A FOOD RETAILERS REQUIREMENTS TO FUTURE MEAT AND MEAT PRODUCTS

ERIK SCHULZ

Danish Consumers' Cooperative Society, Coop Denmark, 65 Roskildevej, DK 2620 Albertslund, Denmark

INTRODUCTION

Coop Denmark was established in 1896 as a purchasing and manufacturing organization. The objective was to provide the Danish independent retail cooperatives with the best possible goods at the lowest possible prices. This is still the main purpose of Coop Denmark.

Today Coop runs 735 retail stores and supplies an additional 900 associated independent cooperative stores with goods.

The overall annual turnover is 29 billion D.kr., the marketshare for food and non-durable consumer goods is 33%, and the number of employees 23.000. In response to the heterogenious consumer requirements Coop Denmark runs different types of shops. Coop stores are run under the names <u>OBS!</u> i.e. large hypermarkets situated in the outskirts of the larger cities, <u>Kvickly</u> i.e. large supermarkets featuring food and non-food assortment, and <u>Brugsen Supermarket</u> i.e. supermarkets with a strong emphasize on fresh food, and finally <u>Near Brugsen</u> i.e. neighbourhood convenience self service shops. The COOP subsidiary company <u>IRMA</u> runs 200 up-scale supermarkets located mainly in the Copenhagen Region. <u>Fakta/Bonus</u> - another Coop subsidiary company - runs 100 "box stores" with a very limited assortment (Aldi formular).

The Coop stores receive fresh food from the countrywide Fresh Food Distribution Centers (FDC); a concept developed by Coop in 1978.

The philosophy of the concept is quite simple:

From the FDC

> **each supermarket** will
> **every day** receive
> **one delivery** with
> **all fresh food** listed on
> **one invoice** before
> **nine o'clock am**

so that the shop assistents can put all fresh food at display before the rush hours.

In short, the FDC is designed to distribute all perishable food items. That is:

* fresh meat, carcass meat
  - primal cuts, boxed
  - primal or subprimal cuts, vacuumpacked
  - modified atmosphere packed meat (MAP)
* fresh poultry
* fresh fish, retailpacked
* produce, bulk
  - retailpacked
* meat products
* chilled dinners
* milk and other dairy products
* egg
* bread
* margarine and other spreads
* mayonnaise, dressings etc.
* marinated fish products

Using pork meat as an example, meat from animals slaughtered in the morning will be distributed during the following night and arrive in the stores next morning .

As regards production, Coop acquired in 1988, 40% of the shares in the Danish meat company Royal Dane-Quality; no 5 in Denmark, slaughtering 1,3 mill. pigs annually.

Being a shareholder, Coop is ensured a constant supply of meat for our supermarkets, influence on product development and an insight into the price structures of the meat business.

Other manufacturing operations undertaken by Coop include: frozen foods, cannery; wine; flour and grain; bread (including frozen); margarine, edible oils and speciality fat; coffee and tea; detergents and chemicals; and confectionary.

However the core business activity of the Coop is the retailing; distribution and production are regarded as support functions, only. Danish supermarkets are inventions of the late fifties. For most of their existence, they have played a rather passive role as a merchandising instrument for the food producers marketing efforts.

Today, all progressive succesfull supermarkets have assumed a much more productive role in determining the nature of products that best meet the wants and needs of the customers. During the last decade supermarket-chains have put a lot of efforts and money into creating individual specific customer-oriented profiles based on store format, store design, assortment, and service.

CONSUMER BEHAVIOUR

The supermarket business being close to the consumers - must be a mirror of the economic and social trends of the society. So, the invitation to present to the meat researches and the meat industry, our future requirements is very much appreciated.

Retailers and the meat industry have a joint concern in responding to the changing behaviour of the consumers. The most important trends to consider are:

Convenience is the key issue. Food must be prepared or easy to prepare. New generations have little interest in or even skills for cooking from "scratch". Both man and woman are working out of the house leaving only little time for cooking. Most dual income families have got the money to pay for the ease of not cooking. The convenience meal wave presents unprecedented opportunities for the food industry and retailers to sell add value products with inherent potentials of higher margins.

Sophistication of products will be of greater importance. Food is not purchased just to fulfill a simple mutritional basic requirement. Certain foods and brands will be purchased bacause they represent individualistic values or personal traits. Food is an integreated part of our human social activities and signals.

Polarization/fregmentention. There is no typical consumer; and even the individual may change attitudes. He may eat cheap, fast and healthy during the week and indulge in gourmet dining during the weekend. Demand organic grown lettuce whilst at the same time buying synthetic jello desserts.

Grazing. The traditional daily family meal occasion is at threat. Attracted by exiting leisure activities, families may devote less time to the regular and - socially important - dining function. Regular meals may to some extend be replaced by informal, irregular but frequent eating of snack-like food. A phenomen termed snacking or grazing. At it's extreme, it is "food on the move".

Consciousness. A growing awareness of the relationship between **nutrition and health** imposses a major impact on the meat industry. Consumers demand lean trimmed raw meat and meat products with little fat. The major challange is to breed animals that are "genetically trimmed" to be lean and at the same time tasty.

The positive spin-off will be less animal fat left to be incorporated into the processed products.

Though **hormonal growth promotors** in some animal-breeds may lead to leaner carcasses, consumers in Denmark are very reluctant to accept the use hormons in the animal husbandry.

Talking of **drugs**, consumers fear drug residuals in meat no matter whether the drugs have been used as growth promoting feed additives or for therapeutical applications. Coop Denmark find that control systems and compliance with rules existing in Denmark is satisfactory. But, nevertheless the developement of new automated immonologically based analytical methods are desireable. Meat trade is becoming increasingly global and efficient low cost high capacity rapid methods are required to safeguard consumers.

As regards **microorganisms**, the salmonella and campylobacter problems associated primarily with poultry have made headlines in newspapers in Denmark and Sweden. Advice or warnings how to handle poultry in a hygienic safe way in the households have been issued. Coop have issued simular guidelines to our supermarket butcher shops.

It is imperative to stress that Coop's attitude to the above mentioned problems - along simular problems regarding yersinia and pork as well as listeria relating to almost all animal species - should be solved at farm or slaugtherhouse level, not in the kitchen or in the back-store butcher shop. Methods of animal husbandry and slaugthering must be changed to reduce the contamination with harmfull organisms. Coop does not recommend irradiation to "cover" the problem. Further, more research is needed to illucidate safety aspects of long term storage of meat and meat products at super chill temperatures. To make microbiological analysis a valueable tool for routine examinations, accelerated methods for online use for enumeration/identification must be developed.

CONSUMER SATISFACTION AND ACCEPTANCE

Value for money is what consumers demand. Even in an affluent society like the Danish, consumers focus on price. The proportion of the households available income spent on food has remained almost constant during the last decade. Food must compete with other expenditures on for instance new consumer goods like videos, home computers and travelling.

The modern educutated consumer - who is not a slave of routine - is prepared to sacrifice old well-known food items for never and may be cheaper items. Here, the red meat is at threat. The consumption of poultry is increasing almost worldwide. Not only because poulty (chicken/turkey) is lean, but because it is easy to prepare and cheap!

Freshness is a must. The Coop distribution system has already been described in details. For the meat industry, processes and storage facilities must be designed to preserve the original freshness of the meat i.e. to prevent contamination with and proliferation of food spoilage bacteria. HACCP systems from stable to table must include factors influencing not only safety but also keepability as regards production; distribution and retailing.

Taste, colour, tenderness; all the characteristics that transcribes muscles into meat, the attractive food commodity. These gastronomic quality parameters have always and must always attract enormeous research resources. As for retailing, colour is of paramount importance. In a self service supermarket, the shopper will buy "by the eyes".

Colour and colour stability of meat exposed to light and oxygen at display in the refrigerated store cabinet is a neglected area of research. This applies especially for retail cuts prepared on trays with a history of being vacuumpacked or modified atmosphere packed. Here more research is definitely required.

MODERN RETAIL SELF SERVICE MEAT MERCHANDIZING

In the highly competitive retailing environment supermarket chains try hard to create their own distinct profiles. Fresh food - mainly produce and meat - is the primary battle field where professionalism can be demonstrated by the supermarket operators. After all, dry grocery articles are the same in all supermarkets. Meat merchandizing is the most valuable marketing asset and means of differentiation between competing stores.

As meat is still the main component of daily evening meal for Danish families, it has been Coop's policy to offer an assortment of fresh chilled meat in all supermarkets and stores regardless of size or location in order to attract consumers and thus provide the service required.

Coop pioneered centralized fresh portion cut meat MAP packaging in Denmark just in order to supply smaller supermarket without butcher departments with fresh meat. Test and trials to find new ways are still conducted in co-operation with the Danish Meat Research Institute, the Danish meat industry and packaging material suppliers. A summary of the systems tested are given in appendix I.

WHAT CAN R&D DO TO ENHANCE THE ASSETS OF THE SUPERMARKET BUTCHER SHOP

To enable supermarket staff to give service, advice and inspiration to the shoppers in the sales area; i.e. to transfer the staff from the back stage to front - simple operations like cutting, trimning and mincing should be industrialized. The industry should provide products ready for tray assembly, that are:

- of uniform quality
- of high bacteriological quality
- has good colour stability
- has proven economic from abattoir to supermarket.

If such products are available, meat staff will be released from the simple cutting operations enabling them to be innovative and creative in defining new sophisticated ways of presenting the meat to the shoppers.

For supermarkets, too small to run a butcher shop, new packaging systems for centralized production of portion cut fresh meat, that

* has consumer appeal
* long shelf life

should be developed - maybe by exploiting the new superchill techniques, again with proven overall economic from abattoir to supermarket.

WHAT CAN R&D DO TO ENCHANCE THE ECONOMIC PERFORMANCE OF SELLING MEAT PRODUCTS

On the grocery shelves, branded food products dominate the shelves. In the refrigerated meat cabinet, branded products are almost nonexistent. It is a well established fact that brand names carry higher margin, are prefered by consumers, and are easily promoted. So the most obvious thing to do is to create raw materials of distinct quality to pave the way for branded fresh meat. Recent Danish examples:

Farmerpork
Guaranteed tender beef.

The mass market for meat products is very competitive with a strong focus on price. The fragments of the consumer market must be better utilized. So, it is essential to develop new products that - through rational and flexible production - will capitalize market segmentation by splitting the mass market.

Supermarkets work hard to develop their own profiles. In-store deli-departments that make "home made" fresh food are exploding in American supermarkets. Some American chains are even building regional catering units (commissary departments) to serve the deli-departments. If the meat industry is not to give away this business, the industry must develop products industrially produced that look real homemade (product as well as packaging).

Much has been said about ready diners and convenience food, so go ahead developing products with a high degree of convenience.

Recipes, combinations, presentations are taken care of by the market research people and the marketing staff. However, thorough basic solid meat research is still required in areas like interaction between food components of different origin, inhibition of Warmed Over Flavour, protection of flavour qualities, retardation of lipid oxydation, stabilization of colour, effect of packaging on shelflife, prevention of freezeburn, assuring uniform microwave heating of the individual components - just to mention a few topic within this multidisciplinary field.

FINAL REMARKS

It is the intention of the congress programme to emphasize applied research and technology and to deal with future needs and challenges within meat research and development. This paper has dealt with the very commercial market oriented aspects of the meat business with emphasisis on applied technology. Coop Denmark has been delighted to be given this opportunity to present our commerciel views on the future to meat research workers from all over the world.

APPENDIX I

THE COOP SUPERMARKET MEAT MERCHANDISE MATRIX (MMM)

Row	Way of packaging at receipt	In-store handling	Way of packaging at display and color	Shelf life (35°F)	Distribution volume
			DECENTRALIZED PRODUCTION		
1	Boxed meat Hook hanged meat Vac. packed primal and subprimal cuts	Cutting Tray packing Tray wrapping Labelling	Individual foil wrapped trays Blooming red color	1-4 days at display	-
			CENTRALIZED PRODUCTION		
2	Single vacuum packs	(Price labelling)	Ind. vac. pack Beef: Bluish Pork: Yellowish/ grey color	7-40 days total depending on type of cut and animal species	Low
3 A	Single MAP trays	(Price labelling)	Ind. MAP deep drawn/seal trays Blooming red color	6-10 days total	High
3 B	Single MAP flow packed conventional trayed meat	(Price labelling)	Ind. flow packs Blooming red color	6-10 days total	High

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THE COOP SUPERMARKET MEAT MERCHANDISE MATRIX (MMM)

Row	Way of packaging at receipt	In-store handling	Way of packaging at display and color	Shelf life ($35^{o}F$)	Distribution volume
CENTRALIZED PRODUCTION					
4 A	MASTERPACK wrapped trays in MAP pouch or box	Unpack from MAP date label (price label)	Ind. wrapped trays Blooming red color	Total 6-10 days incl. at display 1-4 days	High
4 B	MASTERPACK Ind. vacuum packs in MAP pouch or box	Unpack from MAP date label (price label)	Ind. "vacuum" packs Blooming red color	Total 6-10 days incl. at display 1-4 days	Medium
5	PEEL PACK Ind. vacuum packs with a two layer peelable top web	Peel top web date label (price label)	Ind. "vacuum" packs Blooming red color	Total 7-40 days incl. at display 1-4 days	Low