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Cooperation

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AGRICULTURAL CO-OPERATION IN DENMARK AND THE BRITISH FARMER

by J. BRADLEY, B.A. and J. E. HARRISON, M.Sc.

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PREFACE

The farming of Denmark has long been held up to the British farmer as an example of how to combine the advantages of large scale industry with small scale production units. It is not surprising that with profit margins narrowing and incomes falling, British farmers should wish to explore every possibility of reducing costs. Farmers have been increasingly aware of the implications for them of the developments in industrial and commercial organisations - the concentration of supplying firms into bigger and bigger units and the rise of the massive chain stores, supermarkets, etc., as buyers of the farmers' output. This is the day of 'big business' everywhere, and farming cannot hope to be passed by. Thus farmers have once again been turning their attention to the question of co-operation as they did in very different circumstances in the 1920's and 1930's. But currently it is the larger farmers who have taken the initiative in this direction, with the establishment of 'buying groups'. If larger farmers feel the need for this kind of development, then its importance to smaller farmers, who are predominant in Devon, is self-evident. The Devon Nuffield Farm Project has recognised this need. Attention to co-operative activities has assumed an increasingly important role in the advisory programme for this area, and led to the suggestion that a small group of farmers and the project officers might go to Denmark. This report sets down the views of this group.

The fact that nothing of outstanding importance could be recorded which was not already generally known, in no way detracts from the value of this record of the visit. Experience and skill of a high order are needed in making comparisons between the economy of one country and another. Despite these limitations there is no doubt that visits of this kind are very beneficial to all concerned. This will be shown in many varied directions in farming developments in the Teign Valley in the critical days ahead. The visit has given confidence to some and been accepted as a challenge by others.

S. T. MORRIS

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INTRODUCTION

Agricultural co-operation, in a wide variety of forms, is an almost universal phenomenon. Nearly every country, whatever its political system or level of advancement may be, can show some evidence of its presence.

Although Great Britain was a pioneer in the field of consumer co-operation, progress made in the more specific field of agricultural co-operation has been rather meagre, compared with the achievements in some continental countries. This can be accounted for by quite simple historical and economic facts: the diminishing role of agriculture in the total economy, the large percentage of our total foodstuff requirements that is imported, and on a different level, the fact that feudal land tenure was abolished much earlier than in most other European countries.

Co-operation has rarely evolved from purely ideological motives. Invariably the spur has resulted from economic pressures which could not be adequately met by individual effort alone. In periods of prosperity men tend to extol the virtues of competition, but in periods of economic hardship their thoughts turn to co-operative action.

In Britain there have seldom been the critical economic pressures on agriculture to provide the necessary stimulus that would lead to widespread co-operation. However, this is no longer the case, and recently we have witnessed a radical change in the attitude of British farmers towards the concept of co-operation. A new appraisal of the future has led them to the realisation that a large part of the responsibility for solving the long term problems faced by the industry must be met by the collective action of those engaged in it.

With this change in outlook there has sprung up a fresh interest in co-operation in all its many aspects. New ventures have been started, old ones reappraised and new bodies have been set up to direct their energies within the framework of a unified organisation. Co-operation has taken on a new lease of life, and perhaps for the first time its potentialities are being taken seriously by all sections of the industry.

It was against this background that the Nuffield Farm Project set out, as one of its tasks, to encourage the development of co-operative ventures in the Teign Valley in Devon. The Project has been in existence since 1958, and its most conspicuous success to date has been in the field of co-operation.

During 1960 this particular aspect of farm organisation was introduced in two forms, namely machinery syndicates and purchasing groups. By 1962 five machinery syndicates and three purchasing groups had been established in the area, and both had spread their influence over a large part of the South West. Both types of co-operation have proved workable in an area where small farms predominate, and although the majority of farmers in the Project Area do not as yet belong to either body, those participating have become interested in other forms of agricultural co-operation.

A number of farmers were anxious to see how the co-operative system generally worked elsewhere and in particular to see what features, if any, could be usefully adapted to their own conditions. The Nuffield Foundation agreed to finance a visit of nine farmers and three advisors to any part of Europe where agricultural co-operation had developed to a greater extent than in Great Britain. For obvious reasons the type of farming followed, or the organisation of farming ruled out some European countries, such as Italy and Poland. A consideration of the countries which have developed co-operation very fully, and which technically also seemed likely to be of interest, reduced the list to Denmark and Holland.

Both countries were suitable, but since Denmark is more concerned with production for the British market and is competing most effectively with our own farmers it seemed appropriate to visit that country. The Agricultural Attache at the British Embassy in Copenhagen, Mr. James Mellon, was approached, and with his assistance a tour was arranged that covered most aspects of agricultural co-operation in Denmark and also gave an opportunity for the team to see a little of Danish farming.¹

1 The Danish farmers receive so many requests from farmers and others to see their farms that they have found it necessary to set up a body to cater specifically for this demand. This organisation, the Landøkonomisk Rejsebureau is so successful in carrying out its role, that all the members taking part in the visit felt that the National Farmers' Union could well consider setting up a similar body in Great Britain.

THE PRINCIPLES OF CO-OPERATION

General

Men co-operate in a wide variety of ways. The essential foundation for a stable society depends on the degree of co-operation that all members are prepared to accept. There is always a conflict of interests, but it is the awareness that the law of the jungle benefits nobody that leads men to make rules and laws. These limit the area of possible conflict to one in which men are able to pursue their own interests freely.

This principle applies to commercial as well as to civic matters. Participation in any organised commercial venture involves sacrificing part of one's independence in order to provide the stability necessary for the venture to prosper; and this aspect becomes of paramount importance when the enterprise is co-operatively based.

Although a gross oversimplification, one method of differentiating between commercial competitive enterprises and those which are co-operatively based is that the former are primarily unions of capital whereas the latter are unions of persons. Thus, although the joint stock company is democratic in the sense that all shareholders theoretically have a say in the running of the business, this control is directly related to the amount of capital invested. In a co-operative enterprise, however, control is based on the common and mutual interests of the members, and although it is not essential that decisions should be determined on the basis of one man one vote, it is a minimum requirement that voting should be based on the business transacted by each co-operator.

Another contrast with the joint stock company is that membership shares or claims in a co-operative organisation are not freely transferable, except with the consent of members. Similarly all members of a co-operative organisation must be participants in its activities, and the concomitant of this requires that, unless special dispensations are given individually, all members must undertake to fully honour their obligations to the co-operative. Without loyalty to the co-operative there can be little advantage in this form of trading and it is therefore necessary to ensure that disciplinary steps can be taken against any member who does not adhere to this principle. This is often a difficult matter to enforce and is perhaps the most frequent reason for co-operatives simply becoming one more competitor in a highly competitive sphere of trade. Except in the case of debt, few co-operatives are able to impose legal sanctions and as such they are forced to resort to deprivation of membership.

One other feature common to co-operative organisations is that costs, dividends and bonuses, are pooled in proportion to patronage. Although it is frequently stipulated that all dealings within a co-operative society should be confined to members, this only applies to certain aspects of co-operation. In those cases where non-members are allowed to participate, the only advantage to members will be the annual dividend, and in this type of organisation there can be no means of ensuring that all members are loyal.

The aspect of co-operatives usually given most prominence is the fact that they are non-profit making organisations. Any surplus produced is distributed on a patronage basis in the form of a dividend. If the total surplus is not distributed in this way, but a part used for capital investment, this automatically increases the total capital worth of the society, which in turn, increases each individuals share value. But, unless a society is wound up this is rarely recouped in full even by individuals who later cease to be members. Heavy capital accumulation by a society can create a division of interest between old established and new members, but as capital accumulation is incidental to the actual objectives of a co-operative, this aspect is rarely of great significance.

As co-operation can take a very wide variety of forms there cannot be one single set of rules which can be applied to all. Although the above features are probably incorporated either singly or in combination, in the majority of co-operatives, it is extremely difficult to set down a rigid set of principles which are universally applicable. Nevertheless, if none of the above features are present it is doubtful whether an organisation could be considered to be a genuine co-operative.

Agricultural Co-operation

As far as it is possible to satisfy the purely economic requirements, agriculture comes very close to textbook definitions of a purely competitive industry. The existence of many producers, many buyers, and of homogeneous commodities whose prices are known; these features all fit the theoretical concept on the production side. The same forces do not, however, operate on the purchasing side. Most farm inputs are controlled by a relatively small number of manufacturers who channel their products through merchants, who in turn act as retailers supplying the needs of individual farmers. Thus the farmer can be considered to have the worst of both worlds. He has to sell what he produces at wholesale prices in an open market, in which his share of the total supply is so insignificant that it cannot effect the price he receives. In contrast, he has to purchase his requirements at retail prices from suppliers who control

prices to a large extent. If one adds to this the inelastic demand for farm products, plus the fact that no individual farmer can afford not to keep abreast of new production methods, one has an industry which is extremely vulnerable to all kinds of economic and physical influences.

In periods of food shortage this set of circumstances operates to the farmers advantage. However, if there are no shortages, the individual farmer has little alternative but to try to increase his share of production in order to enable him to maintain his relative position. Yet when all farmers attempt simultaneously to improve their position in this way the result is gross overproduction and an overall deterioration for each individual. This feature is contrary to the early economists belief that under conditions of surplus production a sufficient number of producers would be forced out of the industry to bring supply and demand back into equilibrium. There are two main reasons why this stabilising feature does not operate as effectively as the theoretical model envisaged. First, there is the seasonal fluctuations that are implicit in farming and second, there is the factor of limited social mobility which is a characteristic of the industry and which may be induced by the present methods of supporting agriculture.

In an economic environment which is predominantly influenced by the growth of large scale enterprises, it is natural that farmers should seek ways of combining together to protect their economic interests. As it was not feasible to attempt this in the same way that industry found possible, other alternative methods had to be found. Co-operation was the method which was found to be most successful. In those countries where the conditions were suitable, rapid progress has been achieved over a relatively short period of time.

By applying co-operative methods it becomes possible to attack the problems facing agriculture on a number of fronts. On the selling side it provides consumers with supplies of goods of a standard quality. It also ensures that the producer obtains the full market value for his produce, for collectively producers are able to influence the volume of goods reaching the market at any one time. On the purchasing side, farmers can also obtain their essential requirements of an assured quality at lower prices. By having a say in the running of these enterprises they are able to remedy any abuses and to suggest improvements. They receive their annual 'dividend' and this is probably considered by many to be the main incentive. Yet, in order of priority, the greatest advantage provided by co-operatives is that they take over many of the business problems which the average farmer is neither qualified to deal with, nor if he is, has sufficient time to do so satisfactorily.

The importance of agricultural co-operation varies from country to country, but even in those countries where its influence is small it nevertheless has some role to play, and can have some effect on the pattern of agriculture. It would appear, in fact, that in the absence of government sponsorship for producer boards or similar institutions, farmers themselves frequently attempt to bring order into their marketing by forming co-operatives to sell and process their produce. The need is perhaps greater when the commodities are processed, for under these conditions a number of requirements make it essential for joint action to be taken by all suppliers. Where processing takes place, a regular supply of a standard quality raw material is necessary to fully utilise the processing plant and the labour employed. These reasons are given added weight when the goods so produced are largely intended for export. Whereas individual farmers can market their produce locally, if necessary, they cannot possibly attempt to export it. This is a job for a highly specialised organisation. It therefore becomes a sensible development for processing co-operatives to extend their activities to the realm of exporting the goods they produce.

Whereas the first requirement is to provide an orderly system of marketing, some measure of control is also desirable in obtaining essential supplies. If an attempt to solve this problem takes place after suitable marketing co-operatives have been set up, which is generally the pattern followed, it becomes a logical development to co-operate in this sphere also. The necessary conditions and the organisational structure are present to enable this type of extension of business to be accommodated without difficulty.

As it is far easier to impose disciplinary sanctions on the marketing activities of members than it is on their purchasing activities, it is a natural development that marketing co-operatives should pave the way for supply co-operatives to be set up. The discipline necessary for participation in the former creates a suitable climate of opinion for the latter to prosper. However, there is a tendency when supply societies are set up before marketing societies, that their potential influence is limited due to the lack of discipline that can sensibly be imposed on members.

Agricultural Co-operation in Britain

The lack of discipline partly accounts for the type of agricultural co-operative development that has occurred in Britain. Although co-operative societies originated in this country, it was in the field of consumer participation. This type of business does not place great stress on loyalty or discipline. It would in fact be impossible to

restrict the trading of members to the confines of such retail societies. The movement towards agricultural co-operation did not evolve as a logical development of the consumer societies. Co-operative trading did not develop in this country until after it had become established on the Continent. However, because economic conditions did not favour the large scale introduction of marketing societies, most of the developments that did take place were in the field of supply. The pattern adopted in general followed closely that adopted by the retail consumer societies. They traded in all types of agricultural requisites, but did not restrict their members to trading with their societies only. Essentially the trading policy adopted differed very little from that pursued by their private competitors. Their main competitive advantages was the distribution of an annual dividend, but as this rarely gave them more than a marginal advantage over their competitors, the share of total trade has never been sufficient to exert a profound influence on the industry as a whole. Membership of these societies accounts for a large proportion of all farmers (it is impossible to be very accurate due to the fact that total membership includes many individuals who are members of more than one society) but the total share of trade is not proportionately large.

Due to the organisation and structure of these societies the element of democratic control is not strong. The economic temptations to be unfaithful have proved too strong, and these, coupled with the strong individualistic traits displayed by British farmers, have not produced an atmosphere conducive for individual members to exercise their democratic rights. It would appear that unless the co-operator's economic activities are affected on a broad front, the effect of co-operation will not materially influence his attitudes and habits.

The initial impetus towards agricultural co-operation in this country occurred over a short period of time at the turn of the century. Once this impetus had spent itself the structure that had been created was quickly adapted to the general pattern of agricultural trade and in essentials has changed little up to the present time. Yet agricultural conditions have changed considerably. During the early post-war years farmers enjoyed the benefits of a sellers market and under these conditions there was little incentive to turn to co-operation. But these favourable conditions have gradually disappeared, and the future prospects for the industry as a whole make it appear unlikely that these conditions will return.

It is against this background that a new and revitalised interest in co-operation is now taking place. Fears for the future have arisen

with a rapidity and variety sufficient to stimulate a desire to take positive action. Contrary to practice, on occasions as much emphasis is being given to marketing problems as to possible economies in the purchase of supplies. These fears arise from three main sources. First, the implications if Great Britain joins the European Economic Community. Second, the prospect of widespread changes in the exchequer support policy in the future, and third, the increasing power of food retailers and manufacturers in organising their supplies. Any one of these features might have widespread repercussions and in combination they could result in major changes taking place in the industry.

Yet the prospects for co-operation depend to a large extent on the economic conditions prevailing at the present time. The needs which co-operation must meet also change, and the interaction of these two factors can produce a set of circumstances which no longer makes it either possible or desirable to apply the old techniques to the new situation. Perhaps due to these factors the recent co-operative developments have attempted to tackle the problems in a variety of new ways. Machinery syndicates permit producers to benefit from technical changes without incurring the burden of excessive machinery costs that sole ownership involves. Small buying groups affiliated to a central organisation are an attempt to procure the advantages of wholesale purchasing by forward bulk ordering. Quality associations for the sale of specific livestock products have also been set up. Finally the setting up of 'Agricultural Central Trading' a body sponsored by the National Farmers' Union and the existing co-operative central agencies with the objective of co-ordinating present activities and substantially expanding them, is symptomatic of this development.

However, it is fully appreciated that we have a very long way to go before we attain the level of co-operation achieved in most Continental countries. Our conditions are in many vital respects wholly different from theirs, and this largely accounts for the different pattern that we have evolved. Now that we have embarked on a policy which places considerable emphasis on co-operative solutions to deal with some of the problems facing British farmers, it would be negligent on our part if we did not make every effort to learn all we can from those countries who have made a success of agricultural co-operation.

Agricultural Co-operation in Denmark

There are certain characteristics of Danish co-operatives which are common to most of its many branches. In all major respects they are quite free of State control. There are in fact no statutory provisions

relating to the formation of co-operative associations. As such they are voluntary associations liable only under the requirements of common law.

Each has a constitution and rules stating its purpose and defining the method of operation and the advantages and obligations of membership. These constitute a contract between the association and its members, and also between members individually. These provisions can be enforced in the courts. Most associations make provision for disputes to be settled by a board of arbitration if the dispute arises between individual members and the local association, or between the local and central associations. This form of settlement is usually obligatory on members except in the case of debt, which is dealt with through the normal legal channels.

Democratic procedures within different societies are very similar, but there are slight variations. The principle of one vote per member is universal. There are two main types of representative government. One method is for each local - usually village - group to act as a society in miniature with its own organisation and membership. This group trades with a parent society which has no individual members. The groups are the members and each group, or number of groups, elect a delegate to attend the annual meeting where policy decisions are thrashed out.

The second method is more akin to parliamentary government. Each district elects one or more representatives who corporately act as the society's governing body. Where there are many groups a delegates' meeting will elect its representatives. This system ensures adequate representation within the framework of a compact forum. This method is unavoidable when there are large numbers of small local units.

Financial arrangements also vary a little between societies. However the principal method employed is for loans to be obtained from local banks, and these are secured by a joint and unlimited guarantee of all members. It is therefore not necessary for members to provide any share capital whatsoever. The loans obtained rarely have a fixed period for repayment, or if they have, they can be regularly reborrowed. Thus many societies still have debts outstanding equal to a large percentage of their fixed assets. This system was first introduced by the credit societies, which were the first co-operative societies set up, and has become universally accepted. It has the distinct advantage that members can form a society without requiring any liquid capital to set it up. As such it has certainly been an important contributory factor in

the initial rapid growth of the co-operative movement.

A less flexible system prevails when local associations are required to guarantee financial assistance to their associations for capital development. Although there is seldom any necessity to make an actual payment of cash, each individual society agrees to guarantee only a certain sum, this being calculated on the basis of their transactions with the regional body. This ensures that each group knows the exact amount of its commitment to the central association.

At specified periods certain societies prepare their own valuations of assets which must be approved by the general assembly of members. The net assets are then divided between members on a patronage basis and accredited to them in the form of interest-bearing share certificates which are then repaid in equal instalments during the subsequent period. These contract periods usually coincide with the expiry dates of each loan. Arrangements in the case of members withdrawing usually allow for them to receive the greater part of their share outright.

A salient feature of almost all societies is that members are required to deal only with the society in the given commodity for a stipulated contractual period. In the case of marketing societies it is relatively easy to ensure that members do not break their pledge, but this is less easy to ensure in the case of supply societies. Nevertheless, there is no reason to doubt that loyalty is very strong amongst members and that few if any break their pledge.

The method used by the supply societies for pricing their goods is calculated on a cost-plus-expenses basis. At the end of each trading year a bonus or dividend is declared. This is sometimes paid directly to individuals or sometimes is paid en bloc to a group, which can dispose of it in any way it decides. In practice, however, there is rarely any difference between the two methods, for members invariably get paid on the amount of their purchases during the year. Marketing societies adopt a similar system. Payment to members is usually on a quality basis, but annual dividends are mainly related to the total quantities supplied.

The principle of separate societies for each commodity is central to the whole Danish co-operative system. However, in the case of many of the supply societies this is largely a formality. Nevertheless, the fact that the movement developed in this way has largely determined the present day structure.

Apart from being based on single commodities, the movement had its origins in the small village community. This has resulted in a system in which the small local group still retains a high degree of autonomy. By developing outwards, the tendency has been for a tiered structure to develop which still enables the small group to retain a considerable amount of independence.

Although there is no single pattern which can be universally applied, very broadly the structure for a given commodity takes the following form. At the base there are a large number of small local groups. These in turn form a number of associations on a regional basis. These associations then form themselves into a Federation which serves two broad roles. First it will set up boards and committees to deal with all aspects of the specific field related to the commodity which its members either purchase or sell, and secondly it will represent its members on a variety of national organisations. These national bodies can be split in two, being those in which all sections of the co-operative movement alone are represented and those which are representative of the industry as a whole. The latter will thus comprise a forum where co-operatives, private and government agencies can meet to discuss aspects of agricultural policy of a national character.

The co-operative federations have limited powers of direction when dealing with associations or individual groups. They are responsible for research, publicity and information, the provision of advisory facilities and similar functions. In addition they may be directly responsible for such functions as export policy or the fixing of quotations. In broad matters of policy they have considerable powers, but on the more local level their powers are strictly limited.

The regional associations often have little authority to influence local groups on matters which are not specified in the association's own rules. In routine day to day matters this feature is of no great consequence, but in terms of long term planning such as facilitating amalgamations for rational expansion it is frequently difficult to get local groups to relinquish some of their autonomy over their affairs.

The continued existence of the local group or society ensures that the aspect of democratic control is meaningful to the individual members. As a result, active participation by a large percentage of group members is assured, while democratic representation at higher level is made possible by delegation or election from each level to the one above. In this way the interests of the group do not become subservient to the larger bodies, for these themselves comprise individuals who are essentially group members.

At the higher levels there are paid officials responsible for running the association's or federation's affairs, but major decisions of policy are ultimately the responsibility of an elected or delegated forum of representatives.

This form of structural framework undoubtedly accounts for the spirit of democracy that permeates the movement. One man, one vote, is not only a possibility, but to a very large extent it would appear to be a reality. Members do genuinely feel that they have a stake in the co-operatives to which they belong and are jealous of their rights when these are threatened.

The main weakness of this type of system is that it can inhibit rational planning due to the parochial outlook of many of the groups, when their particular interests are threatened. There are dangers when too much power is concentrated at the top or the bottom, and it is doubtful whether there is an ideal solution to this problem. Although the Danes themselves would be the last to claim that the system they have evolved is the ideal, they have gradually introduced adequate safeguards to provide that neither side abuse their authority, while simultaneously ensuring that the democratic basis is still adhered to. This can often result in frustrating delays in getting changes made, and as such may not be beneficial, but to compensate for this is the realisation that all sides and views have been heard before any major decisions are taken. It is perhaps this knowledge which has retained the active interest of a majority of members, and which can largely account for the successful accomplishments which Danish agricultural co-operatives have achieved.

* * * * *

DANISH FARMING

Description

Before describing the part played by co-operation in Danish agriculture, it is necessary to identify the main characteristics of farming in Denmark. Of the $10\frac{1}{2}$ million acres of land, some three-quarters is given over to agriculture. The country as a whole is gently undulating and not unlike the eastern counties of Great Britain, although soils are far less mixed than in the latter. Much of the land is inherently poor, large areas having been reclaimed from heathland towards the end of the 19th century. Rainfall is on the light side ranging from about 24" to 30" per annum despite the fact that the prevailing wind is westerly. Summer droughts are common and more of a problem than are severe winters.

Legislation in Denmark has favoured the formation of owner-occupied small holdings, and as a result of this, 95% of Danish farms are owner-occupied. Average farm size is only 40 acres. The following table compares the distribution of farms in Denmark and England and Wales for the year 1956.

Table 1. Farm Size Structure

DENMARK			ENGLAND AND WALES		
Size of Holding	Farms	Acres	Size of Holding	Farms	Acres
acres	%	%	acres	%	%
1.4 - 12.4	19.8	3.4	0.25 - 19.9	44.8	4.7
12.5 - 24.7	27.0	12.3	20 - 49.9	17.7	9.2
24.8 - 37.1	16.3	12.5	50 - 99.9	16.2	17.4
37.2 - 74.1	24.5	32.5	100 - 149.9	8.4	15.4
74.2 - 148.3	10.4	25.7	150 - 299.9	9.2	28.0
148.4 - 296.5	1.6	7.8	300 & over	3.7	25.3
296.6 & over	0.4	5.8			
	100.0	100.0		100.0	100.0
Total	198,783	7,700,000	Total	365,025	24,497,116*
Av. Farm Size	-	38.7	Av. Farm Size	-	67.1 *

* Rough grazing holdings excluded.

Farm layout is generally good with buildings sited centrally for ease of working. Individual farmers are not permitted to own or farm more than two holdings. Although legislation still permits the government to split up large farms into small holdings, few have been established since 1940.

Most buildings are less than 100 years old and are of a general purpose nature. On a majority of small farms a single large building is used for accommodating all types of stock, as well as fodder and machinery.

About 90% of the agricultural land is cropped regularly, with approximately half the ploughed area cropped in cereals. Cropping in 1958 was as follows:-

	Percentage of Farm Acreage
Cereals	44
Fodder Roots	13
Cash Roots	6
Rotation Grasses	22
Permanent Pasture	12
Other Crops	3

Roots and cereal yields are remarkably high for such a low rainfall area. Both root tops and roots are used throughout the year for livestock feeding. As a result of this the area of grass used for feeding livestock is much lower than would be necessary if British feeding systems were followed.

Nearly every farm, however small, grows cereals, barley predominating. As a result of this policy, cereal imports for livestock feeds are very small in proportion to the volume of livestock production.

Breeds of livestock are far less numerous than in Great Britain. There are only four breeds of cattle and virtually only one breed of pigs. At least 60% of the cattle are Danish Red which are used for both milk production and Danish type veal. Of the remaining 40%, half are Friesians and the balance mostly Jerseys, with a few Shorthorns. Apart from a few Large Whites, all the pigs are Landrace. Sheep numbers are extremely small. The main breed of poultry is the White Leghorn with Brown Leghorn, Rhode Island Reds, Light Sussex, New Hampshires and White Plymouth Rock in decreasing order of importance.

Great emphasis has been placed on breeding and management of all types of livestock. Progeny testing stations, recording societies and research institutes, owned and run by the industry, ensure constant improvement in standards of performance. Considerable attention is paid to the eradication of disease with foot and mouth disease being almost unknown and contagious abortion completely unknown. A start is being made in the eradication of dairy mastitis.

Less than half of Denmark's farmers employ paid labour and only 20% employ two men or more. Unlike the position in Britain, most farm workers are single, and eventually become farmers themselves. Since only about one in five remain as workers all their lives a true farming ladder does exist in Denmark. Farm cottages are extremely rare and most workers live in with the farmer and his family.

Economic Position

Agriculture has always been of great economic importance to Denmark, and the prosperity of the country as a whole has depended, in no small degree, upon the efforts of the industry in both the production and marketing fields. In 1939, agricultural exports amounted to about 75% of the value of all exports, but by 1960 this had fallen to about 60%. This reduction in agriculture's share of the export trade is the result partly of greater industrial production and partly of lower unit prices for temperate foods in world markets. Restrictions on imports imposed by importing countries have been increasing in recent years and these have also adversely affected Denmark's export potential.

Despite the importance of farm products in the export market less than 20% of the Danish workers are employed in agriculture and only 18% of the country's national income is produced from the land. Wage rates in agriculture and industry are not dissimilar, but this is not of great importance since most farmers employ no labour whatsoever.

Farm incomes in Denmark have fallen somewhat in recent years but average about £10 per acre. Expressed as a percentage of total capital invested, including working capital, they represent a return of about $2\frac{1}{2}\%$. In England and Wales, on the other hand, farm incomes have been maintained at approximately the same level since 1952/3, though it should be appreciated that the value of the £ has diminished somewhat over this period. The percentage return on capital would be little higher in England and Wales than in Denmark.

In 1957/58 farm incomes were as follows:-

Table 2. Income per Farm

DENMARK		ENGLAND AND WALES	
Size Group	Income	Size Group	Income
acres	£	acres	£
0 - 25	432	0 - 50	568
25 - 50	585	50 - 100	845
50 - 75	779	100 - 150	1,157
75 - 125	971	150 - 300	1,711
125 - 150	1,089	300 - 500	2,878
150 & over	1,758		

The following table shows the relationships of Danish farm gate prices compared with those of other countries. The figures relate to 1957 but the relative position will certainly not have changed in favour of the Danes during the intervening period.

Table 3. Index of Farm Prices

Denmark	100
Netherlands	113
Belgium	124
West Germany	126
France	131
United Kingdom	145
Sweden	146
Italy	148
Norway	156
Finland	161
Switzerland	186

Source: Food and Agriculture Organisation.

It will be appreciated from Table 3 that Danish farm gate prices were only about two-thirds of the level of British prices in 1957. Individual prices in Denmark and the United Kingdom in 1961 were as follows:-

Table 4.

Farm Product Prices 1961

	<u>United Kingdom 1961/62</u>	<u>Denmark 1961</u>
Wheat	26/11d. per cwt.	26/3d. per cwt.
Barley	27/7d. " "	24/2d. " "
Sugar Beet	128/- " ton	91/- " ton
Milk	3/2 $\frac{1}{4}$ d. " gallon	1/10d. " gallon
Beef	167/- " cwt.	115/5d. " cwt.
Bacon Pigs	43/7d. " score	37/10d. " score
Eggs	3/8 $\frac{3}{4}$ d. " dozen	2/3d. " dozen

United Kingdom prices are maintained by price guarantee and in addition farmers receive a wide range of grants and subsidies amounting in 1960 to £106m.

Due to a substantial increase in milk production in 1961/2, additional quantities were diverted to the low priced manufacturing market and the average price received was about 4d. per gallon less than the guaranteed price shown above.

The price for milk consigned to the liquid market in Denmark is approximately 2d. more than for milk used for manufacturing - the former has to be produced under somewhat more rigid conditions than the latter. The Danish prices shown above are the product of receipts from both home and export sales. Prices frequently differ appreciably in these two markets since for some products a minimum home market price has been fixed. For instance, a price of 7 kr. per kilo has been fixed as the minimum price for butter sold on the home market, irrespective of export prices which are usually lower.

Co-operation plays a very important part in Danish farming as the following table indicates.

Table 5.	<u>Participation in Co-operatives</u>	%
Milk sent to co-operative creameries		91
Bacon pigs sent to co-operative factories		90
Eggs sent to co-operative packing stations		40
Cattle sold by co-operative agencies		45
Cattle export by co-operatives		40
Feedingstuffs purchased through co-operatives		58
Fertilisers purchased " "		41
Cows milk recorded by Recording Society		60
Cows inseminated by A.l. societies		95

Separate societies exist for each class of product and for most farm requisites. Individual farmers may well belong to as many as fifteen co-operative bodies of one kind or another. In addition to the political strength that these co-operative institutions give to the farming community, nearly every farmer belongs to one of the three Farmers' Unions and these, with representatives in the Danish Parliament, give the industry considerable influence. Even this power is not always sufficient to give the farming community as much as they want - this is borne out by the farmers decision to call a strike which was largely successful in achieving its aims of improving farm incomes.

The general picture of Danish farming is therefore one of small farms with a fairly high output of products that attract low prices by British standards; the whole tied together fairly closely by a somewhat complicated co-operative movement.

The History of Co-operation

In order to appreciate the origin of the present structure of co-operative institutions in Denmark it is advantageous to look back to the 19th century.

Denmark became a democracy in 1849 and the largely peasant population of that time was desirous of improving its livelihood. The peasants were short of money and in 1850 a law was passed permitting the foundation of credit societies. Their introduction was soon followed by co-operative savings banks and co-operative insurance societies and it is interesting to note that the first steps in agricultural co-operation were all concerned with finance rather than with goods. This may well be the secret behind the success of Danish co-operatives since financial stability is obviously essential for any excursions into co-operation.

Later in the 19th century Denmark lost an area of territory to Germany and at the same time corn prices fell drastically. These two events had important repercussions in the co-operative field. A society was formed to undertake the reclamation of vast areas of the mainland, which at that time consisted mostly of heathland. This society still exists and carries out valuable work in land improvements and afforestation. The reduction in corn prices resulted in a change-over from a grain exporting economy to a livestock exporting economy and this brought about serious problems of marketing. It had been easy enough to dispose of grain, but the wide variety of types and grades of livestock products caused difficulties.

After experiencing several years of low prices and a fluctuating demand because of quality variations, a group of dairy farmers at Hjedding in West Jutland co-operated together in 1882 to set up the first co-operative dairy. This innovation was so successful that the idea spread rapidly through the country, and by the turn of the century there were over a thousand co-operative dairies.

The dairies were so obviously bringing prosperity to milk producers that they were followed within a few years by co-operative bacon factories, breeding societies and egg and poultry marketing stations. Eventually every aspect of processing and marketing of farm products was covered. Naturally, private interests did their best to fight this growth of co-operative enterprise, but the rate of growth was so rapid and dynamic that they were unable to prevent it advancing over a broad front.

It soon became apparent that if co-operative marketing could succeed there was no reason why co-operative buying should not succeed also. Societies were soon formed to deal with the supply of feeding-stuffs, fertilisers and seeds. At the same time, following the example of the Rochdale Pioneers in Lancashire, consumer co-operative societies sprang up all over Denmark. Although these started off as a town movement they spread rapidly to the country and their policy and

development have largely been dominated by the farming community.

In no field has co-operation established a monopoly of business. At the present time co-operatives and private interests each appear to be retaining their share of the market. In most cases the co-operative societies are strong enough to determine prices and commercial interests remain competitive only if they are willing to offer comparable terms. However, in more recent years co-operative societies have found it difficult to break into new fields as these arise. For instance, they control only a small part of the machinery and fuel trade and appear unable to ensure the loyalty of farmers when starting new ventures.

Characteristics of Danish Co-operatives

Perhaps the characteristic that most impresses the British onlooker is the degree of interest and active participation by the average Danish farmer in the variety of co-operatives to which he belongs. A great deal of power rests with individual members and policy is not imposed on local societies from above. National organisations have been formed for both purchasing and marketing societies, but the local village or town society still retains its autonomy which it guards zealously. This is not the situation in Great Britain where consequently there is far less loyalty towards co-operation.

There is no State control of co-operatives and no restriction of any sort on the formation of co-operative societies. Each individual society is responsible for drawing up its own constitution and rules and these are enforceable in the courts. Rules are generally interpreted very strictly, although provision is made for disputes to be settled by arbitration. If members contract to supply marketing co-operatives with specific quantities of a product and fail to honour their commitments they will, in most instances, be required to recompense the society for any resulting loss.

Societies are formed or disbanded only in response to local demands and there is no question of regional or national organisations establishing new branches. Generally local societies have one or more democratically elected representatives on the regional body. In other cases the local groups are very independent and, although trading within a national organisation, fix their own prices. In such cases the national organisation would have no individual members but would meet occasionally on a delegate basis to make policy decisions. Although each local society is autonomous, many will co-operate with each other in matters of mutual interest. The local insurance society will invest its funds in the local savings bank

which in turn lends money to the local creamery or bacon factory. Advisors employed by farmers' unions will co-operate with many supply societies in order to provide the best possible product to the farmers.

Unlike the position in Britain, members of co-operative societies provide no share capital whatsoever. Societies are mainly financed by loans obtained from local banks, secured by the joint and unlimited guarantee of all members. These loans are in practice not borrowed for a fixed period and there appears to be no difficulty in maintaining them indefinitely. Many societies still have debts amounting to a large percentage of their fixed assets. This ability to borrow means that a group of farmers can form a society without providing any capital and this factor certainly contributed to the initial rapid growth of co-operatives.

Local societies must guarantee a fixed amount of capital to their central association for capital development of a non local basis, but this seldom requires the provision of cash. There have been very few cases of societies winding up because of shortage of money, and bankruptcies are virtually unknown.

It might be imagined that the degree of specialisation implicit in the Danish co-operative system could lead to a considerable amount of wasted effort and duplication. This has been largely avoided, especially on the supply side, by operating through the local consumer co-operative. The manager of the village consumer co-operative frequently acts as an agent for the various supply societies. Membership of these involves a small fee and usually an undertaking to purchase for a stated period all requirements of the commodity concerned. This is probably rather a token gesture since there is little incentive for members to break their pledge.

Consumer societies, tend to supply all the farmers needs which are not specifically catered for by separate societies. If local consumer co-operatives sell goods other than to members they are only allowed to have one shop in each district. This limitation has undoubtedly retarded the development of consumer co-operation since members cannot make purchases in shops belonging to other societies except in Copenhagen where the rule does not apply. Largely due to this rule consumer societies only retain about 12% of the national sales of consumer goods. Farmers' societies, on the other hand, generally account for at least 50%, and frequently far more of the total sales of their particular commodity.

Danish co-operation has not branched into the field of operational activity and there is very little evidence of mutual self help between individuals in their regular work. Apart from an experiment in co-operative housing and milking of dairy cows there has been little development in the co-operative ownership and operation of capital equipment such as the syndicate basis found in Great Britain. The nearest approach to this method has been the formation of co-operative machinery stations which operate as contractors for their members.

The Danish farmer has chosen to retain his independence within the farm boundary whilst surrendering most of his freedom beyond the farm gate.

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EXAMPLES OF DANISH CO-OPERATIVES

It is not intended in this report to provide a detailed picture of each individual type of society. Nevertheless any attempt to appreciate the significance of the Danish system requires an understanding of various types. The following section therefore gives a brief outline of the more important societies.

Marketing Societies

Marketing societies developed in the first place because of export demands, and their immediate success was undoubtedly due to this orientation.

(a) Dairies

Of the 1,300 dairies in Denmark only 153 are privately owned. Traditionally each dairy made butter, but, in order to take advantage of the economies of large scale production, many are now used only for separating milk, manufacture of butter being carried out at central co-operative factories. Some of the factories in more recent years have also manufactured dried and tinned milk.

Milk is produced on more than 90% of Denmark's farms, and nearly 90% of the total production is converted into cheese and butter. Milk supplied to the creameries must be of a minimum standard and payment is made on butter fat content. Most of the dairies are organised on similar lines. There is no initial membership fee, and members are not required to provide any capital. Although members have only one vote each, they are jointly liable for any debts in proportion to their milk deliveries over the previous ten years. Members if they sell milk to dairies other than their own are liable to expulsion. Prices and annual bonuses do vary from dairy to dairy to a slight degree.

Ownership of dairies is vested in members according to their milk deliveries, and this applies also to any increased capital values of the dairies. This appreciation, if any, is distributed to members over a ten year period on the basis of the previous ten years appreciation, thus ensuring that the society has sufficient reserves at all times.

The financing of the co-operative dairies, although satisfactory in the past, is undoubtedly holding up worthwhile development at the present time. In some cases it is difficult to raise the capital for ambitious modernisation schemes to proceed.

Management of individual dairies is usually delegated to a trained specialist, paid on a scale related to the quantity of milk handled. Virtually all the dairies belong to a regional association, these in turn forming the Federation of Danish Dairy Associations. The Federation appoints committees which deal with every aspect of milk production from record keeping to packing materials, and represents the dairy industry on any other organisation connected with the industry. Above the Dairy Federation is the Dairy Office at Aarhus, which is responsible for the general administration of all activities connected with the industry. It consists of a secretariat together with a number of specialist departments dealing with statistics, price fixing, exports, disease campaigns, advisory work, publicity and propaganda and research work.

(b) Bacon Factories

In money terms bacon is Denmark's most important single export, amounting to £80m. in 1960. Of the 98 bacon factories in the country, all but 16 are owned or associated with co-operative societies. Whereas most co-operative dairies have a membership seldom exceeding 200, the average bacon factory has over 3,000 members. The organisation is no less democratic than that of the dairies; with one member, one vote the general rule.

Both co-operative bacon factories and the privately owned factories, have formed federations and these join together to form an export association. All the factories operate a comprehensive system of controls to ensure first class quality for all export products, enforced by a State Quality Control.

Members of bacon factories have to send all grown pigs, including sows and boars, to their factory, fines being levied if this procedure is not followed. Since little pork is produced the supply of pigs to the factories is relatively constant and there is no problem of fluctuating supplies, at least in the short term. Specialist factories have been set up to ensure that all by-products are fully utilised.

(c) Eggs and Poultry

Danish eggs and poultry are exported in considerable quantities, but their marketing has not been organised on co-operative lines to the same extent as bacon and dairy produce. Nevertheless in both spheres they control enough trade to enable them to determine prices. Since eggs require no processing the co-operatives consist of groups of

farmers who send their eggs to 29 packing stations. As with other products strict quality control is enforced by a State inspectorate. These societies are only concerned with eggs destined for the export market, those used in the home market being disposed of separately. More recently co-operative poultry packing stations have been established on similar lines to the egg packing stations, again primarily with the export market as their outlet.

Supply Societies

The organisation of co-operative purchasing societies in Denmark is quite different from that found in Britain. British co-operatives are generally suppliers of a whole range of farm requisites, from feedingstuffs to fuels, whereas in Denmark they are organised on a single commodity basis. In practice the system is probably no more complicated than that found in Britain where farmers usually deal with a number of merchants. In Denmark, the supply societies are usually integrated with the consumer retail co-operatives and membership of specific societies frequently appears to be a mere formality. Such a large proportion of farm requisites is purchased through the societies that they fix retail prices, and there is seldom much price difference between co-operatives and private firms, the main advantage of co-operative membership being provided by an annual dividend.

(a) Feedingstuffs Societies

These societies sprang up in the 19th century initially as a form of protest against the high prices and unreliable quality of supplies available from private merchants. Today the country is covered by three main co-operative associations, the largest in Jutland, with over 1,000 groups. Each group buys supplies from the parent society and resells to members on its own terms. In some cases members buy through consumer stores; in other cases where the groups are large they may have their own premises and distribution system. The national organisations are responsible for importing raw materials and carry out all processing. They also run a number of research stations where experiments are conducted in order to perfect feeding techniques. Although no salesmen are employed, a number of specialists are available to give advice on feeding policy to farmer members.

Farmers are only members of their local groups and not of the national organisations. Each group undertakes to obtain a minimum quantity of feedingstuffs. Members, apart from being guarantors for any liabilities of their own groups, also guarantee a fixed amount based

on the size of their dairy herds of about 2s.0d. per cow and this is used as a security by the parent society. They also undertake to purchase all their requirements from the society for a fixed period: in Jutland for five years. There is no way of enforcing this pledge but there is also little incentive for members to trade elsewhere.

The prices members pay for feedingstuffs are calculated on a cost-plus-expenses basis and therefore they vary slightly from group to group. The annual bonus also differs from group to group but averages about 15s.0d. per ton, or $2\frac{1}{2}\%$. No provision appears to be made for additional discounts for large purchases and prices are therefore the same to big and small users. The possibility of introducing bulk rebates is now being considered.

Since private traders in the feedingstuffs business have to accept prices largely determined by the co-operative societies, they remain in business only by high pressure salesmanship and by offering long term credit for barter. All private trade is transacted by local merchants, there being no nation-wide feed firms of the type familiar in Britain.

(b) Fertiliser Societies

All the local fertiliser purchasing groups are co-ordinated in one national association. Although in most respects organised on the lines of the feed societies, with a democratic structure, and offering an annual bonus, the fertiliser groups have been far less successful and only account for about 40% of all the trade in Denmark. Most of these supplies are obtained through the local retail co-operatives. Since all raw materials except lime have to be imported, no manufacturing is undertaken. The society has only a marginal effect upon prices. In most cases, groups allow fairly long credit to members, making a credit charge of up to 6% per annum. As with feed societies, members bind themselves to obtain all their fertiliser for a fairly long period (10 years) from the society, though it is difficult to check that they do keep this rule. The annual bonus paid is not very large, but since it does exist and prices are identical to those charged by private firms, it is difficult to understand why the co-operatives have only been able to attract 40% of fertiliser sales.

(c) Co-operative Wholesale Society (Fællesforeninger danske Brugsforeninger)

The F.D.B. is basically similar to the British C.W.S. Consumer societies in both countries are affiliated to their parent body, but retain a considerable degree of independence. As in Britain, the 1,900 consumer

societies in Denmark do not purchase all their requirements from F.D.B., relying upon alternative sources for about one-third of their supplies.

Although the bulk of the trade of the consumer societies consist of consumer goods, a wide range of agricultural commodities are also dealt with. About 40% of the total sales of seeds and binder twine are transacted through the consumer co-operatives. The binder twine is manufactured in an F.D.B. factory, whilst the seed is purchased from co-operative groups of seed growers. The seed is produced under the control and supervision of F.D.B. and this has done much to improve the quality of seed produced. Little progress in the sphere of farm machinery has been made so far but having now started to manufacture some of their own, F.D.B. is anticipating some degree of expansion.

As mentioned earlier, many of the feed and fertiliser societies use the local consumer societies as agents for their sales and this has on occasion created organisational problems. There is a tendency, as a result of this, for the agricultural business to be separated more and more from the ordinary consumer trade. At the same time there is obviously a need for some degree of rationalisation since many of the local societies are too small to form sound economic units.

Suggestions for the amalgamation of small societies are meeting with considerable opposition and it will be a slow process. There is also little doubt that consumer co-operation has been held back in Denmark by the rule requiring local membership as a prerequisite for trading. Although there are far more co-operative societies in Denmark than in Britain, and 33% of all households are members, their percentage of consumer trade is little more than half that in Britain.

(d) Other

Many other co-operative groups exist in Denmark, dealing in commodities like coal and cement or providing services such as banking, insurances or cold storage. Their organisation is not dissimilar to that of the societies described earlier. There are in addition a number of credit societies which employ a loan system quite distinct from anything found in Britain.

The Danish credit societies have no funds and simply act as intermediaries between borrowers and lenders. The societies issue borrowers with bearer bonds which are quoted on the Stock Exchange and which they sell in order to raise cash. Borrowing is normally for a 60 year period with repayment by half-yearly instalments. These bonds are almost

equivalent to gilt-edged securities and are frequently purchased by banks and foreign buyers. Loans of this nature are limited by law to a maximum of 60% of the value of the borrowers property, but transfer is simple and they are obviously an asset to both purchaser and seller when a farm is to be sold. The members of the credit societies are all borrowers, the lenders having no voice in their activities. The societies are run on democratic lines, even the valuation being undertaken by members elected to perform the task.

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EDUCATION AND FARMERS' ORGANISATIONS

Education

The system of education in a community is certain to influence the achievements of its citizens. This being so, a brief description of the system that has been evolved in Denmark will not be out of place. Indeed, certain of its characteristics help to explain the success achieved in co-operative enterprises.

Basic education is compulsory for all children between the ages of 7 and 14 years. This is provided in large central schools which cater for several hundred children each. It was realised in the early part of the 20th century that small village schools could not provide a satisfactory comprehensive education. Many of these central schools are not situated in towns but in places which are central for their catchment areas. Thus a school for 400 children would be found in the centre of an area with a population of about 5,000.

Education is free at all levels, although at universities a charge is made for board and lodging. The State meets some 85% of the cost of education, but administration is still largely based on local committees. Unlike Britain, however, the opportunity for higher education is standardised throughout the country and it does not depend upon the willingness of local communities to provide funds.

At the age of 12, children are allocated to technical or grammar streams. Compulsory education ends at 14 years and about half the children leave school at this age, but those who wish to receive further education may remain at school for an additional two years, or for a further five years if they are considered suitable and aspire to a university education. The minimum age of entry to a university is 19. All children receive instruction in German and English, and all schools are well appointed with scientific and technical facilities. Milk is available though it is not free, but no school meals are provided.

So far no great difference between the Danish and British educational facilities emerge. In the field of higher education typified by the Folk High Schools an important distinction exists. These schools were first established in 1844, based on the ideas expressed by Grundtvig. He considered that young people needed to be taught the essence of social responsibility. There are now 64 of these High Schools and they cater for about 6,000 students each year. Courses are short, lasting no more

than about five months. Instruction is provided in both curricular and other subjects, with emphasis on social and economic problems, considerable stress being given to group discussions. Most of the Folk High Schools are situated in rural areas and undoubtedly help to maintain interest in rural life. There seems little doubt that this type of education has stimulated the interest of the average farmer in basic economics, and has made him more willing to play an active part in co-operative and union affairs. The success of the farmers' co-operative organisation can be attributed in no small measure to the teaching of these High Schools.

Further education in the agricultural sphere is provided primarily at farm schools owned and run by the agricultural community. There are 31 of these co-educational farm schools in Denmark, and student numbers range up to about the 100 level per school. Entry is not permitted under 18 years of age and most new students are at least 20 years of age. Before entering the schools, students must have spent several years working on farms in Denmark or elsewhere.

The schools are financed jointly by the Government, the Farmers' Union, by private grants and from fees. Instruction given is primarily agricultural but languages and domestic science also feature in the curriculum. No examinations whatsoever are held at any time. The basic course lasts for five months and this may be followed by either a six month course for prospective milk and pig recorders, a nine month course in farm management, or a 14 month preparatory course for students entering the Royal Agricultural College in Copenhagen to take a degree.

Since there are no rigid qualifications for entry, it is possible for all prospective farmers and small holders to take the basic five month course. A large percentage do so and as a result they are probably more likely to take note of advice given by advisory personnel than if they had finished their formal education at 14 years of age.

Virtually no practical education is provided at these schools. Practical farming experience must be obtained after completion of basic education before entering the farm school. It is considered that students with adequate experience of farms in different areas will find the courses of most value. Students in British farm institutes differ in two important respects from those in Denmark so far as most of them will be younger and will have worked only on their father's farm.

The farm schools are anxious to take students from other countries.

They are prepared to find suitable farmers who will employ prospective students for perhaps six months to enable a knowledge of the language to be obtained before entering the school.

Additional educational services provided in Denmark are similar to those found in Britain. Young Farmers' Clubs have a large membership and are responsible for some training. Many of the Farmers' Union branches organise evening classes for young people together with demonstrations and competitions of one kind or another.

Farmers' Organisations

Danish farmers are organised in three main bodies. Most belong to the National Farmers' Union which has 130 branches and a total membership of about 125,000. Those farmers with less than 20 acres of land usually belong to the Small Holders' Union, which has 1,300 branches and a membership of nearly 100,000. The 2,000 or so very large land owners have formed their own organisations, but they have little political power.

Most of the agricultural advisers in Denmark are employed by the National Farmers' Union and Small Holders' Union. The work of these advisers is somewhat similar to that of British district officers in the National Agricultural Advisory Service though they have far fewer farmers to service. Since union subscriptions are low, and for small holders often no more than £1 per annum, the funds for running the unions are largely obtained by means of lotteries and by charging for services provided by the consultant. For instance, a charge of £6 per year may be made for book-keeping and £15 for economic advice. The government also assists financially in providing advisory facilities.

There is no doubt that Danish farmers make more use of advisory facilities than British farmers. It may well be that advice is easier to give, since farming systems are similar, not only in specific districts but all over the country. In addition the advisory personnel have no statutory duties to perform so that virtually all their time can be devoted to advisory work. Very close liaison exists between advisers and workers at the various specialist research and experimental stations and the transmission of knowledge from research worker to farmer is rapid. Most farmers, having received some form of agricultural education, are prepared and able to accept new methods and ideas readily. Since farms in an area tend to be similar and are easily visible to their neighbours due to the absence of hedges, successful innovations adopted by one farmer can quickly be perceived and copied by neighbours.

In one respect the Small Holders' Union works in the field of co-operation, being responsible for the provision of capital for small farmers to purchase equipment and stock. The funds are primarily provided by the Government at the rate of about £1 $\frac{1}{4}$ m. per annum, with an interest rate of only 4 $\frac{1}{2}$ %. Loans of up to £1,000 are available through local groups for the purchase of machinery, livestock and domestic equipment. To qualify for a loan, holdings must be smaller than 37 $\frac{1}{2}$ acres and the land must be worth less than £750. The membership fee of these credit groups is only 25s.0d. and down payments need be no greater than 5% of the total cost. Purchases made through this system remain the property of the union until the purchase is completed.

There is no doubt that the strength of the Danish farmers' organisations and the concentration in the educational system upon social and economic problems have assisted the successful foundation and operation of farmers' co-operative societies.

Although there may be scope for justifiable criticism of several aspects of the Danish co-operative system, in particular of the number of small local units which leads to a degree of duplication, it has done a most valuable job in stabilising prices both in purchasing and selling. It is true of course that co-operation in the use of machinery has not developed in Denmark as it has in Great Britain. One or two co-operative machinery stations have replaced machinery contracting in some places. Even the Danish farmers, it would appear, like to retain some degree of personal independence.

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CONCLUSIONS

The Future of Co-operation in Denmark

The future of co-operation in Denmark depends to a large extent upon the attitude of the younger generation of farmers. Compared with their forbears they have been brought up in a completely different climate of opinion and have seen little of the struggles involved in setting up the existing co-operative structure. This is a possible reason why co-operatives have not increased their share of the market in recent years. Their earlier success has ensured that private firms remaining in business have had to be extremely efficient and this being so there has been little incentive for greater trading with co-operatives.

The strength of the Danish co-operatives, at least on the marketing side, depends largely upon the substantial share of the processing and the manufacturing business that they control. The ability of the Danish farmer to compete successfully on the world food market depends almost entirely upon the maintenance of very high quality standards coupled with favourable prices.

The democratic nature of Danish co-operation has much to commend it. Although this has been its strength in the past, ensured by group representation at all levels, thereby enabling all members to appreciate the true meaning of co-operation, the future is certain to bring dangers in this respect. The younger farmers have less interest in becoming active members of their societies and this emphasises the necessity for rationalisation of the organisation.

Too great a degree of local autonomy can hamper integration, and as an example of this the drive to reduce the number of creameries is being thwarted by the parochial outlook of the local groups. At the present time there is a very great need for central direction of policy in the fields of both marketing and purchasing. This emphasises the problem that arises in having to balance conflicting principles. In this respect Britain has certain advantages over Denmark, for our present development in co-operation is being carried out with reference to lessons learnt from Danish experience.

Developments taking place in Denmark will require considerable amounts of capital if they are to play an effective part in the industry. Capital will be needed primarily to enable the advantages of large scale operations to be enjoyed. The existing co-operative system having required little in the form of capital contributions from members in the

past is not well placed to provide the necessary funds. Possibly recourse will have to be made in some instances to share capital and this would represent a break with tradition. Since capital invested in this way will be used primarily for developments of a regional nature the question of local autonomy will also have to be reassessed.

Denmark's farmers are lucky in that a co-ordinating organisation is already in existence. The co-operative bacon factories - dairies and so on - are all represented upon a Central Co-operative Committee. The powers of this Committee may be small at the present time, but at least it can act as a suitable forum for promoting the right sort of development. At a higher level there is an Agricultural Council which consists of representatives elected by the three groups of organisations serving agriculture - the Farmers' Unions, the Central Co-operative Committee and the Export Organisations. The Council has only limited powers as far as the operations of the co-operatives are concerned but it does speak for agriculture as a whole. Most farmers being active members of both unions and co-operative societies, the Agricultural Council occupies an exalted position and nothing comparable to it exists in Great Britain.

There is undoubtedly a need in Denmark today for a revival of interest in co-operation. It would be incorrect to suggest that co-operative practice is on the wane, but enthusiasm may well be waning. The time seems appropriate for an attempt to revitalise the co-operative movement by taking a leaf or two out of the books of private enterprise. No attempt has been made to keep abreast with the changes in selling either to producers or to consumers, and some thought should be given to advertising and publicity campaigns. Certainly removal of the limits placed by law on the trading of co-operatives would assist their expansion.

The expected entry of Denmark into the Common Market reinforces the necessity for a resurgence of interest in co-operative development. This is vital if co-operation can be equated with economic production. Denmark's farmers are low cost producers and well equipped to increase their share of the European food market. They will only be successful if costs remain low and standards remain high. It seems more likely that this will happen if co-operative societies maintain, if not increase, their share of farm business.

Lessons for British Farmers

As explained earlier the Nuffield Farm Project financed the visit to Denmark upon which this report is based. The purpose of the visit was largely to study agricultural co-operation but in fact agricultural

education and the advisory services were also studied. This section of the report contains recommendations for possible developments in these three fields. In general they represent the opinion of all members of the party.

Co-operation

Co-operation as practised in Danish agriculture differs in many respects from agricultural co-operation in Britain. It would be wrong to suggest that the exact pattern developed successfully in one country could be adopted by, and should be advocated for, the other. Apart from the undoubted fact that conditions existing in each country would make this impossible, there is little reason for thinking that similar co-operative institutions would be automatically suitable in both Denmark and Britain.

Co-operation became essential in Denmark in the late 19th century when Danish farmers accepted the fact that without it their future prospects were bleak. Economic conditions in Britain today cannot be said to be comparable to those pertaining in Denmark in the last century. Even so, the outlook for British farmers is less favourable today than it has been for many years. In the present climate for British farming, co-operation would seem to offer some alleviation to the industry. Current British trends in co-operation, as in the use of specialised machinery, and in purchasing farm requisites, are more likely to be advantageous to the industry than development along the lines of the Danish system.

In theory it should not be difficult to resuscitate the existing farmers co-operative organisations in Britain. In recent years their interests have been devoted to business expansion almost to the exclusion of the basic ideas of co-operation. Few members have bothered to play an active part in their societies, and even fewer attend the annual meetings. Generally, there is no obvious loyalty on the part of members to their societies and it seldom happens that a farmer trades exclusively with his local co-operative. This is not really surprising since co-operative societies in Britain in recent years have paid their members an average dividend on purchases of only $2\frac{1}{2}\%$. Prices charged by societies are seldom lower than those of private trading bodies, whilst their payment procedure is frequently stricter. It is often possible with personal contact to obtain apparently free credit for a long period from private firms. For many farmers, this is far more attractive than the $2\frac{1}{2}\%$ dividend obtained on average from co-operatives. This emphasises the importance of providing satisfactory credit facilities and the

Agricultural Credit Co-operation should be providing these at the present time.

The existing co-operative societies in England have a membership equal to nearly 100% of all the farmers in the country. However, many of these farmers are members in name only and do very little business with co-operatives. Many are duplicated because they are members of several societies. It would be advantageous for any further development in co-operative institutions in Britain to make use of the resources already owned co-operatively, which are considerable. In any case sums of capital will be required if the co-operative movement is to expand and this will obviously be easier to obtain if duplication can be avoided.

Not all the developments in co-operative effort need to be based on large scale organisations. Already the trading groups that have sprung up during the past two years in many parts of the country have participated in a considerable volume of inter-member and inter-group transactions, particularly of cereals, straw and other home-grown feeds. These can be supplemented by plants for drying, storing and milling of cereals, and possibly also by food mixing and cubing plants. Several of these are functioning already in parts of the country, in particular in Hampshire, and there is possibly scope for further development in this direction. Even if they are assessed for rates as industrial premises, the cost of performing certain tasks for participating farmers will still be substantially lower than most commercial charges.¹

The buying groups established recently as a result of the initiative of Rhys Thomas now total over 200 with some 5,000 members and numbers of groups are still increasing. Apart from supplying goods to members at very competitive prices, they have also provided an incentive to co-operative societies to improve their competitive position. In the past, individual co-operative societies have tended to conduct their business in complete isolation from other societies and have seldom combined to use their considerable purchasing strength to demand better terms from manufacturers. This has been particularly apparent since the new buying groups have been formed, for in many cases through effective bargaining by Farmers' Central Trading on behalf of all the groups, they have been able to purchase on appreciably better terms than the co-operative societies, despite a very much lower total purchasing power. The profits earned by co-operative societies have been distributed on a 'business done'

1 Farmers' Machinery Syndicates in Hampshire, 1955/58. Misc. Studies No. 16. University of Reading, Department of Agricultural Economics.

basis to all members, except for those with debts which have been outstanding for a long period. Thus members who have bought in bulk and paid within a month, have seldom obtained any financial advantage from so doing. This is now being remedied by some societies.

The present competition between purchasing groups and co-operative societies emphasises the fact that farmers have not been using their combined strength to obtain the best possible trading terms. If the formation of the groups achieve nothing more than this it will have been well worth while. There are obvious dangers in having too many co-operative bodies competing with each other and it would be of considerable advantage if the two movements - the groups and the societies - could be persuaded to get together in the future.

The formation of Agricultural Central Trading under the leadership of Sir Miles Thomas should achieve much. It may not always be easy to find farmers willing and able to give their time as secretaries of groups if business continues to expand. As long as there are sufficient groups in an area to justify employment of a full time secretary-agent, then the group system seems likely to continue. However efficiently co-operative societies are run, their investment in buildings and plant, and their day to day running expenses, make it improbable that their charges can be as advantageous as those of the groups. The problems that have arisen in Denmark due to the existence of a vast number of small societies emphasise the inherent dangers of extending the group system. A highly centralised organisation will be necessary to ensure that overhead costs will be kept low. This has not been achieved in Denmark and consequently the prices of farm requisites are little different whether purchased co-operatively or privately. It partly explains why the purchasing societies have not obtained a bigger share of the market in recent years.

The organisation of the processing and marketing of farm produce is the aspect of co-operation most foreign to British agriculture, but most highly developed in Denmark where farmers control and co-ordinate their activities particularly successfully in the export market. By doing so, 'off farm' costs involved in marketing and exporting are likely to be minimised, thereby benefitting both producer and consumer.

In Britain co-operative marketing has developed very little. The biggest producer controlled marketing organisations in Britain, the Milk Marketing Boards, obtain their power through statutory provisions. In most counties a small proportion of fat pigs are sold through quality bacon organisations, and in some areas quality lamb is dealt with like-wise.

The Fatstock Marketing Co-operation is the largest farmers' marketing organisation in the meat trade but only handles a small proportion of national meat production. In any case it can hardly be described as a co-operative organisation. Most farmers are prepared to agree that there are too many markets and too many slaughter houses, and that the middleman and retailer retain far too large a portion of the price that the housewife pays for meat. Despite this, neither the N.F.U. nor any other body can generate enough enthusiasm to promote one national marketing organisation that could count upon the support of the vast majority of farmers. The F.M.C. has attracted so much criticism from farmers throughout its life (much of it completely unjustified) that the only marketing board with any prospects of success appears to be one modelled on the lines of the Milk Marketing Boards with statutory powers. Some of the farmers purchasing groups have expressed an interest in marketing their produce co-operatively. Although nationally their total production is quite considerable, it is very doubtful whether most groups as yet represent a large enough proportion of the production of a specific area to have very much influence on marketing. They could no doubt co-operate in selling a limited proportion of their production in a quality market.

The expected entry of Great Britain to the Common Market emphasises the necessity to improve marketing organisations in the near future. It has often been suggested that this is more difficult to achieve in a country such as Britain which largely produces for the home market. Whilst it may well be true that the advantages of sound marketing are more easily recognised in exporting countries such as Denmark and New Zealand, efficient producer controlled marketing has been developed in European countries which export very little as is the case in Switzerland. Processing units - such as creameries - are generally much smaller in Europe than in Britain despite the fact that most production is destined for the export market. They may well be too small in Denmark but this has not prevented the organising of quality control and regular delivery, so essential for an export business. Possibly the export demands have resulted in greater attention being paid to consumer demand surveys and a willingness to accept standardisation of breeds and often of methods of production. The growth of supermarket trading and the continued integration and amalgamation of retail businesses appear likely to provide the same impetus to better marketing that exporting provided to Danish farmers.

In Denmark, farmers' marketing agencies and private firms handling similar products, co-operate in most export matters to their mutual advantage. Whether a similar degree of co-operation can be anticipated

in this country is doubtful particularly in the first formative years of any new organisation. It is essential therefore that without statutory powers, farmers' marketing organisations should control a large section of the market for their particular product.

Whereas the spirit of co-operation is possibly on the wane in Denmark, it is increasing in Britain in both agricultural and other fields. As a major industry composed of hundreds of thousands of small businesses, agriculture probably has more to gain from co-operation than has any other industry. As yet the climate of opinion is against the acceptance of co-operation as the only solution to the worsening economic climate. If the idea becomes generally acceptable there is little doubt that appropriate organisations could be set up, particularly if farmer-education in co-operation was intensified.

The enthusiasm that is being generated for co-operation in Great Britain should be channelled into two main directions, towards purchasing co-operatively and towards co-operation in machinery use. There are no insuperable problems to be met in advocating further development along these lines. With a degree of official support, not necessarily financial, there is reason for supposing that this will be considerable.

The existence of a powerful and well-established trading structure in the field of marketing make it unlikely that local groups can expect much success in this sphere. If statutory powers are not granted for producer marketing boards then attention should be directed towards strengthening the various quality organisations already serving the industry. These should be organised on a national basis.

Education

Education is undoubtedly the key to much of Denmark's successful agricultural development. Unlike practice in Great Britain it is considered that farming is similar to any other industry and that knowledge and skill must be acquired in both the classroom and at the work bench. A farmer who has not received a formal technical education is considered an oddity and his chances of success are rated as not very great. In addition, and of great importance, the future farmer receives a thorough grounding in non-agricultural fields.

In Britain few established farmers place much value on formal vocational training and few graduates in agriculture become practising farmers. Even a high proportion of those obtaining diplomas service the industry from commercial organisations, rather than participating in

practical farming. Only the farm institutes and colleges in Britain provide an education that is acceptable to those who are going to be farmers, farm managers or farm workers. This being so it is gratifying to learn that the potential student population of farm institutes is to be raised substantially. At the same time the day release classes are to be expanded but it is doubtful whether they offer the same opportunity as attendance at a higher education centre for a period. In view of the intended expansion of farm institutes it would be advantageous at the present time to consider the education provided, and to decide whether courses similar to those provided by the Danish farm schools could not be organised.

The European practice of encouraging farmers sons to work on farms other than those of their parents and preferably in another country, should be developed in Great Britain. This could be organised without much trouble by either the National Farmers' Unions or the Young Farmers' Club movement.

Residents in the rural areas of Great Britain have frequently objected to the closing of small village schools involving the transfer of children to larger centres. Educational services in Denmark are very centralised by comparison and the Danes claim that the education received by their children is much better. Many village schools have of course been closed in Britain, but most of those remaining are very poorly equipped compared to Danish rural schools. Perhaps even more important is the fact that teachers in small schools frequently have to instruct children of several age-groups at the same time. Although no criticism can be levelled at their industry, their task is obviously an unenviable one.

Advisory Services

It may be that advisory personnel in Denmark are accepted more widely by the farming community than they are in Great Britain. This could be due to one of several reasons.

1. In Denmark there is no overlapping in the duties of advisory personnel and they are employed by either the Farmers' Unions or by the marketing organisations; most being specialists in one particular aspect of farming. In Britain, advisory officers are employed by many organisations; by the Ministry of Agriculture, by the Local Authorities, by commercial firms and also by many of the marketing organisations serving agriculture. Whilst Ministry officers are usually general purpose advisors, those

employed by commercial firms and by marketing organisations will usually be specialists. No attempt is made to co-ordinate the activities of the various advisors in Britain.

2. In Britain much of the official advisors time is devoted to statutory work of various kinds. This does not arise in Denmark.
3. In Denmark much of the advice is paid for by their own organisations rather than by the Ministry of Agriculture.
4. The Danish farmer has generally had the benefit of vocational training that makes him better able to understand and implement the advice given.

The unco-ordinated activities of the various advisory bodies working in British agriculture at the present time are not making full use of the quite substantial resources employed. This failure is almost certainly due to the inability of the farming community to understand the advice given. It may well be that some degree of direct farmer contribution towards the services obtained would be worthwhile. At a time when the general public is particularly conscious of the cost of agricultural support in this country it would certainly be a politically sensible step for farmers to consider. Most farmers are already paying in one way or another for advisory services whether they use the facilities or not - by way of deductions from milk or egg receipts, or by way of higher prices to merchants. Many would make better use of the services if they appreciated their true cost.

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ADDENDUM

Danish agriculture is justly renowned for two characteristics - its system of co-operative organisations and its quality products. Yet it is no coincidence that these characteristics should occur simultaneously, for the pattern of Danish farming has developed organically as a result of the growth of co-operative organisations initiated and controlled by the farmers themselves.

There is hardly a single facet of farming life excluded from this concept of co-operative self-help. In fact, to the outsider, its all pervasiveness presents a pattern of complexity which is far from easy to comprehend. This may be due to the fact that there is no obvious logical pattern of development. Yet, despite this the Danes have contrived a system whose many parts fit together with precision.

Any attempt to reproduce the Danish system in Britain would be impossible and perhaps undesirable. The Danish achievements cannot be divorced from the social and educational developments that took place simultaneously with the growth of co-operatives. What the Danes have achieved is truly remarkable. Their system itself falls far short of perfection, but any weaknesses are more than compensated for by the spirit of co-operation that each individual helps to foster. However, one cannot avoid the impression that perhaps some of the zeal that impelled the early pioneers is diminishing. Their system exists, but has tended to become rather static. Yet for all its possible shortcomings it is to their credit that, either consciously, or as a matter of prudent politics, the social and educational changes that have occurred have stimulated the co-operative idea. Today their system still provides an excellent working model of what organised self-help can achieve.

Danish co-operation has merited interest for some considerable time. In 1927, a group of three farmers, accompanied by J.R. Bond, who was then Chief Agricultural Officer for Derbyshire, were invited by the Daily Telegraph to visit Denmark and to report on the possible lessons to be learnt from the Danes' agricultural system. Their report, 'British farmers in Denmark' ¹ is remarkable for the fact that the comparisons they made and their conclusions are almost identical to those arrived at by the participants in this more recent visit. Although co-operation was only one of the features they studied, this emerged as the crucial reason for the superiority of the Danes and even though they too accepted that it would not be feasible to transplant the Danish system in its entirety in this country, they nevertheless felt that there were many spheres in which we could benefit from their experience. It is

¹ See Bibliography.

perhaps a sad commentary on subsequent events that the challenge presented over 30 year ago still faces this country.

The co-operative movement originated in Britain and the idea was rapidly taken up and adopted far beyond our borders. Perhaps now we can reverse this process and usefully introduce some of the successful methods that others have devised! Yet equally important, it may well be that new co-operative methods are needed to deal with new situations. When this applies it would be appropriate that Britain should again be the forerunner in setting the pattern for others to follow.

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