gardening, etc.), there is no doubt that these are mixed farming systems which are managed according to the farmer's perception of his family's needs. Given that labour and cashflow have social as well as economic aspects, we should not only look at how given commodity chains are organised, but also take account of more crosscutting, territorial organisations that can meet the needs of different types of mixed family farm.

Thus, groups that were set up for a specific function (such as collection) can evolve in two ways, having laid the foundations for either path. On the one hand, they can continue within the original commodity chain, moving as far as possible towards the consumer and putting in place genuine professional apexes - organisations that bring together all the actors in the commodity chain, from the producer to the consumer, along with all the intermediaries involved in processing, marketing and distribution.

As we have seen with milk collection centres that have diversified their function, the second path cuts across different commodity chains as part of a broader attempt to address all the needs of the local community (the territorial approach). However, many of these newly multi-purpose cooperatives are unable to develop beyond a certain point, soon finding that major problems with equipment, access to national and international markets, etc. are beyond their capabilities.

2.1.5 Training farmers

Previous work on the role of training in transferring technologies in rural Morocco has already highlighted the problem of illiteracy: according to official surveys, over 70 per cent of members in some cooperatives are unable to read or write. Therefore we will not focus on this issue: not because we think it is unimportant – far from it – but because it is well known and we would not presume to suggest a global solution to this problem in the context of this study.

Nevertheless, it is an acute problem that has major repercussions on farmers' ability to organise themselves. Many structures are managed by 'the literate', who are often, but not always, 'dignitaries' - a trend that unsurprisingly becomes more marked as structures get larger. It also explains why many 'elected' or 'appointed' officials feel that they have the members' mandate, and why their management style tends to resemble that of a personal enterprise rather than a collective structure that is supposed to be accountable to its constituents.

This is not the only problem requiring attention. Other, more technical issues related to production also need to be addressed, which brings us to the interface between trade organisations, extension work and training. Let us take the case of milk production. Farmers import heifers with high genetic potential that can produce an average of around 8,000 litres of milk per annum (or per lactation cycle) on pastures in their country of origin. The best yields in most of Morocco are somewhere in the region of 3,700 litres for a standard cowshed, and 5,880 litres for a 'nursery shed' where reproductive stock are reared. So improving a herd's genetic makeup can have variable effects that have nothing to do with how herds of four to six head of cattle are managed (particularly monitoring oestrus).

Therefore, the only component that can be improved is feed, which entails technical fodder production schedules tailored to local conditions, technical and economic research, and checks on the chemical (fat content and proteins) and bacteriological quality of the milk to determine what kind of genetic improvements are needed.

Our interviews revealed that many farmers find it hard to see where they fit into a given commodity chain. When they say, “We want to know where the cows we import come from”, it means that they want to know the conditions these animals have been reared in so that they can better adapt them to their new environment. Or if someone says, “We want to know what happens to our strawberries”, this shows that they want more control of their product downstream in the supply chain. These issues could easily be addressed through information and training activities, and especially study trips. Here too, dynamic professional structures have an important role to play.

All these points were taken into account during our study of COPAG so that we could better understand the secrets of its success (see Part 3: the function and organisation of COPAG).

2.1.6 From subsistence farming to international markets

Given its upstream and downstream linkages and social importance in rural areas, the agricultural sector clearly plays a key role in the Moroccan economy. It employs just over 40 per cent of the working population and helps generate between 16 and 18 per cent of Gross Domestic Product (GDP). Agricultural produce accounts for almost 30 per cent of all foreign currency exports, largely due to the comparative advantages of low labour costs and modern production techniques.

But despite good yields in irrigated areas (some 12 to 13 per cent of total UAA), overall agricultural productivity remains low due to various natural, technical and economic constraints. These have direct consequences for rural development, driving families on smallholdings to give up their agricultural activities and fuelling the growing exodus from rural to urban centres.

With greater openness to external markets (the EU, USA, Turkey, Arab nations, etc.) intensifying this process, the only solution is to upgrade the agricultural production system by developing lines of products that meet quality, price and timing standards. It is here that this work on COPAG and the Regoverning Markets project will be particularly useful.

We believe that the main constraint to Morocco’s agrifoodstuff processing sector is lack of control over the supply system; not so much in terms of quantity, as in

quality and delivery times. The damage done to Moroccan produce when markets were protected now needs to be remedied as internal markets open up to foreign products, and a growing category of consumers and intermediaries are drawn into the expanding modern retailing and distribution industry. Hence our interest in examining, even very briefly, the state of the agrifoods system. Milk is a determining branch of this system, and COPAG a key actor in resisting the centralising momentum of a monopolistic group. Its activity is a potential lifeline for millions of small- and medium-sized producers who risk being marginalized unless they have support.

2.2 The agrifoods system: a channel for integrating SMPs

2.2.1 A dualistic productive system

The Moroccan agrifood system is characterised by a double duality, particularly between the agricultural sector and the agro-industrial sector.

First, there is the vertical duality between the power of the trade organisations in the two sectors, which are rather less influential in primary production than in processing. The second, horizontal, duality is between two sub-sectors: a modern one based on intensive production techniques geared towards export, and a very poorly equipped traditional one aimed at the internal market. Add in the almost total lack of consumer associations, and this makes for a contradictory system whose overall performance is hampered by its structure. This functional imbalance in the agrifood system has major repercussions on both the costs borne by businesses and the prices paid by consumers. Nevertheless, it also has considerable potential for development on account of the physical and human resources at its disposal.

Regarding relations between agriculture and industry in the Moroccan food system, the dairy industry and fruit and vegetable processing industries (canning, juicing) are much more exposed to supply-related risks, which mainly impact on their production costs. Difficulties in maintaining sufficient volume of supplies are often coupled with problems with the quality of the raw materials provided by the agriculture sector, which means that the processed produce coming onto the domestic market does not always meet international nutritional and organoleptic standards.

2.2.2 A two-speed distribution sector

A study on food distribution channels by the Moroccan Ministry of Industry and Commerce (2002) shows that the market is still dominated by traditional local trade (94 per cent of the market), despite the progressive development of the retailing and distribution industry. This means that domestic shopping habits have not changed

yet, although the advantages of the new system make it likely that they will. Given the opportunity to buy diverse, differentiated products that generally offer good value for money in a one-stop-shop, many consumers will opt to shop in large-scale retail and distribution chains. This is certainly what investors in this sector are banking on, especially since the government lowered the investment threshold exempting businesses from customs duty and VAT on capital equipment to 200 million dirhams (Law No. 18-95 of the investment charter). With its retailing and distribution industry settled into a sustained rhythm since the early 1990s, Morocco now has a good number of supermarkets (mainly dedicated to food), including 12 hypermarkets with sales areas of over 2,500m². Capital investments by foreign chain stores like Makro, Auchan and Supersol also demonstrate the economic interest and promising nature of the sector, which should continue to develop with the introduction of the free trade area (FTA) between Morocco and the EU in 2012.

But despite these encouraging data, the 2002 study by the Department for Industry and Commerce highlighted certain obstacles to the development of the Moroccan retailing and distribution sector, including, among others, the high cost of land, proliferation of intermediaries, absence of a real middle class (potential supermarket customers make up less than 20-25 per cent of the population), unfair competition from the informal sector and declining levels of activity in certain towns. This last constraint is worth noting, as it is linked to purchasing power and consumers' eating habits. Problems with income notwithstanding, the average Moroccan household spends nearly 43 per cent of its outgoings on food, with income elasticity of 0.88 (Department of Statistics, 2001). Dairy produce, meat, fish, fruit, sweet products and drinks are generally considered luxury goods in both rural and urban areas, so the whole agrifood sector urgently needs to promote mechanisms to improve the availability of products that are both good quality and good value. As the free trade area comes on stream, national producers (in the economic sense of the term) will have to deal with the threat from massive imports of foreign foodstuffs brought in to meet consumer demand.

Table 2.1 below shows the main characteristics of the agricultural and agro-industrial sectors identified using the SWOT model of analysis.⁵ This takes account of rising local demand for affordable, good quality products on the one hand, and on the other, a distribution system whose 'modern' retailing and distribution sector has grown steadily despite resistance from the traditional system.

The synthetic evaluation presented below is based on internal and external assessments undertaken using the SWOT model of strategic analysis.

⁵ SWOT: strengths, weaknesses, opportunities, threats.

Table 2.1: SWOT analysis of agriculture and fisheries

Strengths	Weaknesses
<p>Natural resources: agro-climatic potential Infrastructures: large irrigated areas Availability of cheap labour Major contribution to exports Favourable conditions for fishing industries</p>	<p>High dependence on rainfall, big difference in harvests Predicted water shortages Fragmentation of agricultural structures, preponderance of subsistence-level micro-farms Problems with technical and organisational progress (illiteracy) Sluggish attitudes and structures Complex land laws Low average productivity of labour and land Lack of inputs (genetic, fertilisation, health products) Weak professional organisations No effective information system Strong state presence (managed economy)</p>
Opportunities	Threats
<p>Changing model of consumption has significant potential for the domestic market (derivatives of cereals, dairy products, fish, etc.) Significant international potential for typically Mediterranean and organic produce Differentiated products Future opening up of export markets (WTO) Opportunities to significantly increase productivity by modernising techniques Pressure to organise trades in the sector (competition, territorial development)</p>	<p>Increased international competition following the lowering of entry barriers (WTO, CAP) Need to redefine allocation of water resources Territorial development and social problems (rural unemployment) Progressive state disengagement (reducing support for prices) Greater demand for quality products; negative effects on image when not met</p>

Source: adapted from Ingerop (2002)

Table 2.2: SWOT analysis of agrifood industries

Strengths	Weaknesses
<p>Dense industrial fabric Availability of cheap labour Export industry Good use of local materials (tinned fruit, vegetables, fish) Trade organisations Conducive framework for investment</p>	<p>Dual nature of the sector (formal/informal) Not working to full capacity (oil mills, confectionery) Irregular supply of raw materials in terms of quality and quantity (milk, vegetables, beetroot) Poor quality, expensive non-agricultural products, whether they are imported or produced in-country (monopoly on packaging and equipment) Lack of supervision Funding (SMEs have no financial basis to access credit) Organisational structures not suited to a dynamic environment and quality management No efficient system of information on markets for SMEs</p>
Opportunities	Threats
<p>Significant potential for the domestic market as the model of consumption changes (urban demand for processed goods) Significant international potential for typically Mediterranean and organic produce Differentiated products (brands) Future opening up of markets (WTO) Opportunities to significantly increase productivity by modernising techniques</p>	<p>Increased international competition following the lowering of entry barriers (WTO, CAP) Progressive state disengagement (reduced subsidies) Greater demand for quality products; negative effects on image when not met Need to organise localised production systems (LPS) by better coordinating supply and increasing services)</p>

Source: adapted from Ingerop (2002)

3 The milk supply chain: an example of integrating small and medium-sized producers

The milk and dairy products industry plays a significant role in the agrifoods sector: despite having just two per cent of the businesses in this sector, it accounts for nearly ten per cent of its production and six per cent of added value.

Table 3.1: Dairy sector's contribution to the agrifoods industry (AFI)

	AFI	Dairy industry	Share as a %
Number of businesses	1,659	43	3 %
Total workforce	92,106	6,244	7 %
Production	43,928	5,224	12 %
Investment	1,910	306	16 %
Added value	9,154	1,038	11 %

Source: Bathaoui G and Hajjam K, 2001

The dairy industry has about 40 production units that employ around 7,000 full-time staff. After the sugar and drinks sectors, it is has shown the strongest growth in investments over the last decade.

3.1 The supply chain: progressing but far from robust

3.1.1 Two-speed dairy farming

Livestock rearing in Morocco encompasses both traditional and, increasingly, intensive modern techniques. This sector has grown gradually over the last few years, from 2.49 million head of cattle in 1995 to 2.67 million in 2000, of which nearly 1.6 million were female. While overall progress has been made since the first Milk Plan of 1975, it is still dominated by small-scale enterprises. The average herd consists of three cows, and 85 per cent of farmers have fewer than two reproductive females. In 1999 it was estimated that out of a total of 770,000 cattle farmers, only 1,750 - less than one per cent - had more than 11 reproductive females (to be updated in 2006). This largely explains the poor yields, as local breeds, which do not produce more than 600 litres per head per annum (l/h/a), still make up 45 per cent of the national herd, while improved or pure breeds, which are more common in large-scale farms, respectively produce 1,500 l/h/a and 4,000 l/h/a.

3.1.2 Diverse operators

There are various operators involved in the dairy industry: producers (small, medium and large-scale), collectors (often cooperatives of small and medium-sized producers) and processors from the private and cooperative sectors.

Stage 1: Production

Milk production reached 1.15 billion litres in 2000, compared with 830 million litres in 1995, representing average annual growth of seven to eight per cent and the capacity to meet nearly 90 per cent of the country's milk requirements. Most milk is taken to one of the 900 collection centres or sent direct to the main processing plants. At the time of writing, producers were paid 3.00-3.50 dirhams per litre. Milk production is concentrated in irrigated areas, where pure and improved breeds are raised, providing the main source of raw materials for the dairy processing industry.

Stage 2: Collection (procurement)

There are two main milk collection circuits: the organised circuit, which consists of collective or private centres (milk collection centres or individual enterprises/factories) that supply up to 75 per cent of the dairy industry; and the door-to-door circuit, which supplies cafes, mini-dairies and domestic consumers. In addition to these two main circuits, there are also operators who collect milk direct from the producer and deliver it to the factory.

Around 45 per cent of milk is collected, treated and processed in private or cooperative industrial units, 25 per cent is sold to door-to-door sales persons, and the rest is fed to calves or consumed by farm households.

Every production area has a fairly dense network of collection and refrigeration centres. Most are cooperatives, although these now have to compete with a growing number of independent collection centres managed by milk processing companies. Milk producers bear the costs of collection and transport to both types of centre, which is handled by various types of organisation, from individual carriers to cooperative affiliates. Refrigerated lorries are used to transport milk from the centres to the processing plants.

The milk is checked when it is collected, and may attract premiums for fat content (highly prized by cooperative centres) or penalties for poor quality (rejection after a second offence). In addition to collecting milk, some centres also provide other services such as advance payments to help producers' cashflow, credit for livestock feed and everyday food items.

In terms of organisation, milk collection is the strong link in the supply chain. Collection centres are also the hub of various economic relationships and socio-cultural practices, providing a valuable service for small producers who can't afford their own refrigerated tanks - although they do incur running costs that are deducted at source. When the producer is partially integrated into the supply chain, i.e. where there is a private enterprise downstream, these charges constitute a loss of earnings, as the Centrale Laitière (COPAG's main rival, which is under licence to

Danone,) provides non-organised producers with containers. But overall, the associated services that cooperatives offer their members (material and otherwise) compensate for these charges. They also have to absorb the cost of under-utilising their equipment when milk production is low, if they are unable persuade producers who sell their milk to door-to-door sales persons to switch to them during these periods.

Stage 3: processing and packaging

After collection, the milk is treated in 16 medium-sized or large industrial plants (five cooperatives and 11 private firms) and 19 cooperative mini-dairies. We were unable to get any information on how the milk is priced during production and packaging, but can report that collection costs vary according to the circuit, and that the margin on processing differs according to the size of the unit and range of products it manufactures.

Stage 4: distribution and consumption: a dualistic distribution system

At 30-40 litres of milk equivalent per person per year, consumption of milk and dairy products in Morocco is low in terms of global averages (nutrition experts recommend an average of 100 litres per annum). This could be due to the constraints at every stage of the supply chain, from production and collection to processing and distribution.

Most of the milk that is collected and processed (710 million litres in 2000) is pasteurised (73 per cent); the rest is used for sterilised UHT milk and dairy products such as yoghurt, *raibi* (a kind of sweetened drinking yoghurt) and skimmed milk (Iben). Little fromage frais, cream (when milk production is high) or butter is produced.

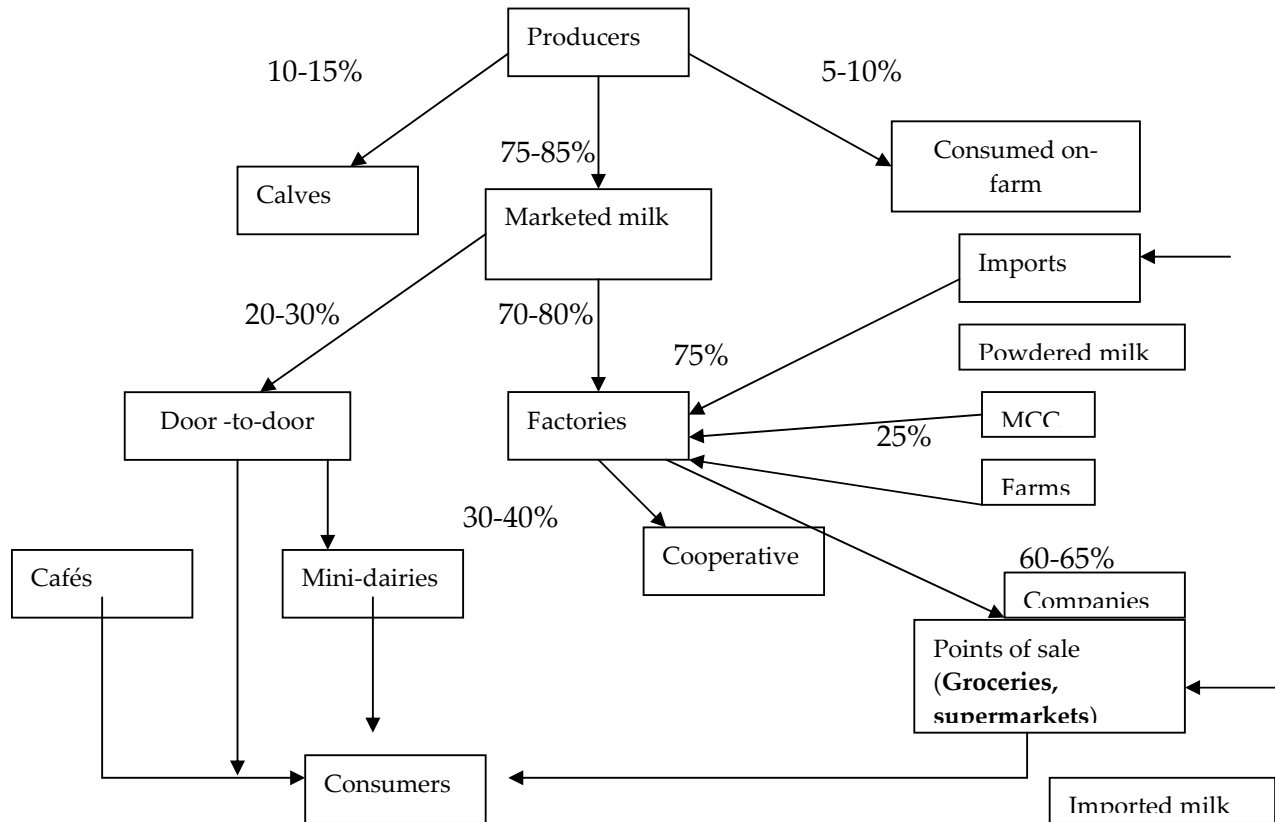
The 40 or so operators in the milk-processing sector are a mixture of private companies, cooperatives and mini-dairies. This is not a very competitive sector, especially where milk production is concerned. The Centrale Laitière, a subsidiary of the ONA group, dominates the dairy produce market, with a 60 per cent market share and a monopoly on sterilised UHT milk. The rest of the market is divided between:

- private companies of various sizes, such as Halib Souss, Douiet, Comapral, Prolait and three companies that specialise in processed cheese: Sofram, Sialim, and Fromageries des Doukkalas (a subsidiary of the Centrale Laitière).
- 24 cooperatives, the most representative (with the capacity to process over 20,000 litres per day) being Bon Lait, Extralait, Superlait, COPAG, and Colainord.

Finally, there are 15 or so 'mini-dairies' in the landlocked regions of Morocco.

The role of the informal sector in milk collection

Milk gets 'from the cowshed to the table' via two main circuits: the organised system and door-to-door circuit, which are shown in the diagram of the milk supply chain below.



Source: Mekkaoui 1996, updated

3.2 A limited and oligopolistic market

3.2.1 Low levels of consumption

We have already noted that consumption of milk and dairy products in Morocco is low, at around 42 equivalent litres per person per annum (el/p/a), compared with an international standard of 90 el/p/a and consumption in France of 380 el/p/a. This is due to the fact that most Moroccans take little milk at breakfast, preferring coffee, tea, or soup with bread and oil; the high cost of milk (over 0.50 €/litre) in relation to local purchasing power; and the difficulty of keeping milk in a country with a patchy refrigeration chain and fridges in only 44 per cent of households. Nearly 40 per cent of the milk produced is consumed on-farm or distributed door-to-door.

Table 3.1 below shows how consumption of milk and dairy products changed between two national consumer surveys conducted in 1970/71 and 1984/85.

Table 3.1: Consumption of milk and dairy produce in 1970/71 and 1984/85

	1970/71			1984/85		
	Urban	Rural	Total	Urban	Rural	Total
Fresh milk	19.78	8.40	12.18	27.74	9.82	17.58
Dairy produce	1.86	0.39	0.87	2.88	0.87	1.74
Skimmed milk	2.59	23.53	16.59	3.86	9.36	6.98
Cheese	0.36	0.00	0.12	0.46	0.08	0.24
Total	30.52	27.29	28.34	43.45	20.24	30.26

Source: Araba A, Benjelloun, 2001

3.2.2 Competition between cooperatives and processing plants

The best-performing cooperatives have become more competitive, mainly as a result of their geographic location, their management – especially if they operate within a collective culture, and having relatively modern organisational structures with new posts (G. Bathaoui and K. Hajjam 2001).

COPAG (Taroudant): an example of a competitive processing cooperative

Having a marketing manager can be a determining factor in a cooperative's success, as major dairy plants in several regions have discovered to their cost. COPAG, a cooperative based in Souss (Taradount), derives much of its strength from its research, development and marketing strategy. A former manager in the research and development lab of a central dairy joined COPAG six years ago after he was made redundant, and has developed a whole line of new products (yoghurts) that were first conceived in his former work place. These were boldly marketed through the traditional distribution channels that still make up 90 per cent of the national distribution network, and a fairly recent television advertising campaign. Having long been denied access to the large-scale distributors monopolised by Danone (Centrale Laitière), COPAG built up close relations with smaller retail stores, playing on its local roots in the Souss region, which is also home to many of these grocers.

COPAG covers 90 per cent of Souss, plus the densely populated urban Marrakech-Casablanca-Rabat area. With a medium- and long-term strategy of expanding its market across the country, it has established a national presence over the last few years and significantly increased its capacity to process milk as a result of major investments (see Section 4 below).

Another point worth noting – and studying in more detail – is that the cooperative culture is more developed in some regions (such as Souss) than others. Cooperatives in areas whose social structure predisposes them to collective enterprise tend to have fewer problems, as can be seen from the minutes of their meetings, which record relations among members, conflict, etc. This is certainly the case with COPAG in Taradount, and Laayoune in the Sahara, both of which closely follow the cooperative model.

3.2.3 Plenty of opportunities, but a difficult market

One of the main problems for the dairy industry is the difficulty in levelling out milk production to alleviate shortages when lactation is low (mid-August to mid-February) and deal with surpluses caused by a drop in demand when production is high. Lack of drying and sterilising equipment is a major constraint to addressing these problems, but there could be considerable potential in developing powdered and UHT sterilised milk production.

The milk supply chain does not have the capacity to make any immediate improvements to the productivity of dairy herds, given the huge need for milk cows and cattle-rearing, storage and processing equipment on the one hand, and know-how and training for operators on the other. Nevertheless, efforts to integrate the supply chain and build up partnerships would improve the chances of achieving this objective.

The market for milk and dairy products is growing, slowly but surely, and there are further opportunities for expansion in the government's drive to increase tourism and Moroccan consumers' growing awareness of new products. However, these are mitigated by the oligopolistic and protected nature of the sector, and particularly by consumers' lack of purchasing power.

3.2.4 Conclusion

Although there are quite a large number of operators in the milk market, few have access to the modern distribution circuit, particularly supermarkets. COPAG has secured a place for its products in the retailing and distribution industry due to a combination of two factors: first and foremost, by improving the quality of its products; and more recently, as a result of the supermarkets' deliberate policy of diversifying their range of dairy products. The entry conditions and key factors in COPAG's success in a quasi-monopolistic market will be discussed later in Section 4 of this study.

4 COPAG as an example of local (meso) and family (micro/household) development

4.1 Methodology

Relations between producers and the retailing and distribution industry are varied and complex. The small amount of research that has been done on this topic suggests that it is a crucial and complicated issue, given the difficulties of establishing dialogue and communication between the two main sets of protagonists – producers and supermarkets.

Our study was undertaken in order to address this pressing need. Its objective was to clarify the relations between the mother cooperative (COPAG) and the retailing and distribution industry within the milk supply chain, and determine how they affect the behaviour of dairy farmers in a market dominated by a small number of powerful businesses.

4.1.1 Choice of study area

This is a study of a success story: the cooperative COPAG, which is based in the region of Souss Massa. The flourishing local cooperative movement in this region is the product of its particular socio-economic characteristics: the knowledge handed down from generation to generation, the commercial dynamism of the Soussi people (the Berber from this region), the remarkable ethnic solidarity shown in crisis situations, the capacity for innovation and spirit of enterprise, the ethic generated by a strong religious and spiritual culture, and the region's varied physical potential.

4.1.2 Study procedure

We began by determining how the cow's milk supply chain functions through COPAG and identifying the role of each link in this chain, before considering how COPAG's association with supermarkets has impacted on dairy farmers' behaviour. In order to validate or invalidate our initial hypotheses, we conducted a series of surveys with various economic and institutional actors, shown in the table below.

COPAG managers	
President of COPAG	M'hamed Loultiti
Director of research and development	Kadri
Director general of the dairy unit	Benhida
Administrative and financial director	Mohamed Achehboune
Head of management, coordination and support for members' development	Abdeljalil Ait Jirane
Director of logistics	Ahmed Khai
Commercial director	El-Bekari
Office for cooperative development (ODECO)	
Central management (Rabat) and analysts of minutes of COPAG meetings in ODECO (Agadir)	
Staff in affiliated cooperatives	
Dairy farmers in the study zones	
Sales supervisor and fresh produce department manager for Marjane Bouregreg, Aswaq Salam, Acima, Label Vie, Métro	

4.1.3 Survey objectives

The aim of these surveys was to show how COPAG and its affiliated cooperatives function, and their relations with the retailing and distribution industry. We also wanted to know what respondents thought about issues such as quality, traceability and the future of the cooperative.

4.1.4 Information gathering tools

In order to allow interviewees to express themselves freely and highlight the issues they felt were most important, we used three guided open-question surveys, one for the sales offices, one for COPAG and another for the supermarkets. We also conducted two closed-question surveys with member cooperatives and dairy farmers.

4.1.5 Sample selection

To make the survey findings more accurate and ensure that each level was properly represented in the sample, we opted for a homogenous proportional estimate of the

whole intervention zone (Souss, Massa, and the mountainous area) to obtain a sample that was well thought out rather than exhaustive.

We used a three-tiered sampling design, looking at the region of Souss Massa, different member cooperatives, and finally, the different categories of dairy farmer (small, medium and large). A diagram of the sampling design is presented in Figure 1 below.

It was decided that the most relevant classification criteria for these producers were farm size, milk production and herd size. Milk production was chosen as a determining factor because farm size is not always a relevant variable, since a farmer with one hectare may have 20 head of cattle, while another with ten hectares might only have five head of cattle.

Producers can be categorised as follows:

PL < 100 l/d	Small-scale producer
100 < PL < 300 l/d	Medium-scale producer
PL > 300 l/d	Large-scale producer

Therefore, we retained 23 small-scale dairy farmers, 13 medium-sized ones and eight large-scale producers.

4.2 The mother cooperative: COPAG

4.2.1 Brief description

The agricultural cooperative COPAG is now the driving force behind the development of dairy farming in Souss Massa. It was set up on 7 May 1987 by 39 farmers from the region of Taroudant who wanted to join forces and manage their agricultural output from production through to an advanced stage of distribution, in order to take advantage of the government's policy of liberalising exports.

To begin with, the cooperative specialised in processing and marketing citrus fruit and early fruit and vegetables. Then, in 1993 it entered a new stage, moving into the milk collection and processing circuit with the creation of the Ait Iazza dairy. It is the only cooperative in the Souss Massa area that collects and processes milk.

COPAG currently has capital shareholdings of 140 million dirhams (having started with 2.4 million dirhams divided into 2,400 shares worth 1,000 dirhams each). This capital is shared between 179 members (112 natural members and 65 corporate members), including 67 cooperatives bringing together nearly 13,000 producers from across the Souss Massa region. An annual growth rate in the order of 383 per cent gives some indication of the level of interest in the principles of cooperative membership among dairy farmers in the region.

COPAG's development is the result of its strategy to integrate the different stages of the agricultural supply chain, and an open-door policy to increase the number of members and the amount of milk it collects and processes.

Table 4.2: Basic information about the agricultural cooperative COPAG

Name	Coopérative agricole COPAG Taroudant
Capital shareholdings	140,000,000 Dhs
Head office	Centre Ait Iazza, Freija district, province of Taroudant (8 km from Taroudant), on a 7 hectare site.
Employees	3,200 persons
Investments	650,000,000 Dhs
Turnover	1,500,000,000 Dhs
Number of members	179, including 67 cooperatives (13,000 producers)
Herd	80,000 head of cattle, including 40,000 milk cows
Area under crops	Citrus: 4,000 ha Early fruit and vegetables: 1,100 ha Fodder crops: 6,000 ha
Number of sites	- Ait-Iazza industrial area: 67,700 m ² - kilometre n°7 on the Taroudant Agadir motorway: 76,000 m ² .

Source: COPAG survey, 2006

Table 4.3 below shows how investment in equipment and construction increased between 1987 and 2001.

Table 4.3: Main facilities, 1987 to 2001

Type of facility	Dairy	Citrus (Ait Iazza)	Citrus (Station Faraj)	Fruit & veg (Ait Melloul)	Orange juice	Livestock feed	Cold store
Date established	1993	1987	1996	1998	2001	1998	1998
Jobs	1,680	402	287	6	40	20	10
Investment (1,000 Dhs)	140,000	25,000	15,000	1,400	15,000	22,000	35,000

Source: COPAG survey, 2006

As a multi-purpose cooperative, COPAG does not simply produce, process and market milk and dairy products; it also produces and exports citrus fruit and early fruit and vegetables. It farms a total area of 11,100 hectares, with 4,000 hectares under citrus fruits, 1,100 under early fruit and vegetables, and 6,000 under fodder crops. It also has some 80,000 head of cattle, of which 40,000 are dairy cows.

As an economic cooperative, COPAG carries out various functions to enhance the value of its members' produce. These include supplying inputs, marketing, supervision, and training in close collaboration with national and international partners. In addition to packaging citrus fruits and processing milk, COPAG also seeks to improve the productivity and profitability of its activities and thereby secure economic growth in the sectors in which it operates.

Its missions include:

- Socio-economic development in rural areas of the Souss region, either by the cooperative or through its members
- Offering an increasingly wide variety of agricultural produce (animal and vegetable) to meet current and future consumer demand;
- Increasing COPAG's income and that of its members through joint actions at each stage in the production, processing and marketing of agricultural produce (and derivatives) with high added value.

The driving principles of its vision, which are often repeated in the words and writing of COPAG officials are: trust and honesty between members, economic and social performance for the benefit of members, good quality produce to conquer demanding markets, respecting and listening to consumers' needs.

4.2.2 COPAG's functions and organisation

A quick look at COPAG's fields of intervention suggests that the cooperative fulfils a number of functions, the most important being: representation, organisation, dialogue, negotiation, guidance, pressure groups, defending interests, information, extension work, training, promoting activities, self-development, management, technical and techno-economic support, procurement and marketing, service delivery, regulation and control.

The reports of successive general meetings show that COPAG is fulfilling these functions fairly well (see analysis). It is also clear that the success of its actions depends upon its members embracing the principles of the cooperative movement, which in turn depends upon successful milk production and the income this generates.

In order to get a better picture of COPAG's organisational structure, we looked at all the decision-making mechanisms in the cooperative, from the general assembly to the staff.

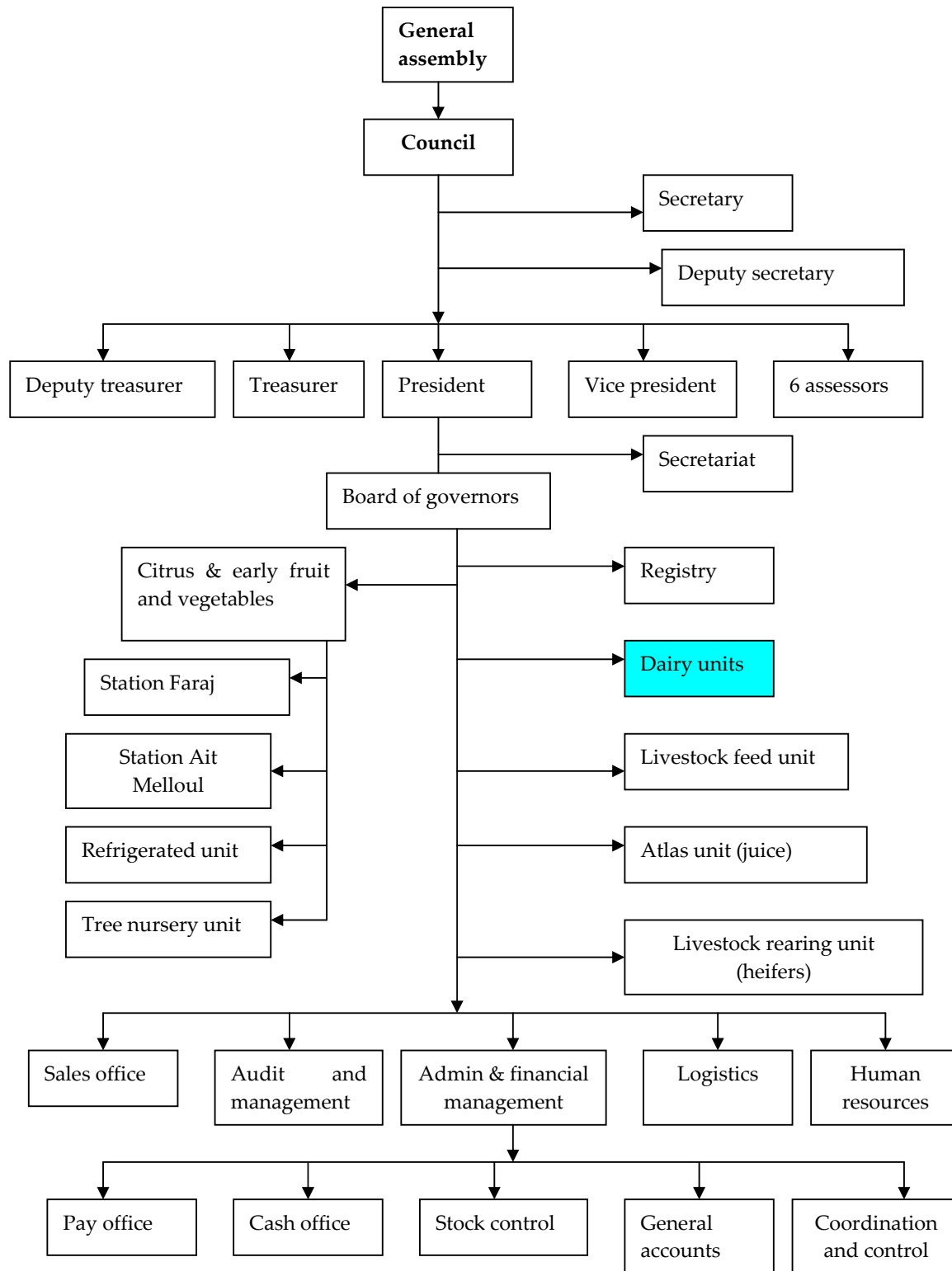
Every year the general assembly decides who will be on the board of directors. This usually meets once a month, or more often if there is an emergency. The 12 members of the board are:

- the President;
- two vice-presidents;
- two treasurers;
- the vice-treasurer
- the Secretary General;
- the deputy secretary and four members.

There are five management bodies responsible for general management, commercial management, logistics, human resources, administration and finance. The latter is divided into six services: the pay office, cash office, stock control, general accounts, coordination and control.

The board of directors has the most extensive powers, which enable it to legitimately administer, represent and make commitments of behalf of the cooperative in accordance with Article 45 of its statutes.

Figure 4.3: Organisational flow chart of COPAG



3.2.3 Main phases of COPAG's development

Although it began with citrus fruits, COPAG set up a milk production unit in 1993 so that it could collect milk from the across region, process it into pasteurised milk and its derivatives and market them nationwide. It is now mainly known for its dairy products. These are marketed under the Jaouda label, which currently enjoys a 20-25 per cent share of the dairy products market in terms of volume, second only to the Centrale Laitière (Danone). COPAG claims to have 15 per cent of the milk market, putting it in third place after the Bon Lait cooperative (Marrakech) and the Centrale Laitière. With this kind of success rate, members have every confidence that it will make their activities profitable.

The milk production unit was set up to address a number of common problems among dairy farmers:

- being unable to market their milk on a regular basis, especially if they produce large quantities;
- difficulties in getting paid for milk by certain industrial units (Habib Souss, Darti and Bon Lait), with late payments and lack of transparency in modes of payment;
- being paid low prices for their produce.

The strategic decision to create this unit enabled its members to drive through development in their fields of intervention, particularly in rural areas, where COPAG regularly collects milk from 170 individual members and 67 cooperatives that bring together nearly 13,000 dairy farmers.

The main stages in COPAG's development as a dairy producer are summarised below:

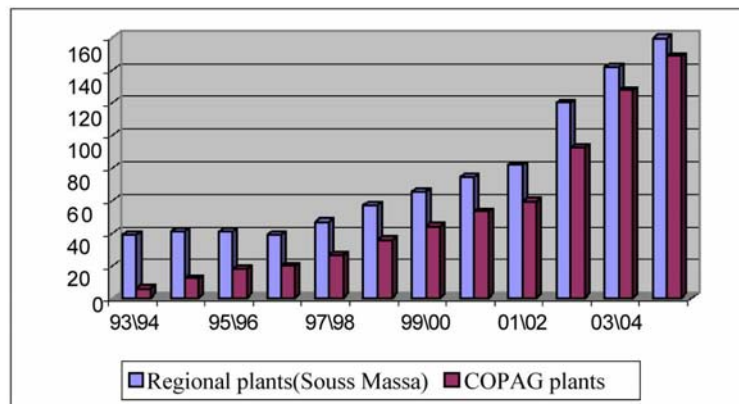
- 1993 to 1996: milk collection and processing begins, with the creation of a mini-dairy with a capacity to process 12,000 litres per day.
- 1996 to 1998: the first expansion increased the dairy's processing capacity to 100,000 litres per day. Investment in a pasteurised milk production line and another production line for milk derivatives; tonnage of incoming milk rises to an average of around 35 million tonnes.
- 1998 to 2001: an increase of 117 per cent on the previous period takes the tonnage of incoming milk to 76 million tonnes. This was mainly due to a rise in the number of members.

- 2001 to 2004: increased investment to upgrade the dairy so that it can position itself in the market for dairy produce and derivatives, and as part of the policy of diversifying the product range. New machines acquired to package fermented milk and yoghurts, in parallel with an increase in milk production upstream in the supply chain.

4.2.3 Performance

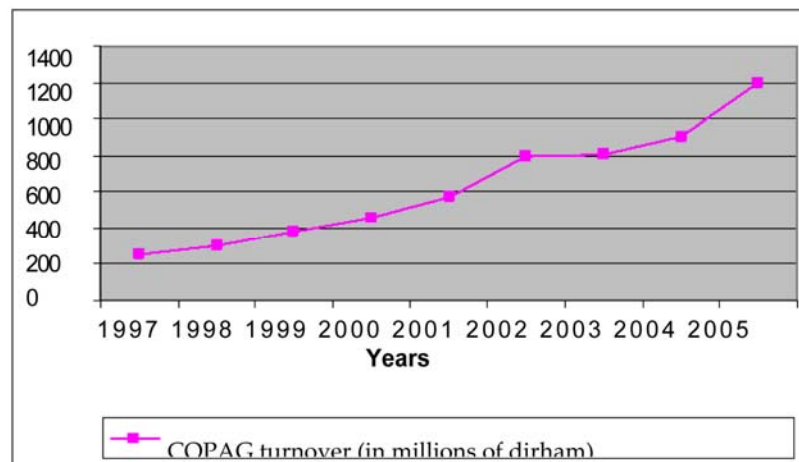
COPAG is currently the largest milk collection and processing operation in the whole Souss Massa area, with the capacity to process 500 tonnes per day. In 2005 it accounted for 93 per cent of the milk supply in the region.

Graph 4.1: Milk production plants in Souss Massa, 1993/1994 to 2003/2004



Source: COPAG survey, ORMVA 2006

Graph 4.2: COPAG turnover, 1997 to 2005



Source: COPAG survey, 2006

Although there is nothing exceptional about COPAG's economic assets (apart from capital funded through hire purchase), its turnover is nearly a third of that of the Centrale Laitière, which is one of the largest producers in Morocco. COPAG's activities are increasing more strongly than those of other businesses or cooperatives, with a five-point (or 24 per cent) gain between October 2003 and October 2004, demonstrating the company's commercial effectiveness.

We would have liked to look at the integration rate for this activity, but unfortunately were unable to obtain the data to identify milk-related activities in COPAG's other production lines, which were particularly relevant to this analysis.

Table 4.4: Added value and integration rates, 2000/2001 to 2003/2004

COPAG	2000/2001	2001/2002	2002/2003	2003/2004
Added value (AV)	75,305,711	83,522,100	96,338,957	125,208,821
Evolution of AV	*** V	10,91%	15,35%	29,97%
Production (t)				
	498,048,057	670,737,462	867,151,818	1,178,952,896
Integration rate = AV/Production	15.12%	12.45%	11.11%	10.62%

Source: COPAG survey, 2006

This table shows that the value added by COPAG grew steadily during this period, reaching nearly 30 per cent by 2003/2004.

This accelerated increase can be explained by the growth in turnover, which is greater than expenditure and other outgoings, indicating a good level of control. However, the integration rate, which expresses the capacity of the business to procure reasonably priced raw materials and control its general costs, appears to be in constant decline. This can be explained by the fact that the production rate is growing faster than added value (on stocks of finished products, rising cost of raw materials, etc.).

In 2003/2004, only 10.6 per cent of COPAG's output generated a profit after deducting the cost of production inputs, signalling a loss of control over stocking policy. At the same time, over-reliance on the bank was also incurring significant financial costs. Table 4.5 gives us an idea of COPAG's financial independence between 2000/2001 and 2003/2004.

Table 4.5: Financial independence

COPAG	2000/2001	2001/2002	2002/2003	2003/2004
Own & assimilated equity (a)	79,529,097	87,490,513	91,587,439	90,903,408
Liabilities less available assets (b)	296,393,443	292,076,483	349,052,757	461,767,049
Financial independence ratio (a/b)* 100	26.83%	29.95%	26.24%	19.69%

Source: COPAG survey, 2006

By 2003/2004 the cooperative was in a delicate position, with the assets raised through subscriptions representing less than 20 per cent of its liabilities. High levels of debt and limited capacity for self-funding made debt repayment a distant prospect and monitoring by the bank a regular occurrence.

Table 4.6: Repayment capacity

COPAG	2000/2001	2001/2002	2002/2003	2003/2004
Long-term financial debt	195 173 807,06	239 119 042,30	239 799 972,25	350 822 482,70
CAF	25 077 331,75	25 293 539,76	28 869 593,82	40 239 048,67
Repayment timescale	7 years 9 months	9 years 5 months	8 years 3 months	8 years 8 months

Source: COPAG survey, 2006

With limited capacity to honour its debts due to a poor cashflow/debt ratio, it was difficult to get the bank to fund projects. COPAG had gone beyond the critical threshold, and by 2003/2004 was looking at an eight-year timescale to get out of debt.

The question now was where could it turn to for funding?

We used three indicators to analyse its financial balance: working capital (WC), working capital requirements (WCR), and net cashflow (NC).

Table 4.7: Working capital

COPAG	2000/2001	2001/2002	2002/2003	2003/2004
Continuous funding (a)	158,643,875	161,339,845	236,963,210	265,426,562
Net fixed assets (b)	185,950,049	171,407,720	175,503,496,03	187,620,375
Working capital (a-b)	-27,306,173	-10,067,875	61,459,714	77,806,187
Principle of financial orthodoxy financière	Not respected		Respected	
Stock	39,359,285	55,602,044	72,229,605	106,218,194
WC/Stock	-69,38%	-18,11%	85,09%	73,25%
Comments	Critical situation		Normal situation	

Source: COPAG survey, 2006

Because COPAG did not respect the principle of financial orthodoxy between the accounting periods 2000/2001 and 2001/2002, it had to resort to bank loans and overdrafts to meet its cashflow needs. However, the situation improved over the next two accounting periods, thanks to an increase in continuous funding, *particularly from members' current accounts*.

Working capital requirements of less than 30 days represents a normal financial situation; some adjustment would be necessary if it is more than 30 days. Negative working capital requirements combined with a zero or deficit net cashflow means that the basic principle of financial equilibrium is not being respected, and that full-time staff are being paid out of short-term resources.

Table 4.8: Working capital requirements

COPAG	2000/2001	2001/2002	2002/2003	2003/2004
Working capital	108,360,023	116,622,551	169,145,563	273,692,116
Floating liabilities	117,859,028	167,069,710	94,531,583	176,296,328
WCR	-9,499,005	-50,447,158	74 613 980	97 395 788
Turnover	568,401,987	808,511,847	959,797,969	1,190,118,635
WCR in relation to turnover	-6,02	-22,46	27,99	29,46

Source: COPAG survey, 2006

The 2000/2001 and 2001/2002 accounting periods show negative WCR, although the balance was *readjusted* over the next two accounting periods. Net negative cashflow signifies that full-time staff and/WCR are being funded by very short-term bank

loans and overdrafts. Table 4.9 shows that COPAG had a net negative cashflow for three accounting periods, and a positive cashflow for the period 2001/2002.

Table 4.9: Net cashflow

COPAG	2000/2001	2001/2002	2002/2003	2003/2004
Working capital	-27,306,173	-10,067,875	61,459,714	77,806,187
Working capital requirements	-9,499,005	-50,447,158	74,613,980	97,395,788
Net cashflow	-17,807,168	40,379,283	-13,154,266	-19,589,600

Source: COPAG survey, 2006

Analysis of the three indicators of financial equilibrium shows an imbalance in capital financing needs in 2000/2001 and 2001/2002, and a short-term financial imbalance (lack of control over WCR) in 2002/2003 and 2003/2004.

The two last periods show the results of management errors (poor management of WCR) rather than a financial imbalance in capital financing needs, as in the two previous periods.

To recap the main findings of this financial analysis:

- Turnover rose to nearly one third of that of the market leader for milk (Centrale Laitière). COPAG's activities grew more than other businesses or cooperatives, which suggests that its business strategies were working.
- The added value or wealth generated by COPAG grew steadily, reaching nearly 30 per cent during the financial period 2003/2004.
- High levels of debt and low capacity for self-funding (nearly 30 per cent self-funding and 70 per cent loans) left the company with a long debt repayment schedule and under close scrutiny by the banking sector.
- Analysis of the financial balance shows a net change in the last two years thanks to better continuous funding (especially from *members' current accounts*).

4.3 COPAG as a conduit for innovation in the Souss Massa region

3.3.1 Improving factors of production

Measures that have helped improve the cattle herd

Most people in the Taroudant region rear cattle as one their main activities. Although they are a long way from major markets and have problems with water, these constraints are mitigated by local irrigation systems and the characteristic plains of the Souss region.

According to the data provided by the Souss regional office for investment, there were 112,000 head of cattle in the region in 2005, of which 30,000 were local breeds, and the remainder pure- and cross breeds. COPAG has 80,000 head of cattle, 40,000 of which are milk cows. The rest of the herd consists of 7,000 heifers > 24 months, 9,400 heifers > 12-24 months, 5,500 bullocks (12-18 months), 9,500 calves (0-12 months), and 2,600 breeding bulls.

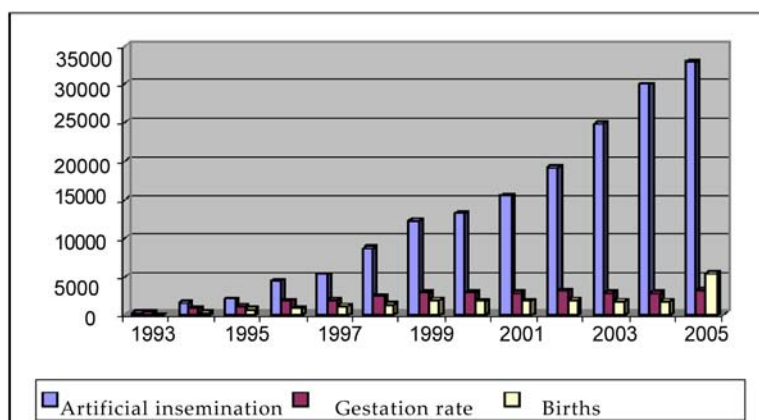
In order to improve the quality of the herd, COPAG imported highly productive Holstein and Friesian/Holstein crossbreeds from France, Germany and Canada.

Individual herd sizes vary considerably, ranging from two to 250 cows per farmer. COPAG organised awareness-raising campaigns and one-off and continuous training sessions to encourage members to use modern techniques like intensification and artificial insemination to improve milk yields.

At the end of the 1990s, the Ministry of Agriculture and Rural Development stopped imports of heifers because of the risks associated with BSE, and developed a whole health programme to protect consumers and livestock. COPAG was in the forefront of a massive programme of artificial insemination and efforts to improve the quality of the herd by importing high quality stock-seed.

It also invested in high quality machines and initiated a whole series of exhibitions and competitions in the field of livestock rearing as part of its drive to modernise techniques. On the educational side, training initiatives included special farmer training days and trips abroad so that members and managers could learn from experiences in other countries, especially the progress made by cattle farmers in Europe and America.

Graph 4.3: Artificial insemination rates



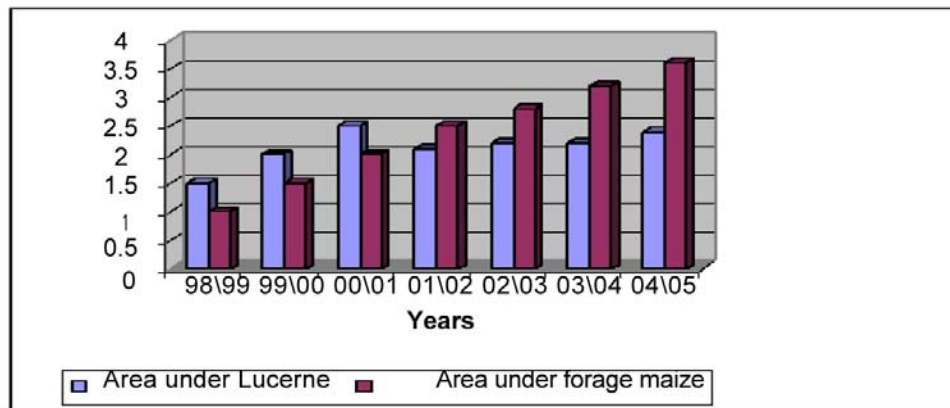
Source: COPAG survey, 2006

As a federation of cooperatives, COPAG supplies its members with various low-cost inputs for livestock and crops, and is constantly looking for ways to improve their technical and growing practices. This entails listening to them so that it can develop new techniques and buy machinery and equipment for growing crops and rearing livestock that will benefit all members, no matter how big or small their farm.

The cooperative also tries to make resources like refrigerated milk tanks available to members and affiliated cooperatives. This service is open to farmers who produce more than 500 litres per day, acting as an incentive to increase milk production.

Livestock feed is seen as a key element in developing the cattle-rearing sector as it has a direct impact on milk production. COPAG has focused on developing fodder crops in order to meet the nutritional requirements of local and imported livestock, making this a priority in its food programme. Therefore it has increased the amount land under cultivation and diversified fodder crop production, expanding the area under forage maize and lucerne by 433 ha/pa and 150 ha/pa respectively.

Graph 4.4: Area under forage crops grown by COPAG members (in thousands of hectares)

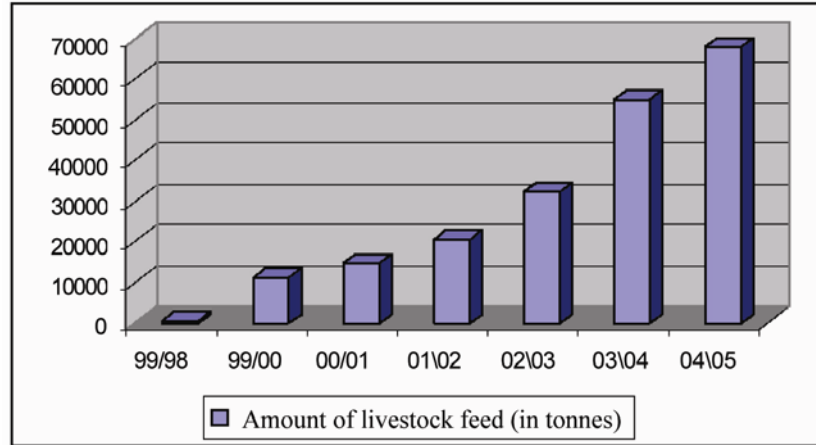


Source: COPAG survey, 2006

In 1999 a special unit was set up to manufacture the Aâlaf's brand of compound livestock feed. With a capacity of 10 tonnes/ha, this helped increase the quantity and range of feed. However, the raw materials needed for the process are very expensive and not always available in the quantities or quality demanded by national markets, which makes it difficult to manage stock.

The livestock feed unit has grown considerably in terms of both volume and quality (production went up to 60,039 tonnes in 2004/2005), making the cooperative self-sufficient in a whole range of high-nutrition feeds. The unit has met its objectives, and can now guarantee even the smallest producers a regular supply of compound feed, helping increase in milk production and improve the entire cattle herd.

Graph 4.5: Production in the 'Aâlaf' livestock feed unit



Source: COPAG survey, 2006

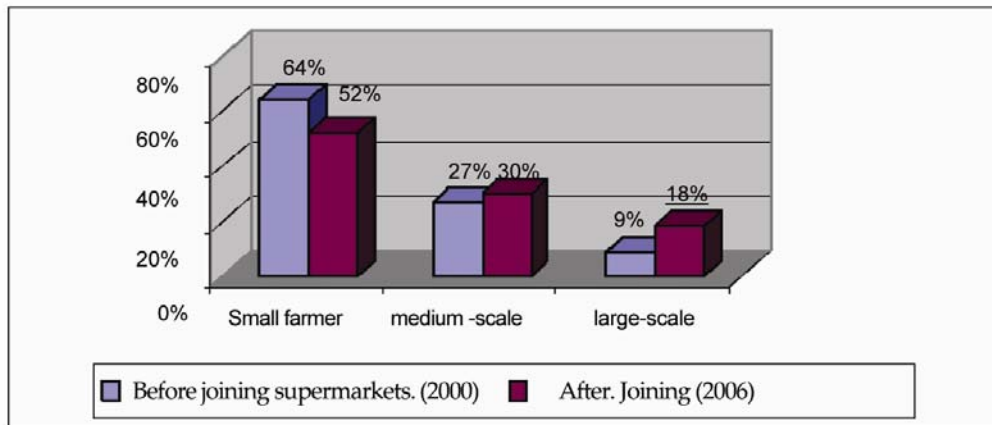
4.3.1 Impact on the living standards of small and medium-sized producers

Changes in the status of cattle farmers

According to interviews with COPAG managers and cattle farmers, efforts to develop the cattle herd have had a positive impact on the living standards of cattle farmers and their families.

All the actions taken by COPAG in partnership with the cooperative SAGB and the Souss Massa ORMWA (state department) have helped increase cattle farmers' usable agricultural area (UAA), the size of their cattle herd, the number of milk cows, and milk production. This has significantly changed the numbers in each category of farmer, as small-scale farmers have developed into medium-sized farmers, and medium-sized farmers have become large-scale farmers.

Graph 4.6: Changes in each category of farmer



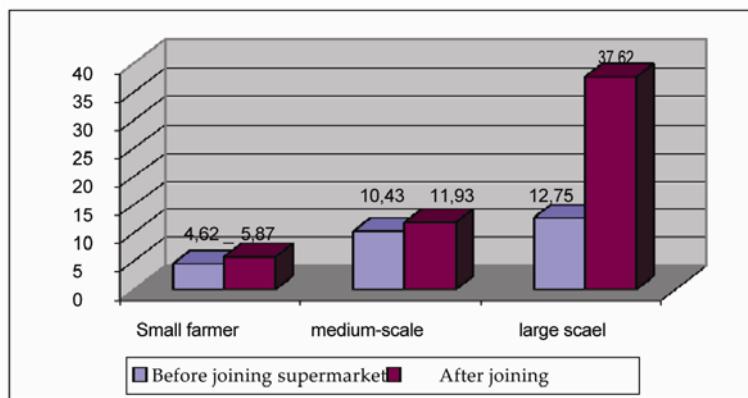
Source: COPAG survey, 2006

The percentage of the farmers affiliated to COPAG who were classified as small farmers fell from 64 per cent in 2000 to 52 per cent in 2006, meaning that these farmers had moved up to the category of medium-sized farmer. This was doubtless due to the increase in UAA, herd size and number of milk cows.

Expansion of usable agricultural land

Cattle farmers in cooperatives across the Souss Massa area reported that their UAA has increased over the last five years, especially since COPAG entered the retailing and distribution industry. This is due to the various initiatives taken by the mother cooperative, which have benefited all member cattle farmers regardless of their size.

Graph 4.7: Average UAA for each category of cattle farmer (in hectares)

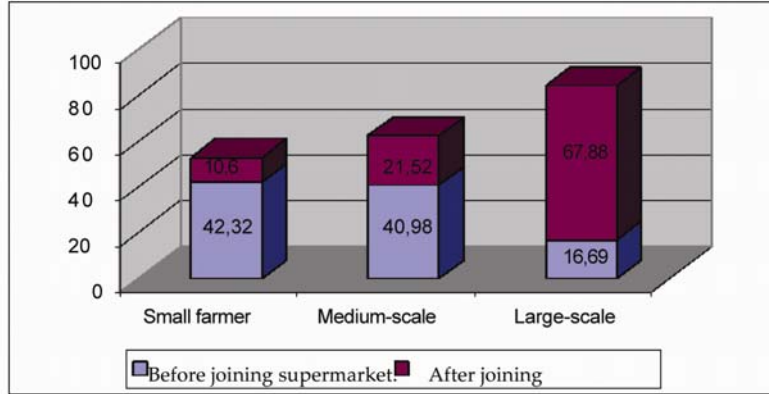


Source: COPAG survey, 2006

The increase in UAA shown above can be attributed to changes in the farmers' economic, technical and social situation.

Graph 4.8 below shows that in terms of UAA, the proportion of small-scale cattle farmers has fallen from 42.32 per cent to 10.6 per cent, and the proportion of large-scale farmers has increased from 16.69 per cent to 67.88 per cent.

Graph 4.8: Categories of farmer according to average UAA

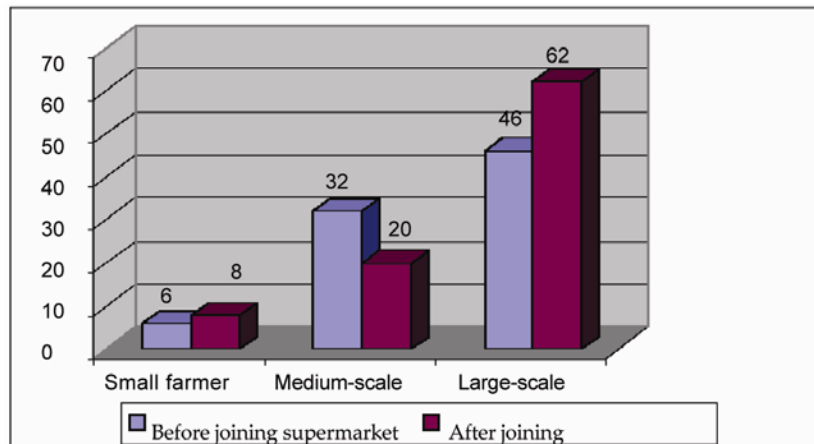


Source: COPAG survey, 2006

Larger herds

Our interviews show that the increase in herd size varies according to the category of farmer. In the year 2000, average herd sizes were six head of cattle for small farmers and 46 for large-scale farmers; by the time of our study, the average small farmer had eight head of cattle, and large-scale farmers averaged out at 62 head of cattle, with no distinction between the different areas surveyed. This represents a 74 per cent increase in herd size.

Graph 4.9: Average herd size for each category of cattle farmer in the study zones

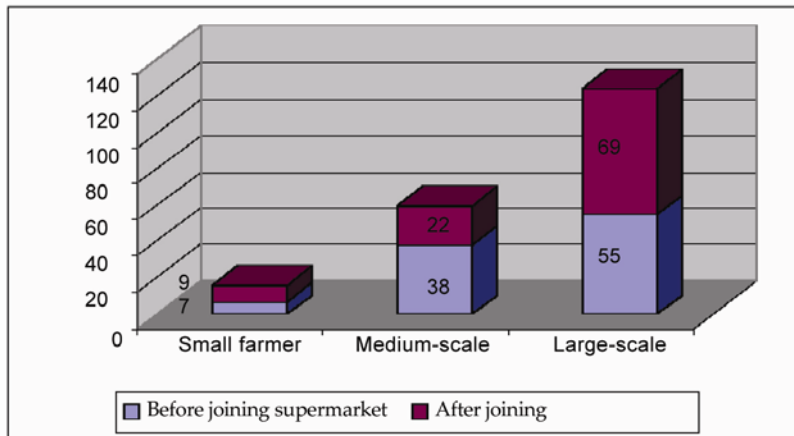


Source: COPAG survey, 2006

The number of large-scale cattle farmers rose from 55 in 2000 to 69 in 2006. They are now the most comfortably off in the cooperatives we surveyed, and clearly have

some influence on the strategic decisions taken by COPAG, as they are the most aware of the stakes involved in accessing the retailing and distribution industry.

Graph 4.10: Categories of herder according to average herd size



Source: COPAG survey, 2006

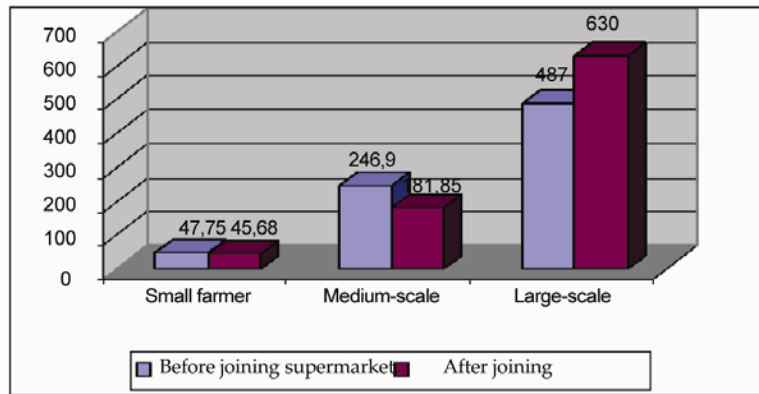
Increased milk production

The development activities undertaken by COPAG have had a major impact on dairy farming in the region, and have helped improve the socio-economic situation of dairy farmers and their families.

The substantial improvements described above, both in terms of UAA and the cattle herds on each farm, have also had an effect on milk production, which has now increased by 40 per cent.

Dairy farming is now more profitable, mainly as a result of genetic improvements to the dairy herd (primarily through artificial insemination), the use of rigorously selected seed, and improved milk yields.

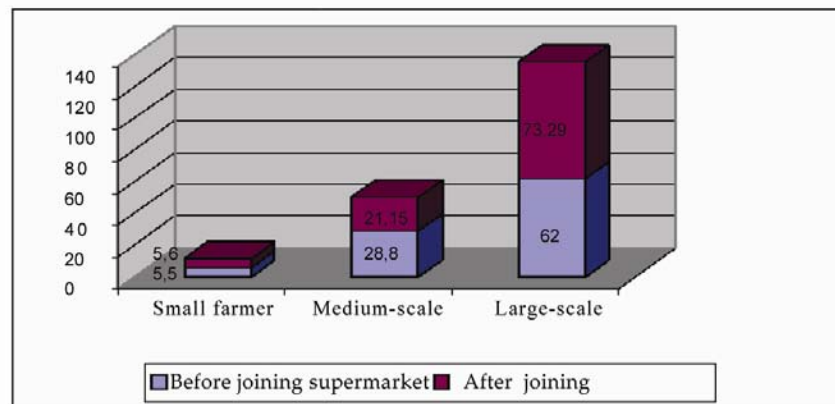
Graph 4.11: Average milk production by each category of farmer



Source: COPAG survey, 2006

The improvement in milk production is most marked among large-scale farmers, especially in view of the fact that several small- and medium-scale farmers have flourished and moved up a category, as noted above.

Graph 4.12: Categories of farmer according to average milk production (litres per day)



Source: COPAG survey, 2006

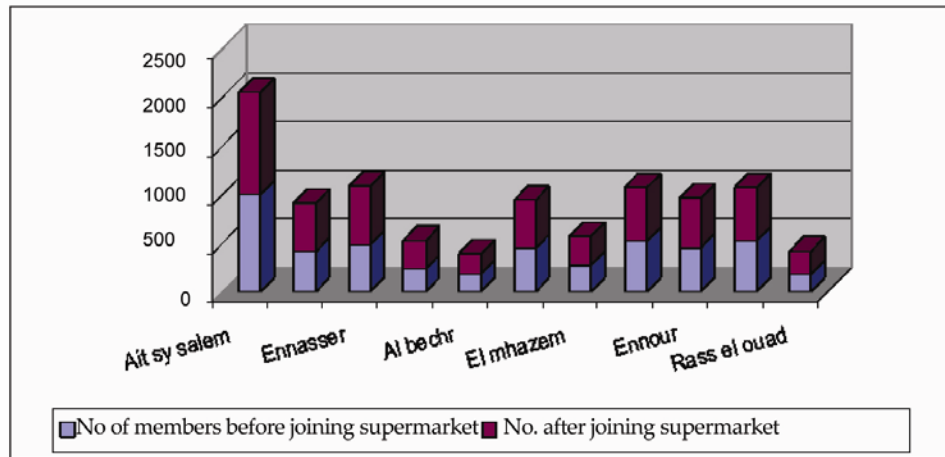
4.3.2 Impact on cooperatives affiliated to COPAG

Rise in cooperative membership

Cattle farmers in Souss Massa have to contend with various problems, from illiteracy to obsolete equipment, surplus labour and very high unemployment. COPAG's influence on the region's social economy has helped add value to their produce, reduce unemployment, settle rural populations in landlocked regions, stem the rural exodus and increase the number of cattle farmers in cooperatives affiliated to COPAG.

According to estimates based on our sample survey cooperatives, membership has increased in the last five years as a result of the benefits offered by the mother cooperative, which is constantly encouraging new members to join.

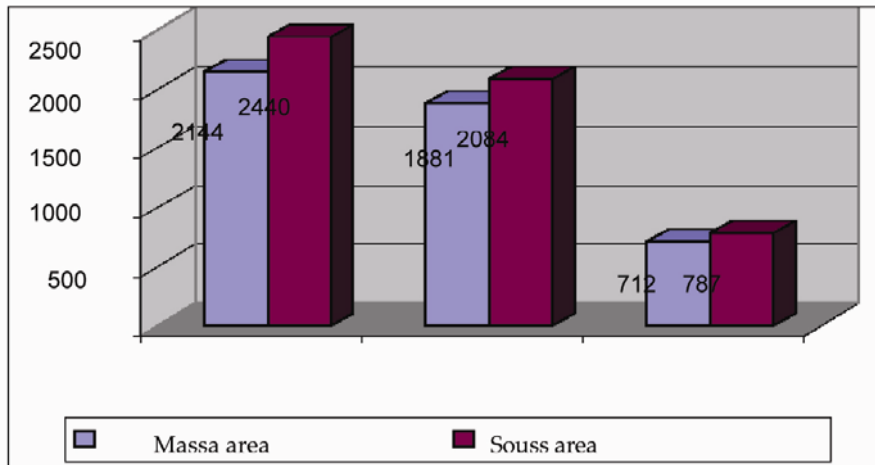
Graph 4.13: Number of members in affiliated cooperatives



Source: COPAG survey, 2006

The average membership of all the cooperatives affiliated to COPAG has increased since its involvement with supermarkets. Growth rates vary across the region: at the time of the survey, total membership of all the cooperatives surveyed in the Massa area stood at 2,440, with 2,084 in the Souss area and 787 in the mountainous zone. While over 75 per cent of all the cooperatives in the Souss Massa region are located in the Souss area, the number of members in the Massa plain has also grown significantly, despite the low concentration of milk cooperatives there due to the mother cooperative being so far away. Membership has increased in the mountains too, but to a lesser extent than in the other areas.

Graph 4.14: Growth of cooperative membership in each study zone

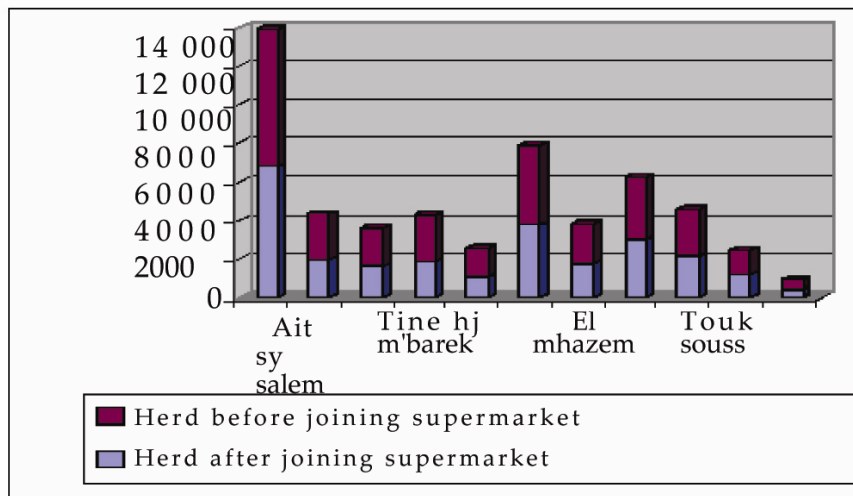


Source: COPAG survey, 2006

Increased herd size and daily production in each cooperative

Most of the cooperatives we surveyed reported an increase in herd size, including Ait Si Salem, the largest and best cooperative in the region. Its members have invested considerable effort in improving hygiene and management, and their complex now has the best basic infrastructures in the region, with company stores, a computer suite, a dormitory, a family centre for training farmers’ sons, a treatment room with more than five milk tanks to receive milk, a petrol station, and farming equipment for its members.

Graph 4.15: Growth of cattle herds in each cooperative

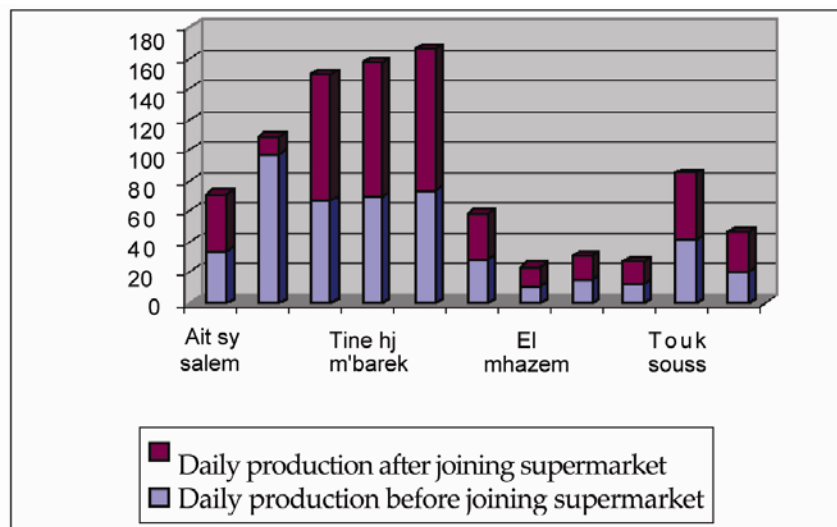


Source: COPAG survey, 2006

Members' milk output is collected at 40 centres in big milk cooperatives or on individual members' farms, which have refrigerated tanks to keep the milk at the right temperature and maintain its quality. Each cooperative has a collection agent or agents to ensure that the milk is of acceptable quality - young employees trained by the mother cooperative to check its acidity and water content. They are also responsible for recording how much milk the farmers deliver and passing the figures on to the accounts department in COPAG. Graph 4.16 below shows a marked increase in the amount of milk delivered each day by every farmer in all the cooperatives we surveyed.

There are various sanctions for bad practices (watering down or skimming milk), ranging from immediate rejection of the consignment with a verbal warning to a 15-day suspension of deliveries, or, in extreme cases, total cessation of deliveries. These measures make farmers more vigilant and careful about their practices.

Graph 4.16: Daily production rates in each cooperative

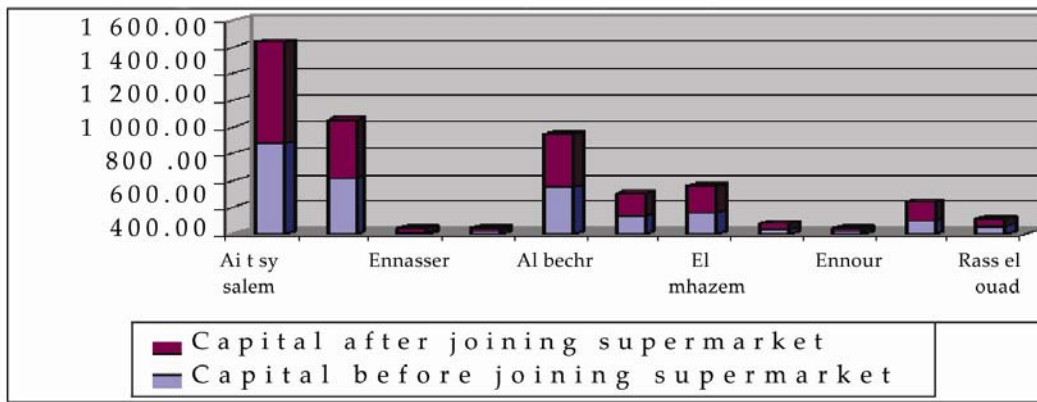


Source: COPAG survey, 2006

Evolution of individual cooperatives' net assets

The net assets of the cooperatives we surveyed vary considerably. Those of the Ait Si Salem cooperative rose from 676,000 Dhs to 757,000 Dhs in five years as a result of cumulative net surpluses, subsidies and premiums, which means that it is now in a position to undertake the various tasks proposed and voted through by its members.

Graph 4.17: Capital growth in affiliated cooperatives



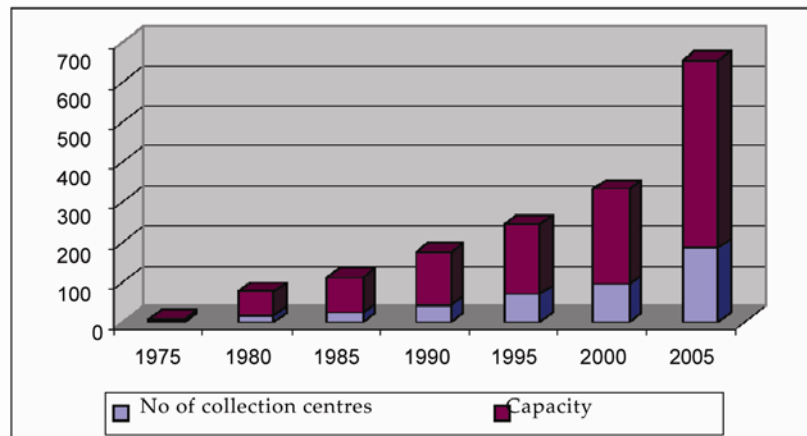
Source: COPAG survey, 2006

All the organisational and management efforts invested on behalf of the region’s cattle farmers will help maintain the quality of the milk as it passes from the collection centres to the dairy.

Collection capacity

According to the statistical report from the Souss Massa regional agricultural investment office, there are currently around 167 collection centres in the Souss Massa area, with a capacity to collect 507,170 litres per day. COPAG contributes to 24 per cent of these centres, whose capacity increased between 1975 and 2005 thanks to being regularly supplied with milk tanks.

Graph 4.18: Number of collection centres and capacity in the Souss Massa region, 1975 to 2005



Source: COPAG survey, 2006

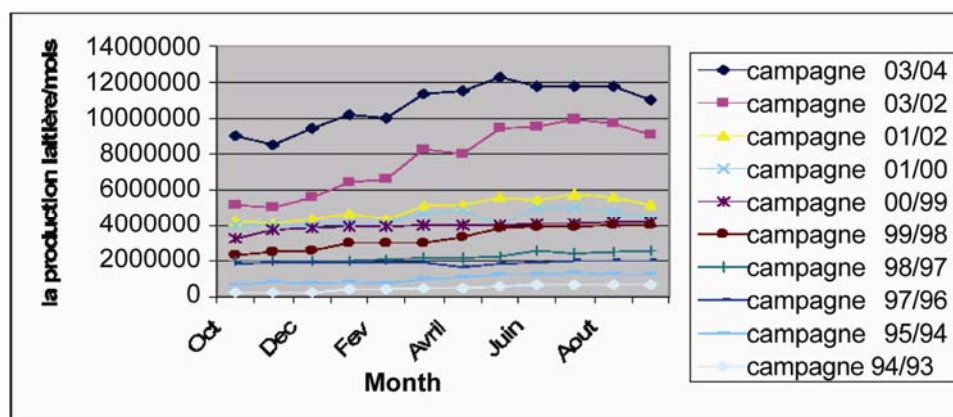
Members take their milk to the nearest of the 40 or so collection centres affiliated with COPAG, which are located along the Aouloz – Massa axis. These serve every

village in the region, and are equipped to carry out initial quality checks on the milk. The cooperatives' milk production increases in proportion to their membership, so those with the most members generally produce the most milk.

Volume of milk collected

Graph 4.19 below shows a 20- to 50-per cent increase in the volume of milk collected each farming year. Seasonality does not appear to be a determining factor, although it did seem to have a slight effect in the last two years (slightly less so in 2003-2004). This may be due to several factors: the increase in land under fodder crops, greater genetic improvements to the herd as a result of artificial insemination and the introduction of high-value genetic stock seed, improved milk production, technical training for farmers, ongoing training for members, an increase in the number of collection centres, and new individual and corporate members joining the mother cooperative.

Graph 4.19: Monthly milk collection from 1993/1994 to 2003/2004

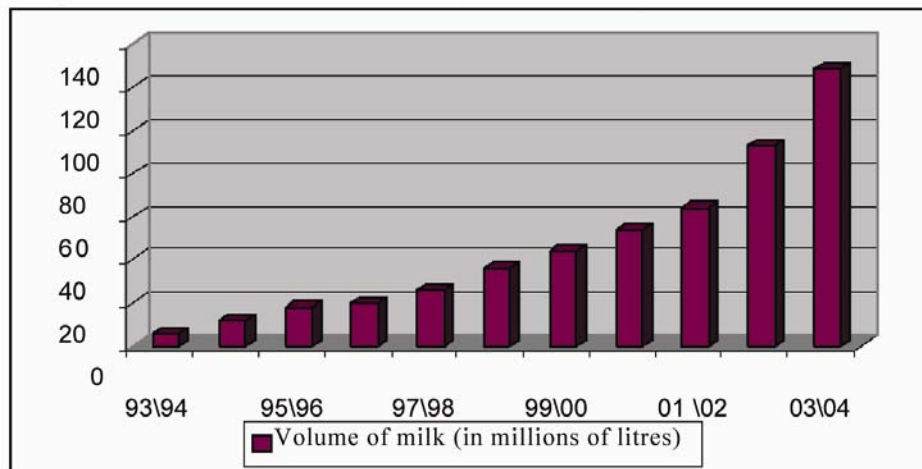


Source: COPAG survey, 2006

Despite the difficult climatic conditions in the region and the national ban on imported heifers, production increased, especially in the 2001/2002 season, when 44,181 tonnes of milk was collected. This is the equivalent of 12,000 litres per day, and represents an increase of 22 per cent.

Going by the surveys conducted with managers in COPAG and its affiliates, we can say that this increase is largely due to members being encouraged to increase their output, raw milk being purchased (and paid for) on the basis of its quality, members being supplied with high-nutrient livestock feed at affordable prices, and the involvement of other new members.

Graph 4.20: Volume of milk collected



Source: COPAG survey, 2006

4.3.3 Impact on capacity to process milk

According to the cooperative managers we interviewed, COPAG's efforts to develop its arm of the dairy industry have improved the conditions for processing its members' milk, offering them a secure market and the best terms and prices in Morocco.

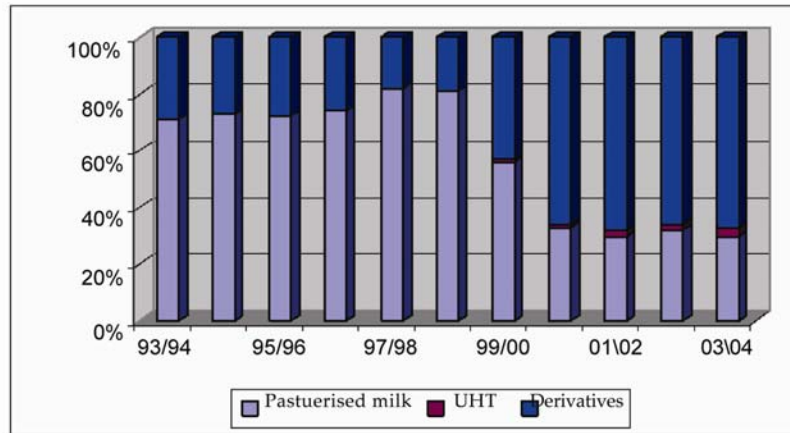
Diversification of dairy products (the Jaouda range)

Graph 4.21 shows how the cooperative has diversified its range of dairy products in order to get ahead in the national market.

When milk collection and processing activities were getting off the ground, most of the milk sold was pasteurised, accounting for 81.15 per cent of sales in 1996/1997. Its initial dominance over other derived products dwindled to 57 per cent in 1999/2000 and 33 per cent in 2002/2003, as the dairy developed and sales of derivatives increased.

Improvements in milk production and processing techniques upstream in the milk supply chain facilitated various investments in the dairy, which meant that COPAG was able to further diversify after it joined the supermarkets, having increased production capacity from 7,100 kg/day in 1993 to 316,700 kg/day in 2004.

Graph 4.21: Changes in the range of products produced by COPAG between 1993/1994 and 2003/2004



Source: COPAG survey, 2006

4.3.4 Impact on marketing of dairy products

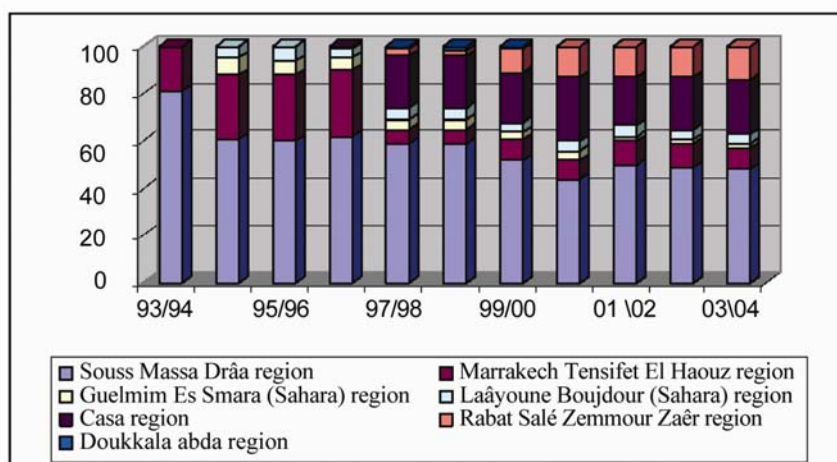
Progressive growth of the national market

COPAG has always tried to overcome any problems it encounters, working to structure its marketing services and build up its human and material resources so that it can achieve its objectives.

The cooperative started distributing Jaouda products on the traditional national market several years ago, when this was its only outlet. The circuit is well organised in terms of controls and logistics, with qualified supervisors trained in-house, and a fleet of distributors with refrigerated lorries to ensure that the produce arrives in good condition. They set off on their rounds of small businesses at 5:00 a.m., following itineraries set by COPAG's managers in order to meet consumer demand for each product.

COPAG's strategy for gradually covering the national market was initially quite timid - in 1993/1994 this entailed marketing a limited range of Jaouda products in its native region (Agadir 47 per cent, Tiznit 15 per cent, Marrakech 19 per cent, Taroudant 19 per cent). However, it extended its field of action as the cooperative developed, and now covers most of the country (Souss region 48 per cent, Rabat 14 per cent, Casablanca 23 per cent, the south 6 per cent, Tensift 9 per cent). This success is due to its members' efforts to produce good quality milk, and its managers' skills in developing the upstream end of the milk supply chain and ability to take on the competition at national level.

Graph 4.22: Distribution zones for Jaouda products, 1993/1994 to 2003/2004



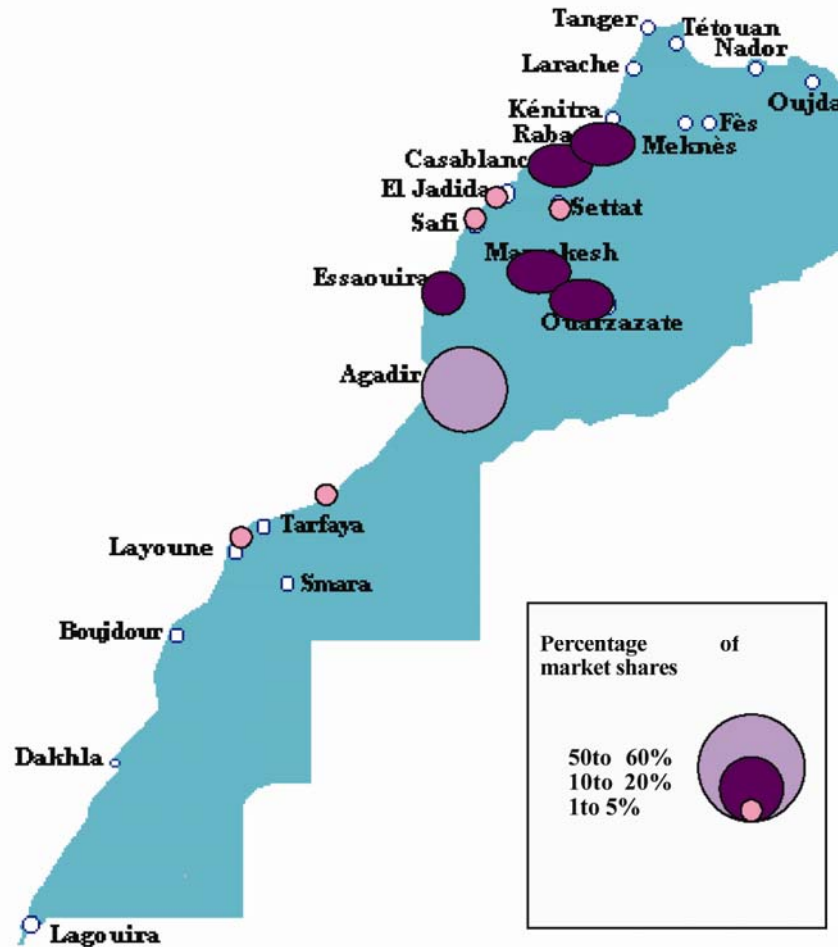
Source, COPAG survey, 2006

COPAG turned over 63 to 93 million dirhams each year between 1993 and 1996, increasing its turnover by 48 per cent in this three-year period. Turnover rose from 112 million dirhams in 1996 to 160 billion dirhams in 1998; a 43 per cent increase that was subsequently dwarfed by the 80 per cent hike to 200 million dirhams in the eight years between 1996 and 2004.

Its share of the national market is continuing to grow, currently standing at 23 per cent for pasteurised milk and 18 per cent for dairy produce and UHT milk. At the regional level (Souss Massa), it accounts for 60 per cent of pasteurised and UHT milk, and 70 per cent of dairy products.

The map overleaf shows the market share of Jaouda products across Morocco. This varies according to local demand and geographical distance from the study zone.

Figure 4.4: Map showing average market share in different parts of Morocco



Source: COPAG survey, 2006

In this section we analysed the extent to which COPAG has adapted to meet the demands of the market, looking at its strategies, organisational factors and what it has done to develop the milk supply chain.

Despite various constraints to production and marketing in the Souss Massa region (climate, limited water capacities, distance from main markets), we found that actors in the area - and COPAG's managers in particular - are on a mission to create and sustain the conditions to develop efficient, profitable and standard-setting agriculture. The strategic decision to integrate activities has enhanced their agricultural knowledge and honed the marketing and industrial skills required to maximise customer satisfaction and loyalty at both national and international levels.

As the only agency promoting and supporting socio-economic development in the Souss Massa region, COPAG's main, milk-related activities have had a significant

impact on the area. With the help of various development initiatives, COPAG has established a new form of professional organisation that seeks to draw farmers into its affiliated cooperatives. Member farmers have seen their UAA increase from an average of five hectares to 38 hectares, their herds grow from an average of eight to 62 head of cattle, and milk production rise by 40 per cent. Many farmers have scaled up their operations, progressing from being small- to medium- and large-scale operators, as average production has risen from 45 litres to 630 litres per day. The efforts invested over the last few years have allowed producers with limited resources not just to survive, but to prosper, take control of their lives and get more involved in the development process.

Facing up to the technological, innovational and logistical challenges of improving production and processing will also help ensure that the State's disengagement from the sector is irreversible. This will help sustain agrarian production systems and go some way towards halting the rural exodus that has blighted the region for many years.

In a context of political and economic decentralisation, COPAG is not just a regional economic success, but also a national byword for dynamism. As such, it has an important role to play as an institutional partner both within the professional apex and to state development agencies outside it.

5 COPAG and integration in modern commerce

As we have seen, COPAG's dynamism in the milk supply chain is due to its effective development strategy, its ability to attract new member farmers and win their confidence, and engagement with the modern retailing and distribution industry some ten years after the cooperative was established. A series of organisational and technological changes gradually prepared COPAG for a bold and aggressive marketing strategy in the face of the giant Centrale Laitière (ONA – Danone partnership). COPAG's managers made it clear that gaining access to the retailing and distribution industry was not a simple operation. Entry was delayed until 2003 by the anti-competitive practices of the Centrale Laitière and ONA retailers and distributors (barriers to distribution) on the one hand, and members' reluctance to meet the financial entry requirements on the other. In the end, the reputation its products had gained in the traditional network of groceries and mini-markets, and Auchan's willingness to diversify suppliers helped provide an entry point into the market.

Analysis in this section will revolve around three main themes: (i) changes before gaining access to the retailing and distribution industry; (ii) the year of entry into structured modern commerce; (iii) the changes introduced with and engendered by entry into modern retailing and distribution.

5.1 Changes before access to the retailing and distribution industry

- Milk production increased by a factor of 18 in seven years: rising from 8,000 litres per day to 147,000 litres per day.

- This increase was due to **investment** in the creation and subsequent expansion of a milk processing unit; the creation of a compound feed production unit and a refrigerated unit; refrigerated transport, storage containers and packaging machines; increasing herd size and improving its genetic makeup; attracting new members, particularly farmer cooperatives from the region who believed in what COPAG was doing; and socio-economic benefits for the locality (more jobs in a region with high levels of unemployment).

- One of the consequences of this investment strategy has been the **progressive diversification of milk products**. Until 1999, the cooperative's main activity was pasteurising milk (82 per cent). Other products were *raibi* (a kind of flavoured curdled milk popular among Moroccans), skimmed milk, yoghurt and butter. In 2000, the company decided to start producing other dairy products and also began

to diversify its packaging, something that was to play an important role in promoting its image and keeping its clients happy.

- From 2000 onwards the **drive for improved quality** led to the development of a rigorous mechanism to check the quality of livestock feed and dairy produce and derivatives. This was the start of an agreement with French companies specialising in food quality control and technical training for cattle farmers. A new payment system was introduced whereby farmers are paid according to the quality of the milk; they were also encouraged to increase milk production, and members were supplied with affordable, high-nutrient livestock feed.

- Many **constraints** had to be addressed too: competition, cyclical years of drought, ongoing training for cattle farmers, labourers and management (continuous training), intensifying and managing fodder crops, feeding herds according to scientific criteria, managing buildings for livestock, helping cattle farmers with feed and getting the quantity and quality of their milk right.

- **Marketing strategy focused on the south until 1998.** After progressively exploring several cities in the south, COPAG began selling in cities along the Marrakech – Casablanca – Rabat axis in the north as its milk production capacities increased. It commissioned its first marketing studies from a marketing consultant in Casablanca; and Jaouda became the umbrella trademark for all the cooperative's products.

COPAG initially divided its distribution zone into five geographic sub-zones (Rabat, Souss, Casablanca, the south, Tansifit), each with its own sales office. It increased the number of sub-zones to nineteen in 2001-2002, when it first engaged with the large retailer Marjane.

- **Organisational changes** began with a change in status in 1997, in accordance with the new law on cooperatives. The creation of new posts (such as marketing director) and restructuring from the late 1990s onwards (see evolution of internal organisational structure, Section 5.3 below) can be seen as important precursors to the diversification of COPAG's markets and its integration into modern commerce in 2002.

Just prior to this, in 2001-2002, COPAG embarked on a programme to upgrade its 67 member cooperatives and their 13,000 member producers. It provided them with a vital infrastructure comprising a milk collection centre, a store selling livestock feed, a company store selling all the inputs they needed, a depot for agricultural equipment and a machine workshop, administrative services and service stations where they can buy fuel. It also laid on administrative and accounts training to improve the management capacities of existing structures, along with hands-on

technical training for producers to improve their practices and behaviours and increase quality and productivity.

Image 5.1: Programme to upgrade member cooperatives



Source: survey photos, 2006

5.2 The turning point in 2003: entry into the retailing and distribution industry, and what this entailed

The changes instigated between 1998 and 2002 enabled COPAG to start negotiations with the retailing and distribution industry – or more precisely, with Marjan, which is part of the Moroccan group ONA. In the end these negotiations came to nothing, not because COPAG was unprepared for the demands of the industry, but because of the anti-competitive practices designed to protect another member of the ONA group, the Centrale Laitière (a subsidiary of Danone).

Table 5.1: Structure of the agrifoods industries

Sector	Number of businesses	Production (M/US\$)	ONA market share
Milk industry	43	533	46.9%
Fishing industry	115	425	13.9%
Vegetable and animal oils	111	579	44.1%
Sugar and refining industry	14	530	46.8%
Other foodstuff industries	97	204	17.7%
Drinks industry	32	464	52.4%
Total agrifoods industry	1,697	5,684	19.2%

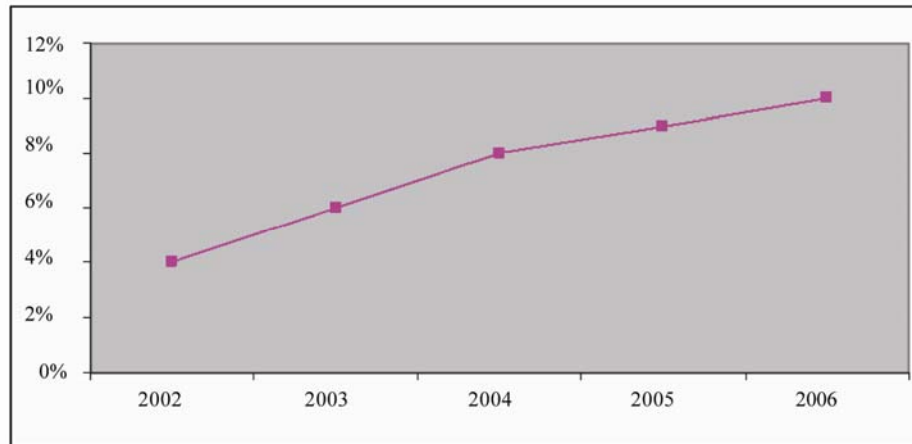
Source: Alt Akka and Ali, 2001

Given the difficulty of breaking into the competitive modern distribution market (at the time monopolised by the ONA and with no legal framework for distribution), COPAG found another market that it would seek to develop and consolidate: the traditional network of grocery stores and emerging small supermarkets. Playing on local loyalties (most shopkeepers come from Souss, where COPAG is based), it would find them to be valuable partners and effective ambassadors for its product range.

5.2.1 Engaging and evolving with modern commerce

Modern commerce has flourished in Morocco as living habits have changed, urbanisation increased, and globalisation spread. By following these changes and engaging with all the supermarket chains, COPAG has been able to promote and establish its products and reach consumers at every level. By 2006, ten per cent of all its dairy products were being sold to supermarkets (see Graph 23 below).

Graph 5.1: Supermarket demand for COPAG's products, 2002 to 2006



Source: COPAG survey, 2006

This is the result of organisation, and a profound change in the cooperative's production systems and business strategies. We will examine these after looking at COPAG's relations with its clients and considering how these shops have expanded and demand increased.

According to the managers we spoke to, engaging with the retailing and distribution industry entails *"upgrading our products in order to establish a credible image among Moroccan consumers"*. In short, the supermarkets provide a direct line to the consumer.

COPAG's marketing director explained that supermarkets, mini-markets and hypermarkets give them access to every category of consumer, and that they had begun their strategy of diversifying products several years earlier, in order to gain access to supermarkets. The photo overleaf shows some of the lines on offer in supermarkets.

Image 5.2: Lines on offer in supermarkets



Source: Survey photos, 2006

COPAG's relationship with supermarkets can be considered in two phases, which are discussed below: (i) its engagement with Métro, Label vie, and Assawak Assalam; and (ii) doing business with Marjane and its subsidiary Acima.

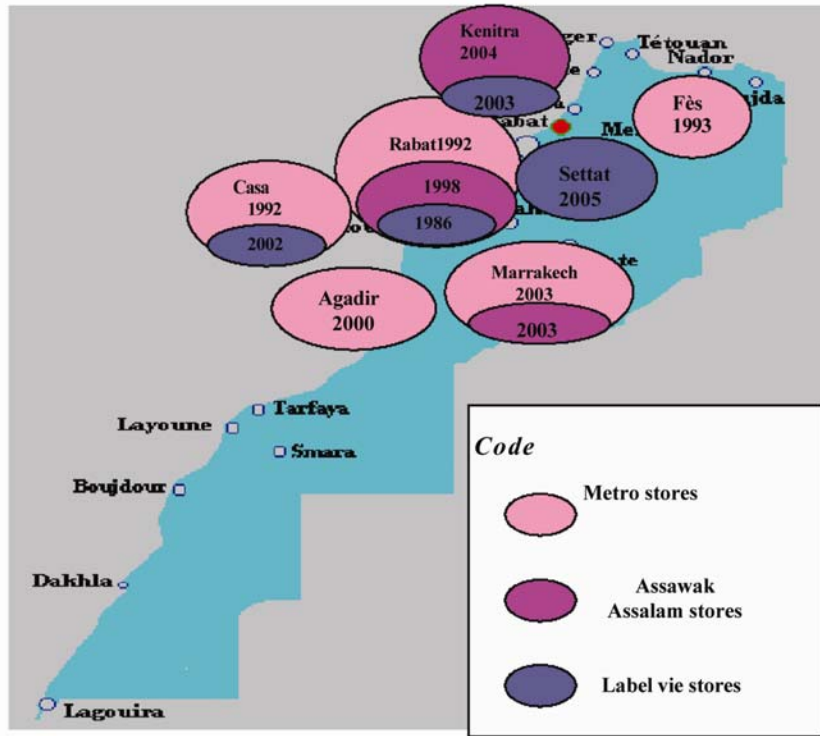
5.2.1.1 Phase 1 (2002)

In 2002 COPAG started marketing its products to Métro, Label vie, and Assawak Assalam, which did not demand the entry fee charged by other shops although they did charge a listing fee. It has an annual contract with these shops, setting specific standards that change from year to year.

Their expansion into every town in Morocco established a massive domestic and foreign consumer base. Demand for milk and dairy produce in these stores varies according to several criteria, such as the size of the shop, consumer demand, and turnover rates.

The map below shows COPAG's coverage of the country through Métro, Assawak Assalam and Label vie stores.

Figure 5.1: COPAG's presence in Métro, Assawak Assalam and Label vie stores

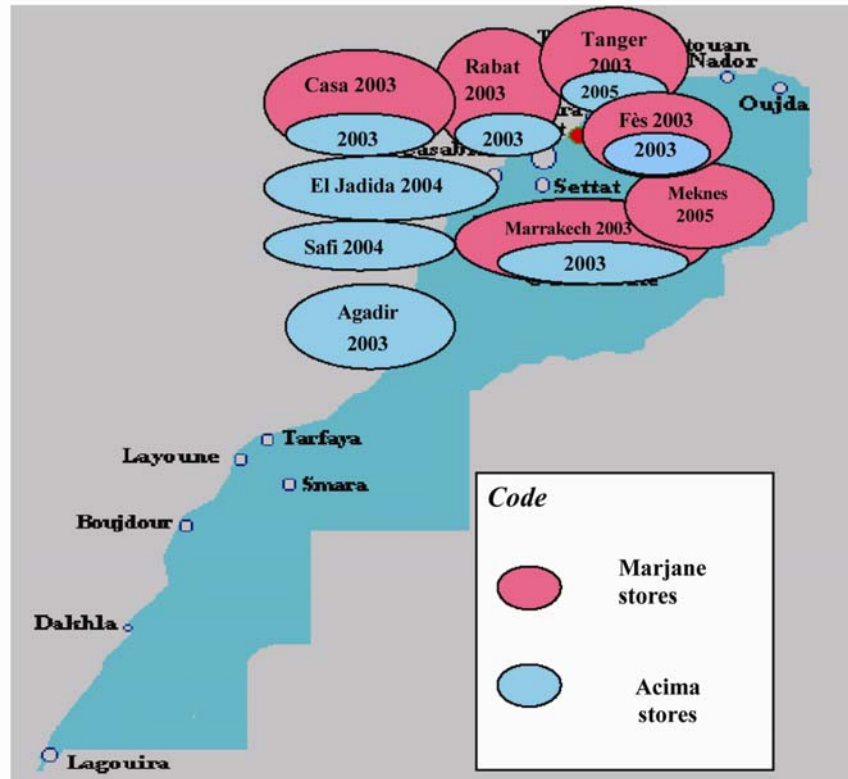


Source: COPAG survey, 2006

5.2.1.2 Phase 2 (2002)

COPAG's presence in these first stores (Métro, Assawak Assalam and Label vie) enabled it to familiarise consumers with Jaouda products and market them intensively (see Figure 5.2 overleaf).

Figure 5.2: COPAG's presence in stores belonging to Marjane and its subsidiary Acima

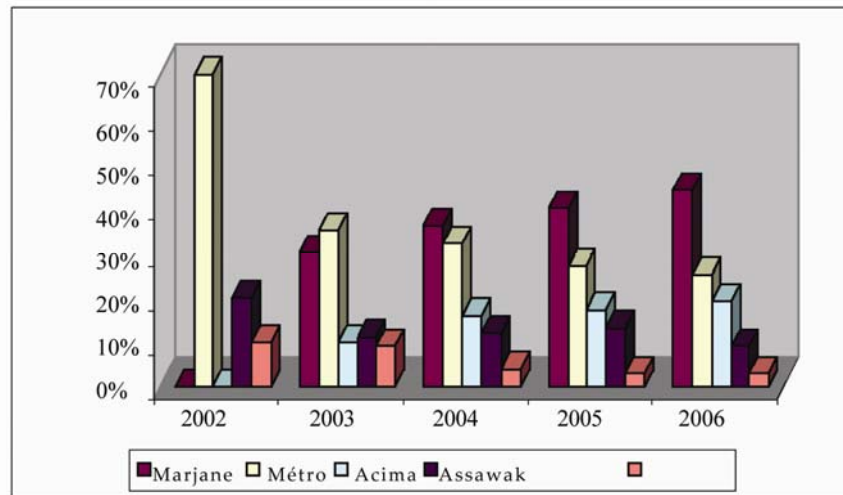


Source: COPAG survey, 2006

Auchan's partnership with the ONA group also gave COPAG access to Marjane stores, as Auchan demanded a wide range of national products in its shops. In the spirit of modern enterprise, it asked Marjane to increase the range of local produce on its shelves as local businesses gained a certain standing in the market and a reputation for quality products and recognised brands.

COPAG fulfilled both of these conditions, which were the key to establishing a presence in Marjane and Acima in 2003 - after negotiating a three-year contract and paying an entry fee of one million dirhams. In the last five years it has seen its products marketed in the modern commercial sector.

Graph 5.2: Demand for Jaouda products in each supermarket chain



Source: COPAG survey, 2006

Demand grew in each chain of supermarkets, particularly Marjane and Acima, which accounted for 70 per cent of total supermarket demand by 2006. The variation in demand for Jaouda products over the years can be attributed to the following factors:

- COPAG's engagement with Métro, Assawak Assalam and Label vie in 2002;
- its move into Marjane and Acima stores in 2003, which have accounted for a much larger share than other stores in recent years (70 per cent in 2006);
- the annual increase in the number of shops in every city in Morocco.

COPAG negotiated with the supermarkets over the following terms and conditions:

- diversification of the product range
- reference listing for each product range, i.e. flavours for each range
- ditching products that don't sell
- a requirement for merchandising specialists, who manage and organise products on the shelves to ensure a rapid turnover.

Marjane organises its stock according to the type of product range, so that consumers can choose from a variety of brands and products. Each supplier is allotted a certain amount of space (linear metres) according to its range, so there is a lot of competition to display all the products on limited shelf space.

Métro and Assawak Assalam have more space, and organise their stock by brand. Acima, which is a subsidiary of Auchan Marjane, offers each supplier a certain number of linear metres according to its range of products.

Over the last few years COPAG has become a key player in regional and national milk production. The year 2001-2002 was marked by **sustained marketing** efforts to get its products known, mainly by advertising on posters, lorries and newspapers.

Although it mainly supplies the traditional commercial circuit, COPAG's share in the modern business sector is growing steadily in comparison with its competitors. We will now examine what this sector requires from the cooperative.

5.2.2 Retailing and distribution industry requirements for COPAG

In order to meet their customers' expectations and increase turnover, supermarkets are constantly seeking to improve their products in terms of quality, hygiene, and value for money. This means regularly monitoring their agrifoodstuff suppliers, especially suppliers of dairy products, to get them to improve their production and launch new products to meet the conditions for turnover, product standards, and quality of service.

Retailing and distribution industry requirements for COPAG

- Varied range of new products, with a focus on developing UHT milk (quality packaging, etc.)
- Continuous delivery of products, also during promotions
- Quality guarantees, particularly transport at less than 6° C
- Keeping to orders
- Delivering on time (7:00 am)
- Ensuring that products are delivered ten days before their expiry date
- Participating actively and financially in promotions: the supplier is expected to be involved in leafleting, running tasting stands, and anniversary promotions (in Métro, for example). The budget allocated for these activities is set during initial negotiations over entry and contractual arrangements;
- Discounts based on a fixed percentage of turnover (including aisle end displays, leaflets, special offers, etc.)
- Offering end of year discounts on turnover + unconditional discounts for supermarkets
- Payment 30 days after receipt of invoice;
- Ability to deliver to every store in the country.

The cash and carry Métro demands anniversary discounts each year, starting one month before the promotion begins and one week after it ends. This is problematic for COPAG as it extends the duration of the promotion to two months.

Some of the clauses of the contract are analysed below.

5.2.2.1 End of year discounts

Distributors expect their suppliers to lower their prices when the volume of sales in supermarkets increases. This puts a strain on relations, as the supermarkets claim completely arbitrary additional retrospective payments in the form of '**end of year discounts**' (EYD), which represent a one- to two-per cent cut in the value of all goods purchased in the previous 12 months.

5.2.2.2 Leaflets

These are a way of advertising suppliers' products in monthly or fortnightly catalogues, depending on the supermarket chain. Suppliers working in food retailing and distribution have to pay a percentage of their turnover in order to be featured in the supermarket's leaflet.

5.2.2.3 Discounts

Base prices may be reduced for various reasons:

- during a promotional campaign
- as an unconditional discount corresponding to a percentage deducted from the total value of an order

Supermarkets impose these conditions as part of their contract with agrifoods suppliers. In COPAG's case, this represents eight per cent of annual turnover.

5.2.2.4 Product requirements

Supermarkets set different standards according to their supplier, to ensure that they get good quality fresh perishables like dairy products. At the moment these standards are less stringent than the quality requirements of European operators like HACCP, ISO, BRC, etc., but Auchan's arrival on the scene through Marjane looks set to change this.

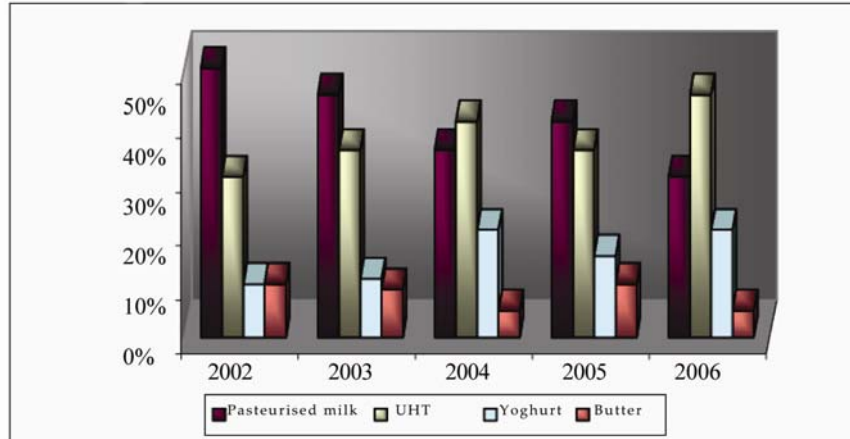
5.2.2.5 Delivery

The aim is to deliver stock regularly to ensure that products are always available on the shelves. Under the terms of its contracts with supermarkets, COPAG is required to:

- supply every store in the chain nationwide;
- guarantee daily delivery of orders placed with the sales office 24 hours beforehand;
- keep to orders;

- deliver goods at 7:00 a.m. at a temperature of 6°C.
 Over the years delivery of Jaouda products has varied from one shop to another and according to the type of product - fresh milk, yoghurt, butter, UHT milk, etc.

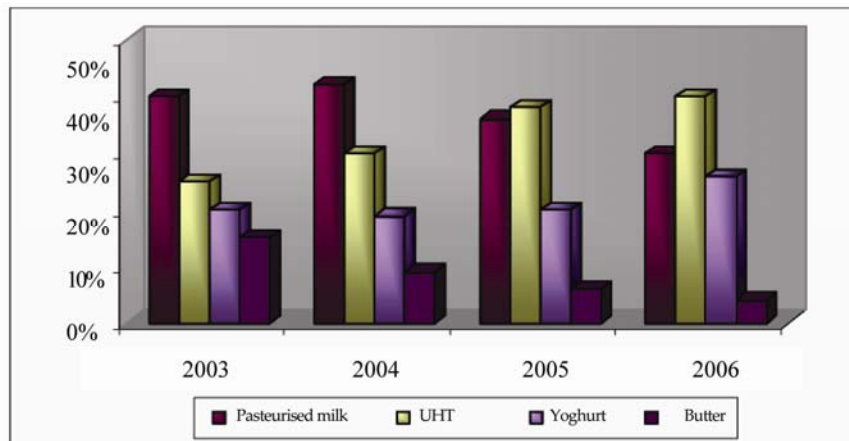
Graph 5.3: Delivery of Jaouda products to Métro, 2002 to 2006



Source: COPAG survey, 2006

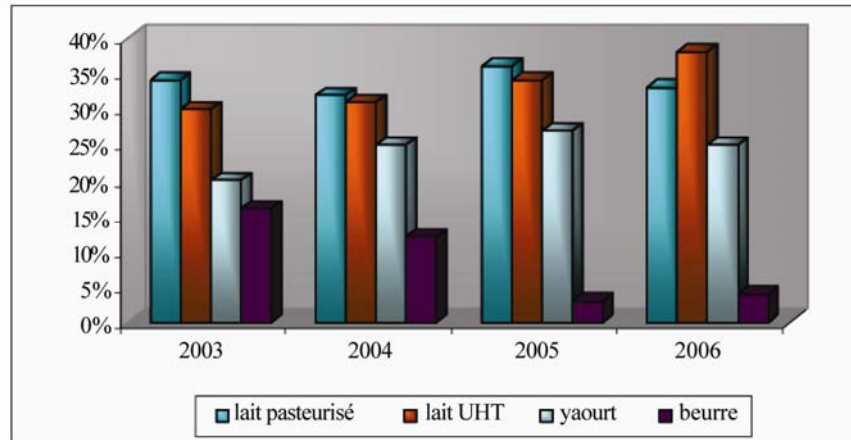
Graph 5.3 above shows that pasteurised milk accounted for a large proportion of the goods supplied to Métro in 2002. This declined over time as demand for UHT milk and yoghurts rose.

Graph 5.4: Demand for Jaouda products in Marjane, 2003 to 2006



Source: COPAG survey, 2006

Graph 5.5: Demand for Jaouda products in Acima, 2003 to 2006



Source: COPAG survey, 2006

Graphs 5.4 and 5.5 show a significant change in the demand for Jaouda products from both Marjane and Acima. Although this varies from one shop and one product to another, demand for UHT milk and yoghurts remained high in nearly all of their stores between 2003 and 2006.

5.2.2.6 Expiry dates

Computerised monitoring of inflows and outflows has improved stock management. The aim is to reduce the average time (number of sales days) articles stay in the shop before they are sold, but supermarkets need goods to be delivered at least ten days before their expiry date to allow for a reasonable turn around time.

5.2.2.7 Merchandising

Supermarkets expect their suppliers to have an in-store merchandiser, especially suppliers of staples like dairy produce. Merchandisers are responsible for shifting 'their' brand in all points of sale. The stakes are high, as merchandising can affect turnover of a line by 30 to 40 per cent. They take their lead from the chain, which means working with the management brand; analysing what is needed on the shelves and at points of sale, filling gaps left by customers, and deciding what is needed in terms of decoration, point-of-sale advertising, bags, even staff uniforms, furniture, etc.

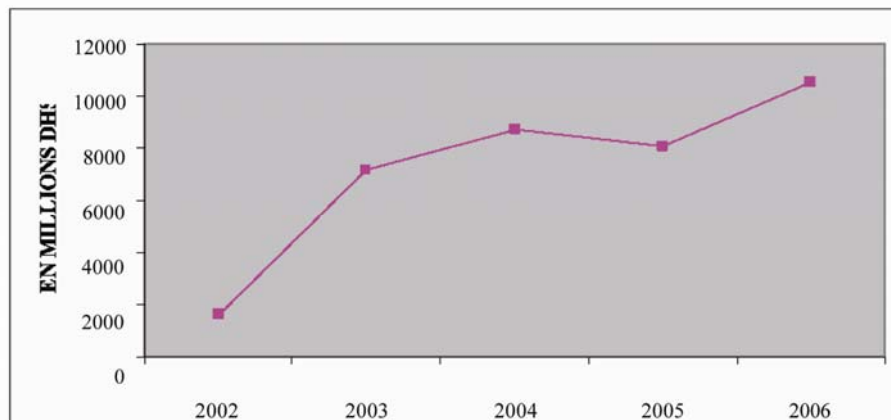
Merchandising has three strategic roles:

- stock: the merchandiser is responsible for managing the shelves. This involves organising products according to the departmental manager's instructions, filling any gaps, monitoring stock movements and checking expiry dates, organising and monitoring the profitability of products in order to maximise turnover.

- presentation and layout: it is the merchandiser's job to sell products within the spatial limits set by the chain, organising them so that customers can see and select what they want. The aim is to place products that sell quickly near those with a slower turnaround, to help shift them.
- promotion: the merchandiser helps with point-of-sale promotions and advertising during sales campaigns, mainly during in-store anniversary promotions and special events like Ramadan, *elaid* and Christmas. COPAG's merchandiser participates in all promotional campaigns, which mainly revolve around the month of Ramadan and store anniversaries.

These requirements are of some benefit to suppliers, especially promotions, advertising and leaflets that familiarise consumers with their products. However, they can also be penalised for not meeting the supermarkets' demands, as they may stop ordering goods or reject them if they are delivered late or at temperatures exceeding 6°C. So far COPAG has managed to fulfil all its contractual conditions and requirements, regularly meeting orders and delivering at the agreed times, etc.

Graph 5.6: Supermarkets' average annual turnover



Source: COPAG survey, 2006

Supermarkets have seen their turnover grow substantially with the opening of new stores each year and the recent escalation in demand for milk and dairy products. We will now look at COPAG's commercial strategies in the light of these trends.

5.2.3 Analysis of COPAG's commercial strategies

So far, COPAG has been able to retain its characteristics as a cooperative while successfully placing its products in a changing market. It now needs to do more to secure its future, by making its organisation more effective and innovative, winning its clients' trust and offering consumers **healthy and enjoyable** products that meet regulatory requirements. To this end, it has developed and implemented various

strategies to enable it to meet the demands and conditions set by its clients, particularly supermarkets.

5.2.3.1 Quality

COPAG has been working to improve the quality of its products from the beginning to end of the production process. In 2002 it created a department to manage product quality and development, which is responsible for putting in place, developing, maintaining and improving the quality control system. Product quality is monitored from upstream to downstream:

- when it is collected from members, milk is checked by a designated manager who is responsible for monitoring hygiene (aluminium containers, cleanliness) and temperature, checking that it has not been watered down, and ensuring that milk tanks and collection centres are properly maintained.
- various physical chemical checks are carried out on the milk before thermization, in order to stabilise and standardise it before it goes through the various processes required to produce different dairy products.
 - Pasteurised milk is heat-treated to eliminate all pathogenic bacteria, then packaged in plastic sachets or 500 ml Tetra Packs marked with a three-day expiry date;
 - UHT milk is sterilised to eliminate all bacterial flora. This process differs according to the fat content of the milk;
 - Yoghurts are produced through a process of fermentation that allows lactic bacteria to multiply. Cheeses, which may be plain, sweetened or flavoured, go through a process of fermentation and separation. All these procedures involve improving and developing the product in order to secure a large share of the market - especially supermarkets.

The quality procedure outlined below was recently put in place as part of a project initiated by AFAC and COPAG.

5.2.3.2 Quality procedure

Since entering a competitive environment where quality is a key issue, COPAG has had to develop a rigorous quality procedure in a relatively short time. In 2005 it became involved in a project in partnership with the company Afak, in order to:

- consolidate its position in the market by reinforcing its role as a major actor in the national economy and the milk sector;
- improve the cooperative's internal organisation;
- build up a credible image with clients;

- develop a clear competitive advantage through innovation and technological improvements;
- increase motivation within the cooperative as a whole.

All these objectives are intended to deliver significant results at various levels, by:

- reducing production costs;
- ensuring customer loyalty;
- winning new clients;
- gaining recognition as a national brand.

To do this, COPAG has focused on hygiene, safety and respect for the environment at every stage of the process, working according to a recognised reference system, the ISO standard 9001 (2000 version) supplemented by the Hazard Analysis Critical Control Point System (HACCP).

This quality procedure is based on two systems of certification:

The first system was established in accordance with ISO standard 9001 (2000 version), which is defined as the ability of a set of characteristics to meet the following requirements:

- hygiene control
- food security control
- work safety control
- environmental protection.

The **second system**, which is based on HACCP and is required by the Auchan chain in Europe, consists of three health-check measures:

- identifying and evaluating the dangers associated with different stages of production
- determining the measures required to manage these dangers
- ensuring that they are properly implemented.

This procedure was introduced through a pilot scheme involving:

- a steering committee to manage the project, taking decisions and organising the whole team's work;
- a project team composed of project managers and selected coordinators;
- working groups drawn from the steering committee and collaborators, to help analyse the results of the work.

Although this procedure has helped the Jaouda brand maintain its good reputation in the traditional and modern sectors, the supermarkets demand a more pro-active approach, with regular product diversification and innovation.

5.2.3.3 Innovation

Supermarkets select their suppliers on the basis of several criteria, particularly their capacity to innovate, be creative with their packaging, and develop new products likely to meet their requirements.

COPAG therefore began a process of constant innovation to enable it to offer consumers a wide and regularly updated range of products, building up a portfolio of 80 lines of 16 Jaouda products in less than five years.

It started in 1993 with a small range of pasteurised milk, skimmed milk, yoghurts, and *raibi*. Major changes were then made to the range, most notably with the launch of UHT milk production in 2000. Due to high consumer demand in Morocco and elsewhere, producing UHT milk was a requirement for COPAG's entry into the retailing and distribution industry in 2002. The timeline for the launch of new products is shown in Table 5.2 below.

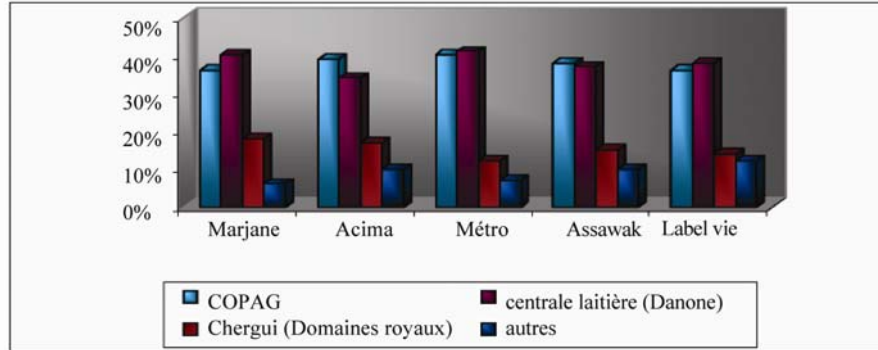
Table 5.2: Timeline for new ranges of product

Period	Type of product
1994/1995	Small range of <ul style="list-style-type: none"> - Pasteurised milk (73%) - Jaouda <i>raibi</i> - Skimmed milk
1997/1998	Launch of new product – butter – and intensification of production
1998/1999	Launch of 'Nectary' orange juice
1999/2000	<ul style="list-style-type: none"> - Launch of three types of UHT milk: whole, semi-skimmed and skimmed. This is seen as the most important product, and was the key to COPAG's entry into the retailing and distribution industry. - 'Fruity' flavoured milk
2001/2002	<ul style="list-style-type: none"> - Diversification of the range of yoghurts: plain yoghurt - Different flavoured yoghurts (vanilla, strawberry, banana, etc.)
2002/2003	Launch of another kind of juice, 'Mixy', with two kinds of packaging
2003/2004	Range of fromage frais products (Perly, Muscly)
2005/2006	Launch of Bataly cheese and a third type of juice, 'Mon jus'

Source: COPAG survey, 2006

By diversifying its range over the last five years, COPAG has established a major presence in supermarkets and expanded its share of shelf space, as shown in Graph 5.7 overleaf.

Graph 5.7: Annual share of shelf space compared with other businesses



Source: COPAG survey, 2006

5.3 Changes since entering the modern retailing and distribution industry

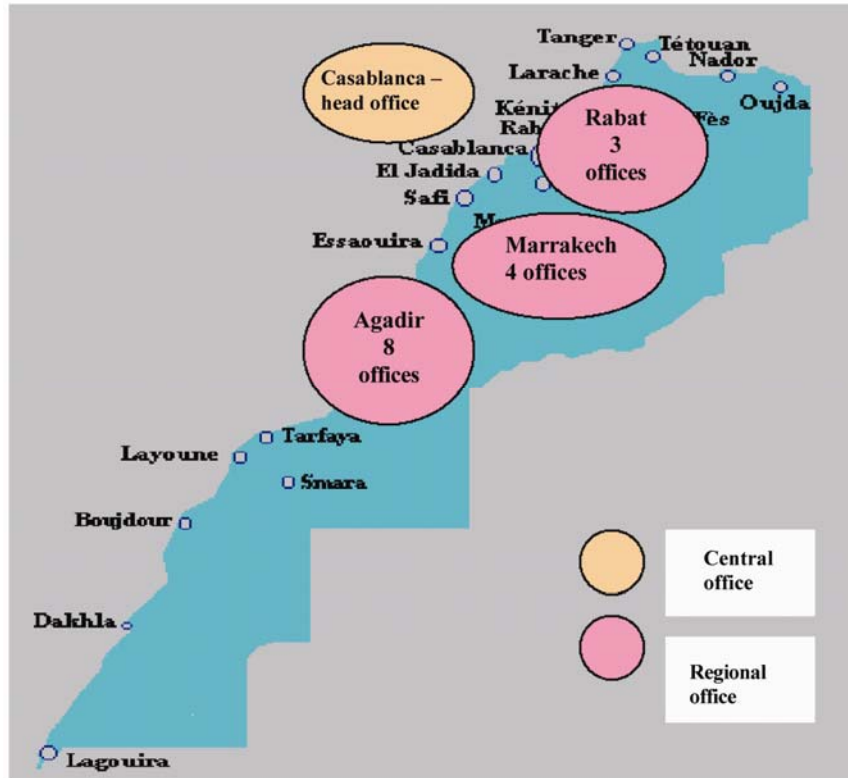
5.3.1 Organisational changes in marketing

5.3.1.1 Changes in the organisation of distribution

The recent introduction of sales offices was a significant factor in COPAG achieving nationwide coverage. It set up a head sales office in Casablanca in 2003, as part of a drive to improve distribution of its products in the traditional and modern sectors, and ensure continuous supply to all points of sale. The head office was divided into three regional sales offices covering the three zones shown in Figure 5.3 below.

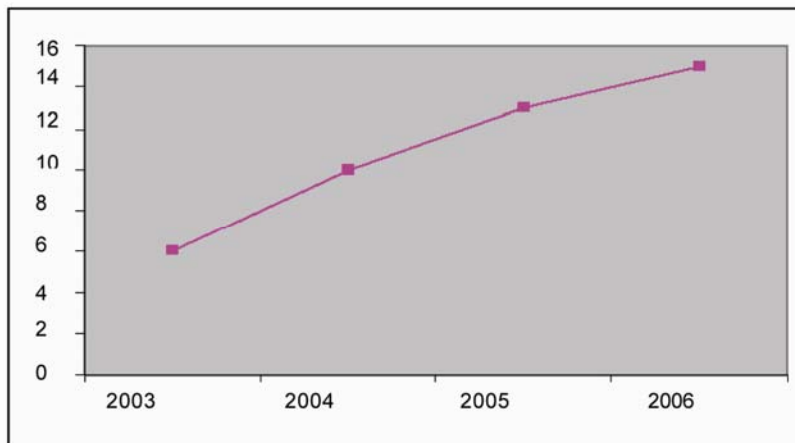
- Eight offices in the south play an important role in supplying large stores across the region (Marjane, Métro, Assawak Assalam, Acima) and the grocery shops found in every southern town, especially Agadir, Tiznit, Taroudant, Marrakech, El Yaoun, Dakhela, Guelemime, etc.
- Four offices in central Morocco distribute produce to traditional points of sale and large stores in Casablanca, El Jadida, Asfi and Beni mellal.
- Three offices in the capital Rabat are responsible for distribution in northern Morocco - large stores in Tanger, Tétouan, Fès, Mekhnès and Rabat.

Figure 5.3: Distribution of COPAG sales offices



Source: COPAG survey, 2006

Graph 5.8: Growth of sales offices



Source: COPAG survey, 2006

The offices are organised as follows:

- The director has overall responsibility for managing his area of activity, monitoring the sales offices and the whole marketing circuit;
- The office manager oversees supervisors of the modern and traditional sectors, and transmits orders to COPAG;
- Supervisors are responsible for checking orders, distribution at points of sale (traditional and modern), and seeking new clients;
- COPAG's merchandisers in the supermarkets it supplies organise displays, ensure that products are clean and visible on the shelves, and oversee point-of-sale advertising, stock management and ordering.

In order to succeed, the sales offices and managers need a reliable logistical system that can distribute and supply their products to all points of sale.

5.3.1.2 Changes in the organisation of logistics

COPAG has had to develop its logistical system in order to maintain good relations with client supermarkets and supply some 35,000 points of sale scattered across the main sales areas. The cooperative now owns a fleet of lorries, semi-trailers and other vehicles to transport goods from the factory to the 15 sales offices and thence to the stores.

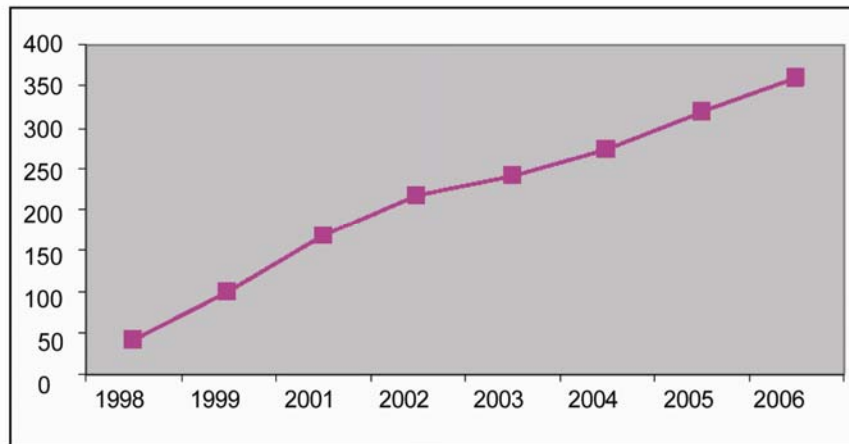
Table 5.3: COPAG's logistical fleet

Type	Number (in 2006)	Characteristics
Refrigerated lorries	30	Transport milk from the collection centres or individual members to the mother cooperative
Lorries	35	These 25-ton lorries transport products in bulk from the factory to the sales offices
Semi-trailers	295	These 3.5 ton trailers make daily deliveries to the 35,000 points of sale

Source: COPAG survey, 2006

In order to keep up with the expansion of traditional commercial areas in southern, central and northern Morocco (Fès, Meknes, Tanger, and Tétouan), and the year-on-year growth of modern commerce, COPAG has had to extend and diversify its distribution services to ensure that it can make daily deliveries to all of its clients (see Graph 5.9 below).

Graph 5.9: COPAG's logistical services, 1998 to 2006

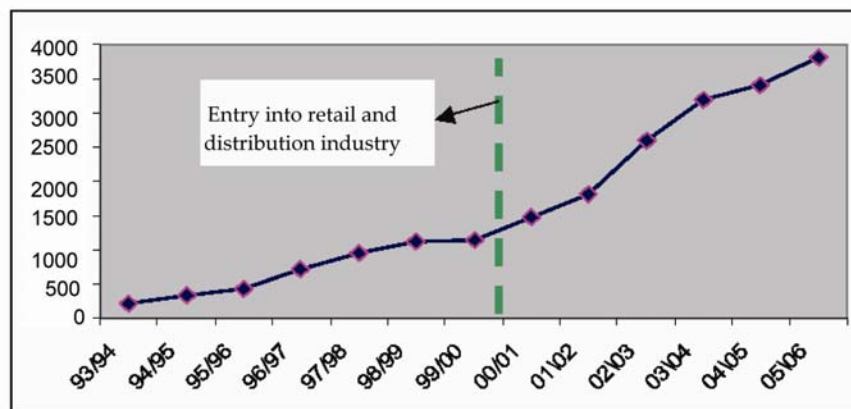


Source: COPAG survey, 2006

5.3.1.3 Recruitment and new personnel

COPAG has taken on more staff over the last few years, particularly since entering the retailing and distribution industry in 2002. As we will see later, the supermarkets were a major factor prompting the creation of new posts within the mother cooperative.

Graph 5.10: Number of staff employed by COPAG, 1993 to 2006



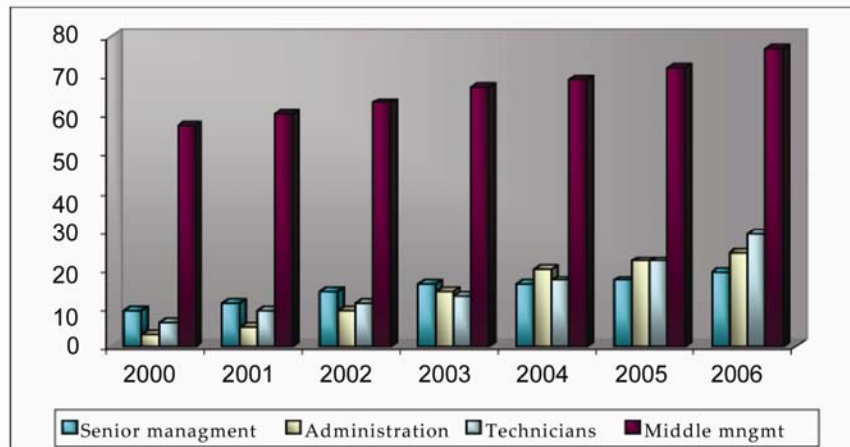
Source: COPAG survey, 2006

After gaining access to the retailing and distribution industry, new positions were created at three levels in the dairy:

- Sales: increasing the number of sales offices required an additional
 - 15 office managers
 - two merchandisers per shop (44 at the time of writing)
 - 540 drivers in 2006 (up from 225 in 2001)

- two or three supervisors per sales office (37 in all);
- Milk collection: agents responsible for checking the milk collected from members;
- Production: engineers and technicians in the Aalaf livestock feed units and the heifer and bullock livestock-rearing unit.

Graph 5.11: Posts in COPAG's milk unit, 2000 to 2006



Source: COPAG survey, 2006

Graph 5.11 above shows significant changes in each category of staff. Senior management, and especially middle management (who constitute the largest proportion of salaried staff) have played a key role in improving production and quality.

5.3.1.4 Changes in the organisation of quality control

In order to improve the quality of milk and dairy products throughout the whole production process, a dedicated department was set up to oversee the quality and development of the company's dairy products.

As well as putting in place a monitoring system, this sends strong signals to all actors in the supply chain to encourage them to improve their practices (and thus quality) and ensure that they meet the terms and conditions set by the supermarkets:

- Incoming milk is checked for hygiene (clean aluminium cans, etc.), watering down and temperature; and maintenance checks done on the milk tanks and collection centres;
- Processing: milk goes through a series of physical chemical checks before thermization in order to stabilise and standardise it before the various

processes required for each product (UHT milk, pasteurised milk, yoghurts, etc.).

In a strategic move designed to anticipate future food-related trends like the recent interest in traceability, COPAG recently set up a quality procedure to facilitate development of the ISO 9001 (2000 version) and HACCP systems, in partnership with AFAC. Although Moroccan supermarkets do not currently require their suppliers to have these systems in place, they are an essential tool in food security (especially for risk prevention in emergencies) - and also give COPAG a competitive edge over other dairy producers, enhancing its brand image and helping secure customer loyalty.

Decision-makers within COPAG also see traceability as a tool for improving its internal management by enhancing control over production, quality and stocks.

5.3.1.5 Changes in the marketing of dairy products

Supermarkets run promotions in all their stores to increase turnover and reinforce the image of the brands on their shelves. COPAG is one of their preferred suppliers because it participates in all their commercial operations, including the promotions, point-of-sale advertising and other clauses in their terms and conditions.

The cooperative's own marketing strategy uses promotions to make consumers aware of new products it is launching, for stock clearance aimed at reaching a large number of clients, or to increase sales of products with a low turnover. It uses point-of-sale advertising, posters, shelf and aisle end displays, the media and the press, and is responsible for organising tasting stands for new or low-margin products.

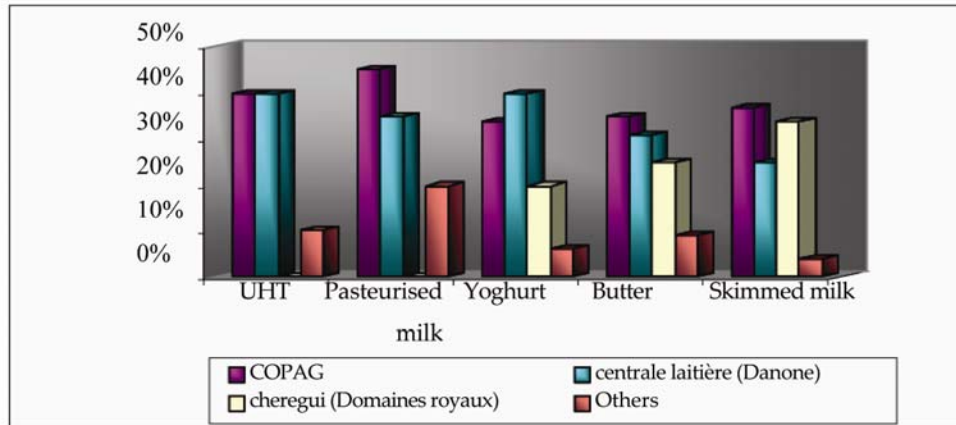
Although the terms of its contracts with supermarkets state that promotional campaigns to mark store anniversaries and festivals such as Ramadan should not adversely affect its business, COPAG does suffer from having to participate in their many promotions.

However, it has established a strong presence in various stores over the last five years, with a clear image and reputation that sets it apart from its competitors. This is largely due to its scrupulous respect for the terms of its contracts with supermarkets, which is seen as a factor in its continued relations with these chains - regularly delivering orders on time and in accordance with their conditions for cleanliness, hygiene and temperature.

COPAG's marketing also keeps it constantly tuned in to its clients' demands, and able to deal with competition from other cooperatives and the market leader Danone (Centrale Laitière). We can assess the extent to which it has adapted to its

competitors by comparing sales of its product lines in supermarkets with those of its competitors (see Graph 5.12 below).

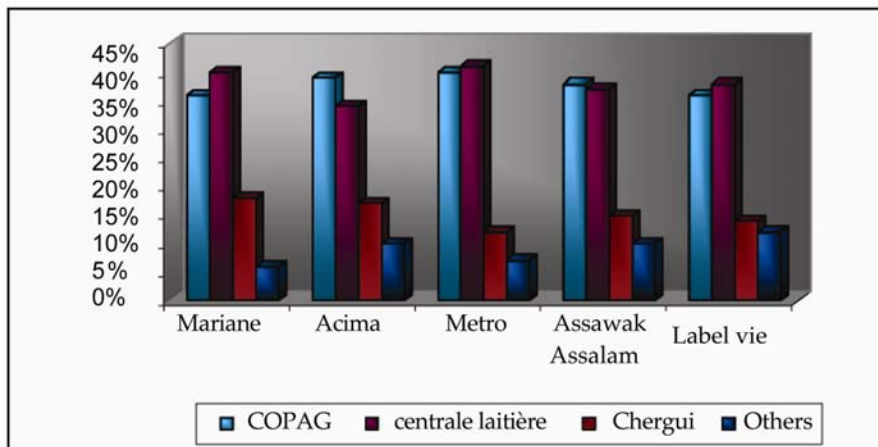
Graph 5.12: Sales of dairy products by COPAG and other producers



Source: Marjane survey, 2006

The size of COPAG’s market share can also be seen in Graph 5.13 below, which shows the shelf space allocated to its products and those of its competitors.

Graph 5.13: Shelf space allocated to COPAG and other producers



Source: COPAG survey, 2006

COPAG is the ‘mother cooperative’ to 67 cooperatives bringing together 13,000 member producers from various regions (Souss, Massa, and the mountains). It is a well-organised operation with sound strategies and a coordinated workforce, is responsive to the demands and fluctuations of the market, and has a dynamic president who has played a key role in driving the company forward.

Accessing the modern commercial sector has had considerable benefits for both the mother cooperative and the cattle farmers it serves. The question is, **what impact has**

the retailing and distribution industry had on cattle farmers, and what are the advantages of engaging with supermarkets?

5.3.2 Changes in the structures of production among cattle farmers and cooperatives

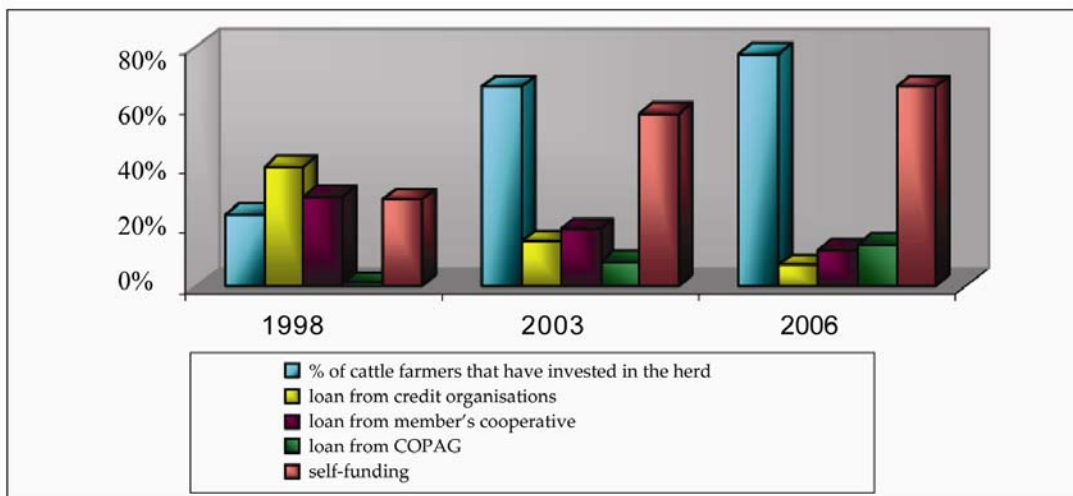
Entering the retailing and distribution industry meant that changes had to be made in the way producers were organised, and necessitated new investments funded by loans from credit organisations, members’ cooperatives and COPAG itself.

5.3.2.1 Changes in the herd

Farmers need to have at least two or three cows to be able to join the cooperative. They have built up their herds and intensified milk production since COPAG began preparing for entry into the modern circuit.

The mother cooperative invested in heifers through the cooperative SAGB, and member farmers have followed suit since COPAG joined the retailing and distribution industry. The new opportunities this presented enabled them to buy pure-bred cows and heifers, stimulating further increases in annual milk production, as shown in Graph 5.14 below.

Graph 5.14: Percentage of cattle farmers investing in milk cows



Source: COPAG survey, 2006

Members funded these investments out of their income from citrus fruits, milk production, early fruit and vegetables, etc., supplemented when necessary with loans from the mother cooperative or financial organisations.

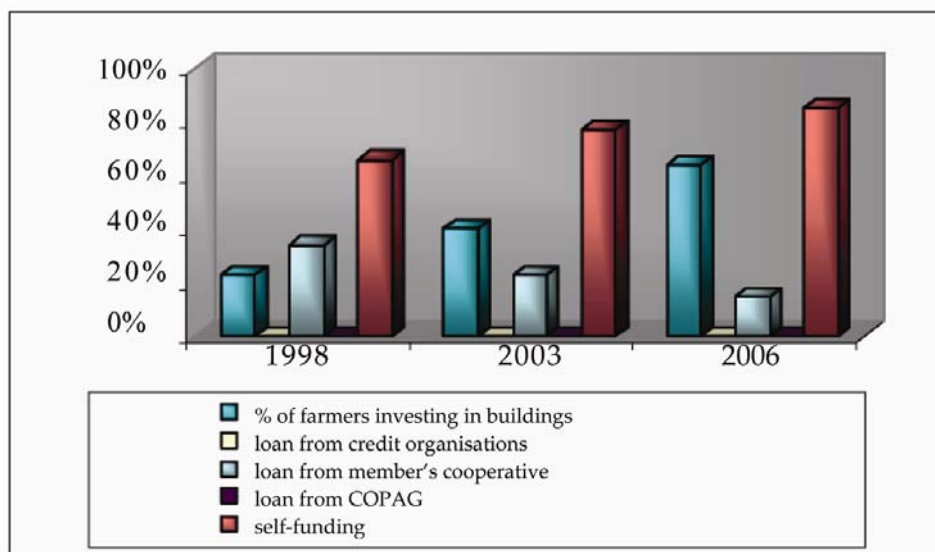
Producer investments have risen by an average of 25 per cent each year, increasing significantly since COPAG joined the retailing and distribution industry. Since then, farmers have borrowed less from financial organisations and their cooperatives, and put in more of their own money.

Therefore, we can say that the retailing and distribution industry has increased farmer investments in heifers and milk cows, and raised levels of self-funding.

5.3.2.2 Investments in buildings

The average amount that cattle farmers invested in constructing farm buildings when COPAG joined the retailing and distribution industry was 6,091 Dh. The proportion of farmers investing in their buildings rose from 23 per cent in 2000 to 40 per cent in 2003, and stood at 64 per cent at the time of writing - indicating that supermarkets have had a real impact on investment as farmers have had to improve their cowsheds in order to produce more, better quality milk.

Graph 5.15: Percentage of cattle farmers investing in buildings; sources of funding



Source: COPAG survey, 2006

The proportion of self-funded investments has grown substantially since 2003, showing that farmers have greater capacity to improve their production systems by rebuilding cattle sheds.

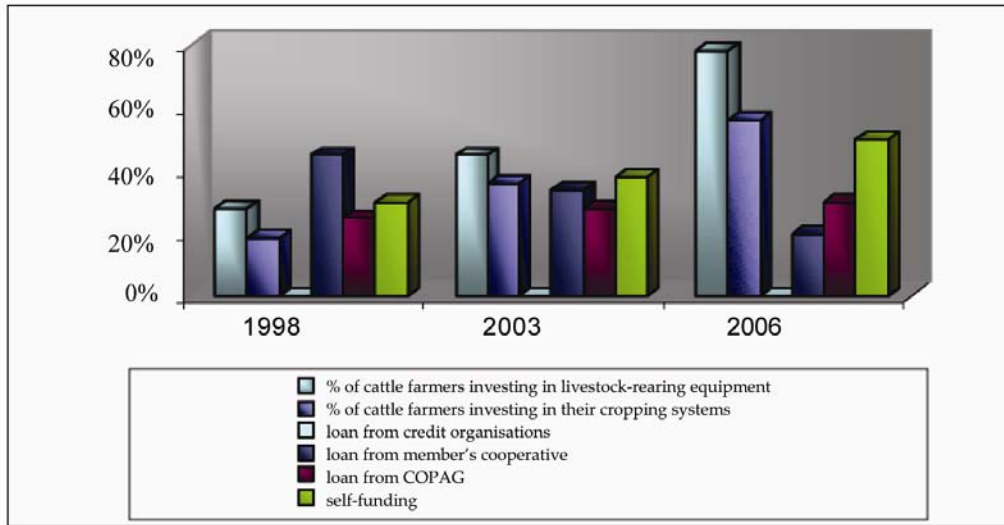
5.3.2.3 Investments in equipment

Investments in farm equipment and machinery have risen as the dairy herd has expanded. Cattle farmers were investing an average of 13,038 dirhams in equipment when they first joined COPAG; by the time it entered the retailing and distribution industry this figure had soared to 31,039 dirhams – and what is more, was entirely self-funded.

These farmers have made similar investments in their cropping systems too, installing drip-feed irrigation systems that cost an average of 12,120 Dh in 2000, and 14,500 Dh at the time of writing.

Benefits from their cooperatives' affiliation to COPAG include the introduction of new techniques like digging and deepening wells, acquiring motorised pumps, building water catchment basins and installing irrigation systems, all paid for through a combination of loans and self-funding (see Graph 5.16 below).

Graph 5.16: Cattle farmers' investments in agricultural equipment



Source: COPAG survey, 2006

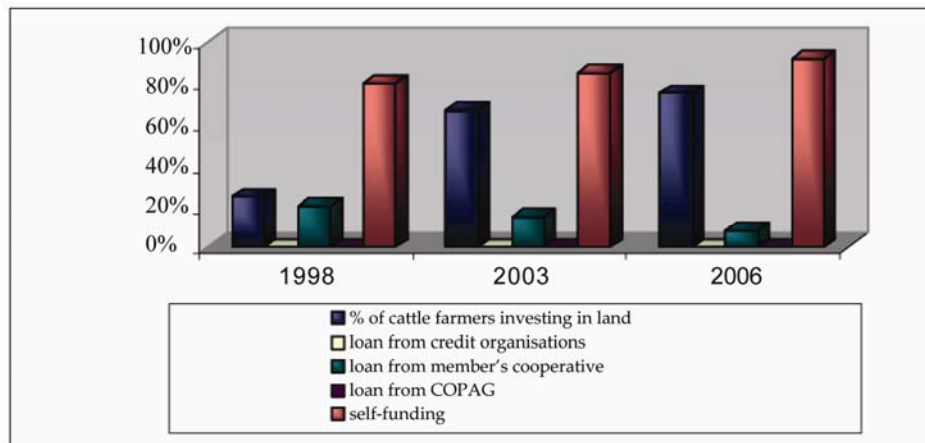
Investments in land, livestock, buildings and agricultural equipment have grown considerably since COPAG's involvement with supermarkets. This has not only improved productivity, but also helped farmers develop the capacity to fund investments themselves.

We will now examine the impact of the retailing and distribution industry on herd size and management, and the role of the mother cooperative in marketing dairy produce.

5.3.2.4 Investments in land

Major changes in the amount of land given over to dairy production are further evidence of the impact that supermarkets have had on the industry. Some 75 per cent of dairy farmers that we interviewed had increased their land holdings over the last five years, investing an average of 2,500 dirhams when they joined COPAG, and an average of 4,000 dirhams since COPAG entered the modern commercial sector. This variation can be explained by changes in the modes of finance and a significant increase in the proportion of self-funding (see Graph 5.17 below).

Graph 5.17: Investments in land



Source: COPAG survey, 2006

Differences in the amount of land farmed by members since COPAG joined the supermarkets prompted us to look at changing patterns of investment in farming equipment.

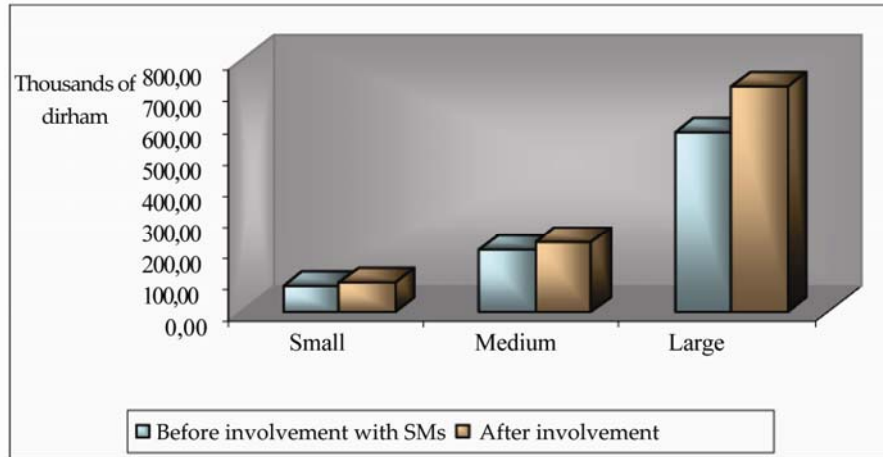
5.3.3 Changes in producers' income, employment and living conditions

The farmers who have invested their own and borrowed money in increasing milk production have benefited from the development of dairy farming, which can generate pretty good returns, depending on milk yields.

All the farmers we spoke to told us that their income has increased since they joined the cooperative, and especially since COPAG joined the retailing and distribution industry. This has enabled them to increase their landholdings, acquire more agricultural equipment and enjoy other benefits.

COPAG provides them with a regular income that they pick up every fortnight at the collection centre. On small farms, this represents a living wage that enables them to meet the family's needs and buy feed for their livestock.

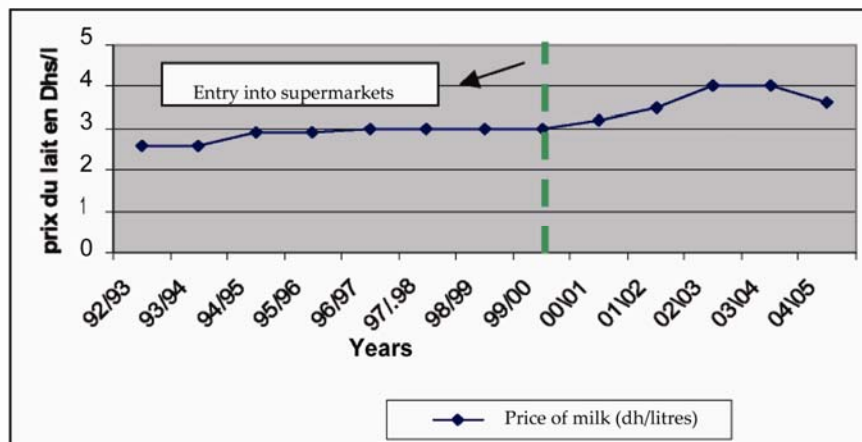
Graph 5.18: Producers' average annual income before and after COPAG joined the supermarkets



Source: survey of cattle farmers, 2006

Every category of dairy farmer has seen their income increase significantly, despite successive cuts in the price of milk due to taxes and travel costs. The supermarket effect is an important factor in this, enabling COPAG to increase and stabilise the prices it pays farmers for their produce at the milk collection centres.

Graph 5.19: Prices paid to producers for raw milk



Source: COPAG survey, 2006

5.3.3.1 Employment

Changes in all of the farms associated with COPAG have reduced the number of small-scale producers in member cooperatives and increased the number of medium and large-scale producers, particularly since COPAG went into business with the supermarket chains.

Employment levels have risen significantly, particularly on large farms. However, they are still relatively low on small-scale farms, despite rising over the last few years as production systems have improved in order to meet the supermarkets' health and hygiene requirements.

This increase in on-farm employment is due to overall improvements in dairy farming.

5.3.3.2 Standard of living

Doing business with the supermarkets has had a direct impact on members' living conditions, as greater investment, increased dairy production and higher incomes have improved the well being of cattle farmers and their families.

The fortnightly wages generated by milk production give farmers a fixed income that enables them to feed, clothe and educate their household (education rates now stand at 71 per cent), repair farm buildings, meet secondary needs (radio, television, satellite dishes, machines, domestic appliances), and improve their homes by laying on electricity and digging wells. All these improvements represent a significant and rapid change in farmers' living standards since COPAG joined the retailing and distribution industry.

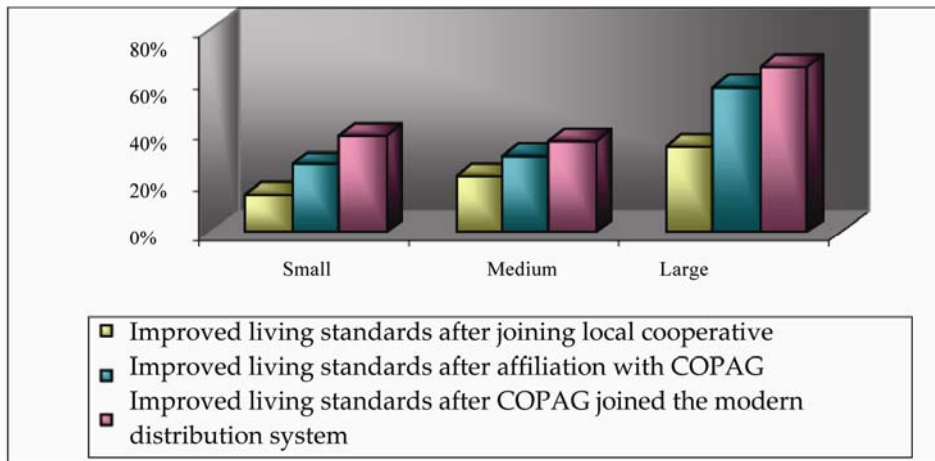
While these changes have had a particularly striking an impact on small-scale farmers (38 per cent of whom have seen their living conditions improve significantly), all the farmers concerned (small, medium or large) have felt the benefits of joining a cooperative and selling their produce at the regional and national levels. Graph 5.20 shows how their living standards changed over three main periods: when they joined a local cooperative; when their cooperative became affiliated to COPAG; and when COPAG became involved in the retailing and distribution industry.

Thus, the improvements in living standards identified during our survey can be attributed due to three factors:

- producers joining a local cooperative
- affiliation with COPAG
- involvement with supermarket chains.

Better living standards and higher incomes and rates of employment suggest that bringing farmers together through cooperatives can succeed, even though the cooperative movement has not flourished at the national level.

Graph 5.20: Improvements in farmers' living standards



Source: survey of cattle farmers, 2006

6 Conclusion

Involving small-scale producers in modern commerce is a demanding process that requires significant organisational change within cooperative groups. COPAG's experience of engaging with supermarkets has generally been satisfactory in terms of the effects on its own organisation, affiliated cooperatives and the producers themselves. It has had a very positive impact on the way that milk processing and marketing cooperatives organise their production systems, which has helped cement relations with the supermarket chains.

COPAG is the only milk collection and processing cooperative in Morocco whose endeavours in social regrouping and training have succeeded. Wealth has been created across the region in terms of employment, income and, more generally, raising cattle farmers' living standards. In the space of a few years, it has successfully integrated itself in the retailing and distribution industry, despite competition from businesses with much greater resources, such as the Centrale Laitière and the royal estates. The key to this has been organising all the links in the production chain and vertically integrating activities and production systems.

In order to supply the supermarkets efficiently, COPAG has reorganised its distribution system, extended its sales offices across the country and improved its logistical system.

Its entry into the retailing and distribution industry has also had an impact on cattle farmers, who have invested heavily in buildings, land holdings, livestock, herd management and agricultural equipment, largely out of their own funds. Improving their production systems has helped change the status of these farmers, raising their incomes and living standards. Receiving regular fortnightly payments allows them to feed, clothe and educate their families and meet their secondary needs (television, radio, satellite dishes, domestic appliances), renovate their homes, develop their farm buildings, get connected to the electricity supply and dig wells.

However, despite these significant knock-on effects, there are certain questions about COPAG's ability to maintain this momentum. The majority of member cattle farmers attending the annual general meeting **refused to invest in development projects** put forward by the President, directors of the sales offices or director of the dairy unit, as they did not see the point of continuing to invest in **advertising** or **purchasing chilled display cabinets**, as the Centrale Laitière has systematically done in nearly all of its points of sale. Certain members complained about the high expenditure on advertising and the small margins they get from supermarkets, as well as their demands for discounts, etc. Some of them want to get out of the modern distribution circuit, which they say is too expensive, in order to consolidate

and develop the more established traditional sector, which has 35,000 points of sale and accounts for 90 of COPAG's turnover.

Thus, it seems that there are two schools of thought within COPAG: the managers, who think in terms of the future, and the members, who are more concerned about immediate benefits than longer-terms strategies. Unfortunately, we were unable to analyse the nature of these internal power struggles, the extent to which they affect strategic decision-making within COPAG, and the time it takes to react to competition. However, we believe that these problems are not insurmountable, for two main reasons:

- Leading cattle farmers, who have the most influence on decisions, are most aware of the stakes involved in the globalisation of markets and development of modern commerce. Haj Oultiti, the president and main driving force behind COPAG, is himself a large-scale cattle farmer who is affiliated to the cooperative.
- The profound impact that COPAG's development has had on cattle farmers' living standards helps attenuate disagreements over decisions with major financial implications.

Nevertheless, delays in decision-making may put COPAG at a strategic disadvantage if its competitors can react more quickly.

- **Daily deliveries to supermarkets** are another problem. The supermarkets want to clear their stock by the end of each day, and COPAG does its best to fulfil its obligations, even though this increases the cost of transport and inevitably reduces profit margins. It also suffers from the many supermarket promotions (anniversaries, etc.) in which it has to participate, even though this contravenes the initial conditions of its contract.
- The **semi-arid climate and drought** in the Souss Massa region affect the availability of fodder, and thus milk yields. The cooperative has encouraged producers to grow maize instead of lucerne in order to address this problem, but this requires a lot of water and contributes to the lowering of the water table.
- The **high price of inputs** is affecting the production of livestock feed (maize and barley). This increase, which is partly due to the high tax on imports, is another constraint for the cooperative's managers, especially when they are endeavouring to keep to their original prices in order to maintain their competitive advantage.

- The **region's mediocre road infrastructure** is hindering the development of the milk supply chain, cutting off rural communities, adversely affecting the quality of milk collected from the most far-flung cooperatives, and damaging the vehicles that transport milk to the mother cooperative.
- The long **distances** between the processing unit and points of sale make daily deliveries difficult and cause stocks of certain Jaouda products to run out, especially in northern areas like Fès and Mekhnès.
- Producers stand to lose money as a result of **taxes** on the processing and marketing arms of dairy cooperatives, which resurfaced in 2005. These cooperatives were created with the objective of structuring small producers, upgrading their operations, increasing their income, making their agrarian production systems sustainable and helping stem the exodus from rural areas. Taxing them makes it difficult for cattle farmers with limited resources to develop their dairy production systems, so their only alternative is to focus on products that generate further added value.
- The **consequences of opening up markets** and creating the free trade area with Europe is another threat that COPAG needs to address, by consolidating its position on the national market and creating solid barriers to entry.

COPAG's managers are aware of the challenges ahead. They want to continue to anticipate and react to the changes associated with the globalisation of the agrifoods industry, by introducing effective technologies, strengthening production and regularly producing innovative products. Even though the retailing and distribution industry only accounts for a small percentage of business in Morocco, it is a major force for change. Therefore, COPAG's managers believe that they need to maintain a presence in the supermarkets while ensuring that they do not neglect the cooperative's other outlets.

The box below summarises their strategic vision for the business until 2010:

- | |
|---|
| <ul style="list-style-type: none"> • Develop the flexibility to deal with changes in the market • Stay in touch with the market and market trends • Enhance the value of regional agricultural produce • Support sustainable development in Morocco • Develop the cooperative's activity in supermarkets • Create new, innovative products, such as 'light' lines and desserts • Ensure that products are always available • Maintain good business relations clients • Develop extension work with supermarkets • Improve marketing strategy • Strengthen the branding of its UHT milk to give it more credibility • Constantly monitor the quality of its milk and dairy products |
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Regoverning Markets

Regoverning Markets is a multi-partner collaborative research programme analysing the growing concentration in the processing and retail sectors of national and regional agrifood systems and its impacts on rural livelihoods and communities in middle- and low-income countries. The aim of the programme is to provide strategic advice and guidance to the public sector, agrifood chain actors, civil society organizations and development agencies on approaches that can anticipate and manage the impacts of the dynamic changes in local and regional markets. The programme is funded by the UK Department for International Development (DFID), the International Development Research Centre (IDRC), ICCO, Cordaid, the Canadian International Development Agency (CIDA), and the US Agency for International Development (USAID).

Innovative Practice

Innovative Practice is a series of case studies from the Regoverning Markets programme providing examples of specific innovation in connecting small-scale producers with dynamic markets at local or regional level. Based on significant fieldwork activities, the studies focus on four drivers of innovation: public policy principles, private business models, collective action strategies by small-scale farmers, and intervention strategies and methods of development agencies. The studies highlight policy lessons and suggest working methods to guide public and private actors.

The case studies were coordinated by:

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