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AGRICULTURAL CO-OPERATION IN NORTH WALES.

A Study in Experience

BY

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PREFACE.

Conservative as farmers are often thought to be, there are interested persons, and even some farmers, who are always ready to suggest that new forms of organisation or drastic modifications of existing machinery are necessary when new farming problems call for solution. There is no doubt that improvements in systems and methods of marketing farm produce are urgently required, or that the attainment of any really satisfactory improvement must have its reactions on farming practices. Nor is there any doubt that in the harmonising of supply and demand; in securing economy and speed in distribution; and generally in the attainment of more satisfactory marketing, there is room for many forms of organisation. Yet in Wales it would be folly to assume that everywhere it would be better to begin anew and ignore the existing organisations which are now under farmers' control.

Agricultural co-operation in general, and, in certain times and places, individual societies are subjected to much criticism mainly, if not merely, because they are public or semi-public in character. If private businesses or financial concerns were subjected to the same inspection, the same criticism, it could hardly be suggested that they would stand the tests better than the co-operative societies. They are not subject to the same criticisms merely because they are personal or private and because their conditions are private and their results are more or less secret. It is sometimes a source of weakness to societies that their affairs are semi-public, but there should be compensating advantages in the understanding and confidence of members. These advantages are not fully realised because there is a lack of comparative information. Any interested persons in a locality may know some details of a co-operative concern while they have only vague ideas of conditions in the competing private businesses. But were it possible to compare prices, qualities, service, profits and future service or future production between co-operative and private businesses it is almost certain that the results would be favourable to the great majority of co-operative societies in Wales.

However this may be, it is quite certain that farmers have more regard for their societies, more confidence in them, than their public or semi-public utterances would lead the superficial observer to imagine. It is very certain that even farmers who criticise would dread the possible loss of their societies, and with good reason. The co-operative society, like the State, is expected to bring forward the millenium without too much pressure on the tenderest spots or too much restriction of the proclivities of the individual. The farmer will kick at both the co-operative society and the State, but when other people begin to kick he will give both his protection and support.

Nowhere is this more true than in Wales, and it was for this reason, amongst others, that it has been deemed advisable to examine the present position and past experiences of the co-operative societies as a preliminary to the consideration of the needs of further organisations and their forms. This study follows one of a somewhat similar character of societies in South Wales (*Agricultural Co-operation in South Wales: An Economic and Financial Analysis*, by J. Morgan Jones), but it differs from the former in that it covers the general experience during the last quarter of a century, while the South Wales study dealt more closely with the static conditions of 1926. No study of agricultural co-operation in North Wales at this date could gather together all the details of experience, for many of them have been lost. In particular, this study has left out the very important personal elements in the history of the movement. While this aspect of the study deserves treatment, and while those who have given of their service and wealth to the good of the movement should be honoured by record, it was felt that available resources should at the moment be used for the most practical aims.

The aim has been that of gathering together such of the experiences as could now be collected for the benefit of those who may wish to consider lines of future action. More information on some aspects, especially the finance and organisation of requisite societies, than is here presented has been collected and analysed, but this may be reserved for the more special uses of private and semi-private advisory services.

The collection and preparation of data in this report is ascribed as to Chapters 2, 3 and 5 to Mr. J. Morgan Jones, and as to Chapters 1 and 4 jointly to Mr. Jones and Mr. R. Harding Wynne. The Department has been fortunate in

having the assistance of Mr. Wynne in this specialised study of the dairy societies, and his interest in the data of the general report.

The Authors and the Department gratefully acknowledge the skilled and unremitting help rendered by Mr. Hugh James, of the Welsh Agricultural Organisation Society; and by Mr. R. Parry and Mr. Manod Owen, of Stapleton Cotton House, and the consideration shown by all members of these bodies. They also wish specially to recognise their indebtedness to many farmers and other interested persons, too numerous to mention by name, who have assisted them in their *post-mortem* examination of defunct societies. The comedies as well as the tragedies of agricultural co-operation have often been raised to life in their interviews with its Midwives and Undertakers. But even those who have suffered have still courage and sense enough to drag out experience for examination in daylight, and while this is so there is hope for the movement. The representatives of existing societies should also be thanked for their help and encouragement, but the Authors and the Department hope to meet them again and render service for service.

A. W. ASHBY.

July, 1928.

Contents.

INTRODUCTION.

CHAPTER I. General Position in North Wales, 1926.

Requisite Societies.
Farm Produce Societies.
Miscellaneous Societies.

CHAPTER II. Varieties of Experience.

Marketing Farm Produce.
Agricultural Production.
Ownership of Farm Machinery.
Miscellaneous Enterprises.

CHAPTER III. The Anglesey Egg Collecting Depôt.

CHAPTER IV. Co-operative Dairying in North Wales.

Historical Survey.
Financial and Business Analysis.
The Organisation of Cheese Factories.
Farm Production and Marketing Organisation.
The Factory Butter-Making Alternative.

CHAPTER V. General Conclusions.

AGRICULTURAL CO-OPERATION IN NORTH WALES.

INTRODUCTION.

In the past the tendency to regard agriculture as the most conservative of industries, and to say that the conditions of rural life are static, has been all too common; and this attitude has been responsible for much unhealthy criticism. Those who are familiar with the rural history of this country realise the enormous changes which have occurred during the last century or two in the methods of farming, the aim and quality of production and in the disposal of products. This revolution can be termed the "commercialisation of British agriculture"—a phrase which denotes the changes which have made "farming a business."

Farmers have responded to these changes and met the requirements of new situations partially by individual effort, but largely in association one with another. On the production side these associations have taken such forms as shows, agricultural societies, holding competitions, and more recently breeding societies; all originally having in broad objective "the improvement of agriculture." New methods of production, the use of many new raw materials were accompanied by the need of organisation for the purchase of requisites and the sale of produce. During the chief periods of transition in the nineteenth and the present centuries many forms of agricultural organisations were tried. The chief economic forms are now such as were evolved by the working classes in the period of their trials 1800—1850: the "trade union" in the form of the National Farmers' Union. The Co-operative Society in the original form of purchase of requirements has in agriculture taken the form of requisite societies. In the later and more specialised agricultural form the co-operative principle has been extended to the sale of farm produce. The growth of Agricultural Co-operative Societies may be explained in part as the substitution of formal co-operation for

the many more or less informal methods of mutual help which were common in Wales. Farmers have had long experience in the necessity for, and practicability of helping one another in such seasonal work as shearing, harvesting and threshing. But these traditional forms of mutual assistance could not solve the farmer's business problems, though their educative value in determining his attitude to methods of joint trading was very considerable. This nucleus of experience in working together did much to prepare the ground for joint action on the business side when the necessity for this arose.

Statistical Data 1904—25.

The year 1904 marks the first essays in co-operative organisation in North Wales, and since that time the movement has gradually developed though not without suffering the growing pains of youth. The table opposite gives classified statistics of this growth, though mere figures only offer a guide to the true history of the movement. However complete may be the records—statistical and other—they cannot measure the motives which actuated the pioneers, the intensity of opposition which they met and those very important personal factors which determine the fate of any cause.

But the table does indicate the main features of co-operative activity in its experimental stage. In the early years progress was slow and co-operators were loth to apply the co-operative principle outside the business of buying and selling requisites. This form of co-operation has won on its merits since the start, and the steady progress in the trade of this class of society is some measure of the intensity of the want they supplied and of the efficiency with which the service was performed. The encouraging experience of the early societies during the period 1904-1910 was winning adherents whose enthusiasm resulted in the expansion of the movement to new districts. Consequently when the agricultural situation of 1914-18 produced conditions which placed a premium on association, farmers were willing to organise because other societies had successfully put the co-operative principle to the test. The war-time period, even ignoring the inflation of prices, is marked by the rapid expansion of requisite societies, and there is every indication that these societies have come to stay. It is inevitable that a new form of business activity must have some failures associated with it, and to this rule co-operation in North Wales forms no exception. Of the

TABLE I.
AGRICULTURAL CO-OPERATION IN NORTH WALES, 1904-1925(1).

Year.	Number of Societies.	REQUISITE SOCIETIES.			PRODUCE SOCIETIES.				MISCELLANEOUS SOCIETIES.				ALL SOCIETIES (2).			
		Members.	Share Capital.	Sales.	Number of Societies.	Members.	Share Capital.	Sales.	Number of Societies.	Members.	Share Capital.	Sales or Receipts.	Number of Societies.	Members.	Share Capital.	Sales.
1904	3	157	£ 283	£ 2,527	..	..	£ ..	£ ..	..	..	£ ..	£ ..	3	157	£ 283	£ 2,527
5	5	212	351	5,291	..	..	..	..	..	..	..	..	5	212	351	5,291
6	10	489	640	10,296	..	..	..	..	..	..	..	..	10	489	640	10,296
7	11	580	768	17,263	..	..	..	..	..	..	..	..	11	580	768	17,263
8	13	671	881	19,785	..	..	..	..	..	..	..	..	13	671	881	19,785
9	16	864	925	27,495	..	..	..	..	..	..	..	..	16	864	925	27,495
1910	17	1,014	1,154	35,101	..	..	..	..	..	..	..	..	17	1,014	1,154	35,101
11	18	1,239	1,480	43,269	1	9	153	436	1	10	1,311	330	20	1,258	2,944	44,035
12	20	1,653	2,509	52,798	1	14	183	1,257	2	80	3,000	728	23	1,747	5,690	54,783
13	25	2,129	3,814	71,965	2	97	314	4,502	2	77	3,230	761	29	2,303	7,358	77,258
14	30	2,753	4,373	99,434	2	98	396	6,442	2	77	2,830	2,344	34	2,928	7,599	108,220
15	32	3,609	5,108	157,044	2	97	316	8,712	2	79	3,012	709	36	3,785	8,436	166,465
16	40	4,405	6,407	210,647	2	101	517	11,232	2	80	3,014	788	44	4,586	9,938	222,667
17	40	5,562	10,202	272,830	4	368	611	17,835	4	95	4,358	1,736	48	6,025	15,171	312,401
18	40	6,563	15,859	281,156	6	586	1,408	44,145	8	402	6,953	3,886	54	7,551	24,220	329,187
19	40	7,932	31,191	434,567	15	1,225	7,761	126,127	11	490	8,477	6,528	66	9,647	47,429	567,242
1920	38	8,109	43,599	644,868	21	1,662	12,628	160,664	10	478	8,950	6,357	69	10,249	65,177	811,889
21	36	8,254	53,141	487,716	22	1,771	13,357	88,611	8	313	5,503	6,105	66	10,338	72,003	582,432
22	34	7,873	51,746	405,225	23	1,810	13,927	54,160	7	295	4,352	4,252	64	9,988	70,025	463,637
23	35	7,924	53,066	413,604	18	1,522	9,203	37,564	6	267	2,847	4,807	59	9,713	65,116	455,975
24	35	7,966	55,023	441,838	16	1,469	8,709	32,187	6	266	2,887	3,374	57	9,701	66,619	477,399
25	34	7,687	55,801	441,671	12	1,180	7,925	23,104	6	267	4,389	3,590	52	9,134	68,115	468,365

(1) Comprising Counties of Anglesey, Carnarvon, Denbigh, Flint, Montgomery and Merioneth.

(2) Excluding Smallholding and Allotment Societies.

52 requisite societies which had been registered up to the end of 1925, 34 were still in business, 6 had been absorbed by amalgamation, while 12 had been wound up. Of these twelve, two or three traded only for a year or two on a small scale, while at the other extreme, one or two were wound up after a fairly successful business career of twelve or more years. The majority of the districts served by these twelve societies are now covered by other neighbouring societies, and the disappearance of some societies has hardly been a loss to the movement.

Such an optimistic conclusion can hardly be arrived at when reviewing the records of the produce and miscellaneous societies. Perhaps North Wales is unique in the range of activities—varying from land purchase to the growing of daffodils—which have been taken up under the name of co-operation. But apart from these offshoots, there have been many serious attempts at organising the sale of produce, and some of them deserved better treatment. In all 26 societies were registered for the sale of produce, 22 of these being organised for handling milk, 2 for eggs, 1 for fruit and vegetables and 1 for the sale of wool. The big majority of these societies have failed and can be largely regarded as the victims of economic circumstances. The majority of the very varied group of societies in the miscellaneous classification have been de-registered largely as a result of the temporary character of the wants for which they sought to cater. It is a very significant fact that only five of the produce and miscellaneous societies were in existence before 1915, and it was almost inevitable that the universal craze for establishing businesses on flimsy foundations at that time should have extended to the co-operative movement. But the efforts have by no means been wasted, and in fact a study of the causes of past failure can be positively useful as indicating the pitfalls which present and future enterprises should avoid.

The dairy societies are specially dealt with in Chapter IV, and other societies in various sections. But it should be stated that there are different forms of "failure" amongst agricultural co-operative societies. The private business that "fails" usually fails in the financial sense to the extent that the owner is bankrupt either in law or in fact and is unable to meet his liabilities in full. Co-operative societies may fail in this sense and fail to meet the claims of their creditors with 20s. in the £; or while paying creditors in full, fail to meet the full claims of shareholders to repayment of share capital.

But a co-operative society may fail in the "service" sense, and yet pay creditors and shareholders their full claims. There have been "failures" of societies which have been valued in excess of paid-up share capital. So far as is ascertainable, the loss suffered by creditors of requisite societies has been very small, if any, and the financial loss in paid-up capital of shareholders has been very small indeed. In the case of the produce societies, especially those engaged in the manufacture and sale of milk the position has been quite different. In a few cases, creditors had to be content with only a part of their claims, while shareholders lost all their holdings. In a larger number of cases the financial loss was shouldered by shareholders only. But taking the movement as a whole, the addition to members' interests in the form of undistributed profits or bonus shares is much greater than the losses which have been sustained through the misfortune of a few societies.

CHAPTER I.

THE GENERAL POSITION IN NORTH WALES, 1926.

As in South Wales, there were 48 registered societies doing businesses in North Wales during 1926 with one further requisite Society which, though being dormant for some years, has not yet cancelled its registration*. The following classified table shows the number, membership, and trade of the societies :—

TABLE 2.
SUMMARY OF COUNTY TABLES, 1926.

<i>Requisite Societies.</i>	No. of Societies.	Member-ship.	Sales.		
			Requisites.	Produce.	Total.
Anglesey ..	5	1,318	£ 41,483	£ ..	£ 41,483
Carnarvon ..	6	1,768	69,031	10,305	79,336
Denbigh ..	5	1,291	91,384	..	91,384
Flint ..	4	1,223	59,487	17,076	76,563
Merioneth ..	11	1,944	68,689	..	68,689
Montgomery ..	2	706	43,853	..	43,853
Total Requisite Societies ..	33	8,252	373,927	27,381	401,308
<i>Produce Societies.</i>					
Egg ..	1	814	..	7,676	7,676
Dairy ..	8	298	..	14,242	14,242
<i>General Purposes.</i>					
Implements	3	98	..	..	302
Miscellaneous	3	154	..	..	961
Grand Total ..	48	9,616	373,927	49,299	424,489

There are one or two conditions which make it rather difficult to measure the scope of the co-operative movement in North Wales in relation to the business needs of the agricultural population†. In the first place there are some societies which are not agricultural in character, being established for

* *Vide* pages 14—18.

† For comparison *v.* Agricultural Co-operation in South Wales—J. Morgan Jones.

carrying on other forms of rural enterprise. In the second place there is not that clear-cut distinction between the industrial and agricultural areas in the North as is found in South Wales. Although North Wales is predominantly agricultural in character, the slate industry of Carnarvon and Merioneth and the coal and allied industries in Denbigh and Flint are of great economic importance in these areas. But these groups of industries are surrounded by farming areas, and many persons primarily engaged in industry are smallholders. The population of several villages consists of persons wholly dependent on agriculture collateral with others who work in neighbouring quarries. Consequently, while co-operative societies in such villages may be classed as "agricultural," their trade is not such of necessity and their membership is considerably in excess of the farming population of the immediate neighbourhood. Some indication of this is given in the following table:—

TABLE 3.
MEMBERSHIP, FARM POPULATION AND TYPES OF HOLDINGS.

County.	Membership in all Societies.	Farmers and Graziers, 1921.	Per cent. in Movement. %	Agricultural Holdings 1928.	Agricultural Holdings per 100 members.	Cultivated Land per Holding. (acres).
Anglesey ..	2,285	2,622	87.1	4,366	191	32.48
Carnarvon ..	1,786	3,337	53.5	5,857	328	27.38
Denbigh ..	1,480	3,656	40.5	5,663	383	44.87
Flint ..	1,332	1,918	69.4	3,344	251	36.12
Merioneth ..	1,946	2,100	92.7	2,837	146	46.68
Montgomery ..	787	3,631	21.7	5,261	668	49.39
Totals and Averages ..	9,616	17,264	55.7	27,328	283	39.13

In Merionethshire for example and to a less obvious extent in Carnarvonshire the membership in relation to the number of farmers is inflated by reason of the inclusion of quarrymen who may or may not be small-holders. Other precautions must also be taken to avoid undue optimism based on fictitious figures. It must be remembered that the laxity in checking share registers and the extent of trade with non-members are important. Then there is doubtless some duplication of membership between the requisite and the other societies. Taking the requisite societies alone, it may be

estimated that membership represents rather more than one-third of the total of farmers and smallholders who are not themselves traders. In the sale of produce the farmers are organised only to a very small extent. Altogether, it is evident that the movement has much territory to conquer. This is so even in the farm requisites business and there are enormous potentialities in the marketing of produce.

Requisite Societies.*

Societies for the sale of requisites are scattered all over North Wales and there are few farms so situated that a co-operative store is not within reasonable distance. There is extreme variation in the scope of societies—some doing a trade of less than £1,000 per annum, whereas one or two with half-a-dozen or more depôts are handling goods to the value of upwards of £40,000 each year. Whereas the policy of committees and the business attainments of the managers are the controlling factors determining the size of societies in some cases, the topographical features of the district and the ease of communication are none the less important in others. It is significant that with the single exception of one society concentrating on a "household" trade, all the societies doing a trade above £10,000 are in low-lying districts. The variations in average size of societies between counties are demonstrated in the following table:—

TABLE 4.
SIZE AND TYPE OF TRADE OF REQUISITE SOCIETIES.

County.	Number of Societies.	Members per Society.	Sales per Society.			Sales per Member.		
			Farm Requisites.	Household Goods.	Total.	Farm Requisites.	Household Goods.	Total.
Anglesey ..	5	263	£ 6,894	£ 1,402	£ 8,296	£ 26.1	£ 5.2	£ 31.3
Carnarvon ..	6	294	9,591	1,914	11,505	32.5	6.5	39.0
Denbigh ..	5	258	16,878	1,398	18,276	65.3	5.4	70.7
Flint ..	4	305	13,709	1,162	14,871	44.8	3.8	48.6
Merioneth ..	11	177	3,782	2,462	6,244	21.3	13.9	35.2
Montgomery	2	353	19,552	2,374	21,926	55.4	6.7	62.1
Totals and Averages	33	250	9,453	1,908	11,361	37.8	7.6	45.4

* v. Forthcoming Article "Co-operation in Supply of Farm Requirements" Ashby & Jones. Journal Ministry of Agriculture.

Again Merionethshire stands out as a county where for several reasons the sales per society are small and where a high proportion of the trade is concerned with the supply of household needs. The tendency towards a larger society concentrating on the sale of farm requirements is equally notable in those counties bordering on England. Both these tendencies are associated with the type of farming conducted in the respective areas. At the one extreme, extensive mountain sheep farms can be contrasted with milk-producing grass farms relying largely on bought foods at the other. Generally speaking, therefore, the farming systems, together with topographical features, play an important part in determining the size of businesses. There are, however, considerable areas where both these factors are consistent with having larger societies and businesses than are found in them at present, and in certain cases it should be expected that increased turnover or amalgamation would offer probabilities of substantial savings. One group of societies is already forestalling some of the theoretical advantages of amalgamation by the joint purchase of foreign fertilisers. Experience has shown this to be helpful and the method of collaboration is so simple that no society should fear unpleasant complications in extending the co-operative principle by such schemes.

The problem of meeting the competition of other sellers, which is everywhere keen, varies considerably over different parts of North Wales owing to the situation of individual societies in relation to the sources of supply. For feeding stuffs, Merseyside forms the natural buying market for North Wales, but some societies are within easy reach, while others are at considerable distance. Societies in Anglesey, Carnarvon and Merioneth are too far removed from Liverpool to purchase direct and consequently have to rely on large wholesalers for their supplies. Their purchase and sale problems are rather different from those of societies bordering on England. In their buying the managers of the more remote societies have to rely on information given by travellers and obtainable from trade papers. In other cases managers make frequent visits to Liverpool, are in close contact with the market and often take delivery direct from the quays. This advantage of having first class market intelligence is largely, though not wholly, counterbalanced by intense competition on the part of other distributors who bring goods direct from the ports and deliver them to farmers in the area. Consequently keen buying on the part of the manager is vital in these districts, and the farmer must be very well served if societies are

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to retain his custom. Two societies in the North-Eastern district strive to meet competition on a quality basis, and for this purpose do a considerable amount of milling in order to be able to guarantee the purity of cereal feeding stuffs.

One or two of the "inland" societies, notably those in quarrying districts, are faced with another form of competition, which comes from retail distributive societies of the "industrial" type. In more than one instance the strong industrial societies are encroaching on the agricultural and so modify the latter's price policy as to make the payment of a dividend by them virtually compulsory. While a few cases of direct competition exist, relations between the two movements are fairly harmonious and the possibility of wider mutual trading in farm produce has formed the subject of discussion at least on one occasion.

With the exception of nine societies, all the requisite businesses made profits in 1926. In four of these cases losses in that year were definitely due to the financial situation which had been caused by heavy losses in previous years. Some of these losses were created by the depreciation of equipment in the post-war slump, others by extravagant expenditure on fixed assets, while in one case heavy losses are attributable to gross mismanagement. The other five societies are cases of small businesses which lack good management, and are likely to disappear in the near future without causing much loss to the movement.

Apart from conditions of capitalisation, profits or losses are determined by the manager's skill in buying and price fixing and careful scrutiny of working costs by the manager and the committee. The importance of these two factors is shown below, where the societies have been grouped on their trading results, *i.e.*, ignoring the complications introduced by differences in financial conditions. The influence of financial conditions has been discussed elsewhere*.

TABLE 5.
TRADE MARGINS AND COSTS.

Trading Profit margin as % of Sales.	Number of Societies.	Per cent. of Sales.		
		Trade Income.	Trade Costs.	Margin.
2 % and over ..	17	9.1	5.5	+ 3.6
2 % to 1 % ..	5	9.75	8.1	+ 1.65
1 % and under ..	5	10.06	9.83	+ 0.23
Loss ..	6	6.67	7.94	- 1.27

* Agricultural Co-operation in South Wales. J. Morgan Jones, p. 27
et seq.

These group results are instructive as demonstrating the importance of both gross profits and working costs. The wider difference between buying and selling prices in groups 2 and 3 compared with group 1 is accompanied by poorer results because of a greater proportionate increase in expenditure. On the other hand the societies showing a loss are characterised by normal costs, but the insufficient gross margins, either due to inefficient buying or to a misplaced desire to benefit members at the expense of the society. Whereas no definite rules can be laid down for the calculation of selling prices it should be the aim of all societies to sell at something near market price and give members the advantage of keen buying in the form of interest, dividend, or in unappropriated profits at the end of the year.

As in other parts of the United Kingdom, there are supply societies in North Wales which add a certain amount of trade in farm produce to their general requisite business. Only two societies show trade in produce in the *Annual Returns* sent to the Registrar of Friendly Societies, although about a dozen societies actually handle members' produce. Of the societies recording produce trading, one—the Maelor Society—does about half of its total trade in wholesale liquid milk, and unit haulage costs are greatly reduced by the Society's vehicles being able to deliver requisites and return loaded with milk. The other society—Eifonydd Farmers' Association—deals widely in eggs, and considerable quantities of butter are also handled. The farm collection of produce is not in this case dove-tailed with the delivery of requisites, and the bulk of the eggs are assembled through the medium of local agents in each district. This society has also conducted some experiments in the sale of fat stock. Manchester forms the natural outlet for the meat of the area, and fat stock has been consigned to this centre for sale on a dead-weight basis. In order to ensure that stock of good quality was obtained, the society hired an agent to purchase on the farms. Other societies handle butter and eggs, and in the case of the Foel Society in Anglesey, arrangements have been worked for the sale of members' wool. The wool was assembled in the society's depôt, inspected to ascertain that it was properly packed, and later inspected and bought by individual dealers. Last season another society sold several lots on the London Wool Exchange. One society by exercising care in the purchase of supplies and informing suppliers

of market requirements, has built up quite a good local demand for home-cured bacon and hams.

On the whole, the handling of produce by societies so far has only been tackled in a half-hearted way, but the problems with which they have been confronted emphasise the intimate relation between production and marketing. In the large scale handling of eggs, the chief difficulties are to find remunerative outlets during the glut season and to get eggs of good size and quality. The seasonality of production has been very marked and it has been difficult to get a sufficient quantity of Grade 1 eggs to cover the losses sustained in selling those of lower grades.

Lack of uniformity in the supply and quality of butter creates great difficulty in establishing a permanent market for this class of produce. Some societies have small quantities for export during the summer, whereas the local supply is far from adequate to meet the demand of local shops during the winter, with the result that imported butter has to be secured. On the other hand, the variations in the quality which exist in the supply of different farms provides the manager with a nice problem in adjusting supplies to tastes. The only way in which customers can be kept satisfied is to ensure that they are always given butter from the same farms. The necessity for such a plan is eloquent testimony to the fact that lack of uniformity retards the wider consumption of the home-produced article. Several societies have been faced with this problem in their attempts to establish trade in produce with industrial societies. The latter are willing and often anxious to extend inter-trading provided that agricultural societies can offer a supply fairly uniform in quality and quantity. While certain variations in supply are almost inevitable, organised effort, together with a better knowledge of market requirements on the producers' part, soon brings about that uniformity of quality which is so essential if the competition of imported supplies is to be met.

Farm Produce Societies.

In 1926 there were nine societies directly concerned with the sale of farm produce, either in the form supplied by farmers or in a manufactured state. Since 1920 this branch of co-operation has not offered much encouragement to those who have faith in the movement, but the present outlook is distinctly encouraging and the current economic depression

is creating an atmosphere favourable to resuscitating the co-operative sale of produce. The history of produce societies is given in some detail in other sections, but the general position in 1926 may be briefly sketched.

Dairy Societies.—Eight of the societies devoted entirely to the handling or manufacture of farm produce in North Wales in 1926 were concerned with the sale of milk in one form or another and it is encouraging to find that all these societies are still in existence and show every indication of remaining so. Three societies are situated in Flintshire and five in Denbighshire, and although they extend right to the western and southern county borders, the co-operative dairy movement in North Wales is at present strictly confined to these two north-eastern counties.

Four societies are solely seasonal cheese factories; usually in operation only from April to October each year. They deal with surplus summer milk in stock-raising areas and manufacture a Cheshire type of cheese which finds a ready sale either locally or through cheese factors in the Liverpool and Manchester districts. All four societies are of comparatively long standing; one, Nerquis and District Co-operative Cheese-making Society, Ltd., being one of the first four dairy societies to be formed in North Wales in 1918. Of the other three cheese-making societies, one commenced operations in 1919 under the name of The Llangedwyn Farmers' Co-operative Cheese-making Association, Ltd., in the most southern corner of Denbighshire; and the other two, Prion Co-operative Dairies, Ltd., Denbigh; and Tryddyn Co-operative Dairies, Ltd., Mold followed one year later. These four societies have continued to make cheese every year from their commencement and, as a result of careful management upon the financial side and in the factory itself, and of the comparative loyalty of their members, have successfully weathered the storm that wrecked so many North Wales cheese-making societies in the early post-war years.

Two societies situated in the Vale of Clwyd combine their summer cheese-making activities with a liquid milk trade in winter. Centred as they are in districts more adapted to the dairying branch of farming they are enabled to keep in operation all the year round, despite the fact that their summer and winter supplies vary considerably in quantity. The Llandyrnog Cheese Factory, Ltd., which originated in 1919, caters for the liquid trade during the winter months by supply-

ing milk by rail to wholesalers in Manchester. This society has also attempted to develop business in another direction. Milk is separated and the cream offered for sale either in bulk or in cartons bearing the society's name. A market is found for this product both locally in the Denbigh district, and in the coast resorts; but irregularity in output militates against much expansion of this aspect of the trade at present.

Further up the valley the Vale of Clwyd Dairies, Ltd., has had its home at Ruthin since 1919. This society is similarly placed regarding a summer cheese and winter wholesale milk trade, but, in addition, the society operates a retail milk round in its own town. This yields a steady market at fair prices and the summer pressure is further relieved by the sale of liquid milk in Rhyl, where demand is increased by the influx of visitors. It is a reasonable conjecture that enterprise similar to that exhibited by these two societies might have turned failure into success for some of the societies—now defunct—that held rigidly to cheese production during the difficult years of the slump in price of cheese.

The Vale of Conway Dairies, Ltd., which operates in Llanrwst, is another of the older societies, dating from 1919. This society, however, has never been concerned with cheese-making but finds its chief source of income in a retail milk round in the town of Llanrwst. Shop premises in the town are owned by the society and milk is delivered there by about seven suppliers. After cooling and filtering, the milk passes to the consumer either by way of the truck and can roundsmen or, directly, over the shop counter. Surplus milk in summer is either retained on the farms for butter production or it is separated at the shop and sold as cream in cartons in Llanrwst and district.

All of the seven societies mentioned are small in size and receive their supplies from very limited areas. With the exception of the wholesale milk trade, and the cheese in one or two instances most of the sales are made comparatively near the scene of production. There is one other society, however, that is working along somewhat different lines. This is Flintshire Farmers, Ltd., which originated in that county in 1925. Many farmers in Flintshire are interested in the supply of liquid milk to retailers in the Wallasey district of Cheshire, which forms a considerable residential and suburban adjunct to the industrial centres of Liverpool and Birkenhead. The society was formed as a result of certain disputes between Wallasey dairymen and their Welsh suppliers and it now

creates a direct link between producer and consumer. The society has two shops and three milk rounds at present operating in Wallasey and draws its supplies of milk from members in various parts of Flintshire. It is interesting and important to note that the milk is supplied under contract to the society and is consigned on rail to Wallasey by the suppliers in the same way as when dealing with an ordinary wholesaler. A considerable proportion of the milk is bottled at the dépôt in Wallasey before distribution to the consumer. Surplus milk can be disposed of as cream in cartons, and, if the surplus is considerable, butter-making facilities are available. The society's shops also supply groceries of all kinds and deal with a fair quantity of eggs from the Flintshire farms.

Although several of the existent societies are situated in districts where the typical agriculture of a great part of North Wales—stock-raising on small farms—is prevalent, the general tendency for the more successful dairy societies, particularly cheese-making societies to be found in the eastern counties has a peculiar significance which will be discussed in a later section devoted to the co-operative dairy movement.

The Anglesey Egg Dépôt.—The Anglesey Egg Dépôt is now the only society in North Wales established solely for the sale of eggs. Poultry keeping is generally practiced all over the island and the population is so predominantly rural that a society selling produce in distant consuming markets is fulfilling a real need. The dépôt draws supplies from farms scattered over the island and also operates to a limited extent on the other side of the Menai Straits. The two collectors travelling by motor van are given sufficient cash to pay for supplies, the weekly price being fixed each Friday morning in accordance with changes at Llangefni Market on the previous day. In order to test the Llangefni prices, the manager personally visits that market each week. Eggs arrive at the Llanfair P.G. Dépôt each day and are tested by the electric tray system, and subsequently graded on a weight and quality basis. The Llanfair dépôt adjoins the main platform and goods can be sent by rail with the minimum handling costs. The bulk of the eggs are sold to retail distributive societies in Lancashire and Cheshire, but some North Wales towns provide a market for inferior grades.

Apart from the business problems of a society of this character, one of its chief difficulties is to maintain close con-

tact with suppliers. It is difficult to secure sufficient control over the movements of collectors and the wide range from which supplies are drawn presents great obstacles in the proper organisation of the society. A large society covering a wide area is in danger of losing the active interest of members unless some form of local organisation can be set up. Large requisite societies usually have depôts in most districts served by them and in the election of committees an attempt is made to give representation to each district. The case of the Egg Depôt is rather different since it has only one trading centre, and active interest can be maintained only by frequent visits of the manager to individual customers. The maintenance of close personal contact between members or suppliers and the manager is necessary to secure the solidarity of the society and to secure the smooth running of the business if supplies are to be obtained in competition with higglers.

Miscellaneous Societies.

Six societies are classed separately because they are not definitely concerned with the purchase of requisites or the sale of produce. The existence of these enterprises shows that co-operation is a form of organisation which can be successfully applied to various forms of business activity. There is nothing inherent in the co-operative principle which incapacitates it from absorbing the majority of industrial and commercial enterprises.

Threshing Societies.—Three of these societies are of an agricultural character, being organised for the co-operative ownership of threshing machinery. The machines were bought with share capital subscribed by members on the usual lines. The burden of organising work falls on the secretary, who receives applications for the use of the machine on particular days and arranges for movement from farm to farm. He shares the duties of administration with a committee who have the responsibility for determining service fees to users of the equipment. The comparative absence of necessity to thresh on a particular day contributes to the ease of organisation and these societies are able to work without friction. Greater difficulty would be encountered in the co-operative ownership of equipment which would be more intensively used, and it does not seem that much further expansion in this direction can be anticipated.

Newborough Mats.—In the sense that all the yield of the soil can be called agricultural, the Newborough Mat Makers can claim to be an agricultural society. The efforts of this society to sustain an old-established rural industry should be welcomed by those who bewail the eternal drift towards the towns. The society exists to give the village mat-makers of Newborough the marketing facilities which they lack when acting individually, and thus help to secure for them a fair reward for their skill. The mats are brought to one store room, are paid for on delivery, and are subsequently sold by the secretary who is in touch with purchasers over a wide area. The better prices which the society has secured in the past is a further example of the way in which a co-operative society selling in distant markets is able to serve its members.

Electricity Societies.—An interesting projection of co-operation into rural life is seen in two villages in the east of Montgomeryshire, where the village electricity supply is controlled by co-operative societies. The favourable financial position of these societies and the reasonable rates charged to users show that the benefits of co-operation can be distributed over a broad basis and are not confined to the holders of capital. It will be interesting to watch the extent to which new developments in rural activity generally will follow on co-operative lines. The amenities supplied by the village societies, together with the training in citizenship and democratic control which they offer to members, will contribute materially to enriching the life of the countryside.

CHAPTER II.

VARIETIES OF EXPERIENCE.

The description of the general growth of agricultural co-operation in North Wales and its present position can not do full justice to the story nor indicate the full scope of the movement, its experiences, or their lessons for the future. The movement in North Wales has at various times commanded the interest and services of many different types of friends of co-operation. Landowners, farmers, smallholders, cottagers, have all taken a part in the very varied activities of the societies. Persons interested in general social reform, in rural reconstruction, and persons specially interested in the safety and welfare of the State, have also played their parts and have at times exercised important influences on the movement. Paid and semi-paid organisers, as well as the actual business managers, have also given their ideas and enthusiasms as well as their detailed services to the societies and the general movement.

North Wales is perhaps most remarkable for its co-operative enthusiasm and its willingness to apply the principles of co-operation to all kinds of enterprise. Many of the projects of the past have now gone into the subconscious minds of the older folk of the present generation and of the generation that is passing. The ideas which were actually embodied in societies may sometimes be traced; but those which remained as projects, never passing beyond the stages of informal and formal discussion, and the preliminary stages of organisation, are passing beyond recall. The dim spectres of that past sometimes arise when related ideas are expressed or schemes are projected at the present time, and like other ghosts they mostly bring fears and warnings. When ideas were embodied in organisation, and business was carried on, some records may remain; but these are often incomplete. The memory of these societies remains dim and indefinite as regards actual details of fact, but often forbidding and restrictive in influence. In the rural community of North Wales there are people who are still warned by the enthusiasms of the past yet full of doubts and misgivings of their own feelings, some who are cold with the fear of the spectres, and others of the younger generation who are still open to the cooler consideration of the practical possibilities and needs of the present moment.

Had there been as much of practical organising and business ability as of enthusiasm, the rural business of great parts of North Wales could by now have been carried on under a co-operative system. The aims of the promoters of co-operation appear to have been formed on the lines of the continental movement and their endeavours directed to the embodiment of all the forces of rural enterprise in co-operative societies. At a later stage the exigencies of war were responsible for a conscious endeavour to harness the latent productive forces of the countryside to meet the national need. The ideas and the current needs brought into existence societies of many types. These dealt with the marketing of many farm and garden products, with supplies of farm equipment, with other rural requirements and activities. The history of all these societies cannot now be written, but examples are worthy of description. The dairy enterprises are dealt with separately (Ch. IV.) and the experiences of the Anglesey Egg Collecting Dépôt were deemed worthy of separate treatment (Ch. III.) but some other experiments are dealt with below.

.Marketing Farm Produce.

Marketing Wool.—One of the early experiments in co-operative marketing in North Wales was in the direction of selling wool on co-operative lines. The contrast between the efficient methods adopted by Dominion producers and those existing for marketing wool at home was attracting the attention of agriculturists. The A.O.S. did much useful propaganda work in this matter during the two years preceding the outbreak of the war, and endeavoured to educate the farmers in the advantages of classifying and grading. In elaboration of this scheme, county committees were set up and as far as North Wales was concerned, propaganda work was conducted during 1913-14 in Anglesey, Carnarvon, Flint and Montgomery.

This work fructified in the formation of the Carnarvon Wool Society in 1913, in time to deal with the clip of that year. Previous to this two requisite societies—the North Flint, and Dysynni Farmers—had done something towards securing better marketing of wool and their actions represented the earliest attempts to organise the co-operative sale of wool in this country. The Flint Society bought the wool outright from members, collected and brought it to their stores where it was classed by the grader of a private firm. This particular

firm eventually bought the wool on tender, as an agreement had been previously reached whereby the highest tender was to be accepted. Though this action secured top prices for members it was hardly a contribution to solving the problems of efficient marketing.

The Carnarvon Wool Society is the only example in Wales of the handling of wool on the orthodox co-operative lines such as are now pursued by existing societies in England. The wool was brought to a depôt in Portmadoc and weighed on arrival. An experienced classer was employed who classed and graded the wool, and each supplier was credited with the weight contributed to each grade. Subsequently the wool was baled and sent to London in bulk. There, after storage for some time, it was sold through brokers on the London Wool Exchange. The 1913 season was the first in which English or Welsh wool was sold on the London Exchange, and the care which had been taken in preparation by the Carnarvon and a similar society operating in Yorkshire resulted in buyers being favourably disposed to home wool. The wool was sold to home and foreign buyers and it was confidently expected that the development of co-operative sale would soon win for the home product a good reputation on the world's largest market and thus stimulate demand.

But these anticipations were not realised, at least as far as the Carnarvon Wool Society was concerned. Though the Society retained registration until 1922, it did no business after the first three seasons. The sales in each year 1913-15 were £1,286, £980 and £480 respectively. The outbreak of war, with its consequent upheaval in marketing methods and prices created special conditions, in the absence of which the society might have succeeded and developed. But actual history has to record another case where in practice the theoretically sound enterprise proved to be a failure.

Several reasons suggest themselves as providing explanations for this failure. The costs of operating the scheme were too high, though some items would have been reduced after further experience. On the 10,000 fleeces handled in 1913, working costs amounted to 1.4d. per pound. Some reduction would have been achieved had farmers taken more trouble in packing in the first instance. As it was, high wages had to be paid to the grader for routine work which could have been done by less skilled workers. Moreover, the costs of packing were increased because the small weight of the average fleece was only 2lbs., compared with 6lbs. in Yorkshire. Further-

more, freight to London and warehouse charges were heavy items since all the wool was dispatched there for storage and direct sale. The satisfaction of the buyers seemed to be such that in future the market would readily have accepted a 5% or 10% sample (as it now does with some English co-operatives) but the Society did not trade long enough to put this to the test.

The result of these heavy charges was that the final price received by the farmer was little above that obtainable locally. With characteristic lack of appreciation of the ultimate advantages of the new method, farmers preferred to retain existing practices and maintain the personal contacts which they are always loth to surrender. Considerable allowances must also be made for the fact that co-operative selling was a new method with which farmers were unfamiliar and of whose principles they were ignorant. Another factor may have been of greater importance than is obvious at a first acquaintance. Farmers received nothing at the time of dispatching the wool to the dépôt, but had to await payment for about two months, until the broker had disposed of the Society's consignment. The Society only had about £11 capital and evidently could not pay anything in advance to suppliers. Although the Society adopted the true co-operative principle of selling for, rather than buying from members, perhaps a good deal of farmers' apathy was due to the very thoroughness with which the principle was applied.

Several attempts have been made since the war to resurrect the Society and many schemes put forward whereby distant buyers could be introduced to the district. In the general re-organisation of wool marketing it was suggested that the wool of the larger part of North Wales could be concentrated at a central point to which buyers from all centres would be attracted. The need for organising the sale of wool is as great as ever, but it would seem that even now the time has not arrived for launching new schemes. The significant thing about the Carnarvon Wool Society was that it embodied some of the principles which have everywhere characterised the successful organisation of produce marketing on co-operative lines.

The Anglesey Produce and Supply Society.—Other efforts towards co-operative organisation in North Wales afford further examples of attempts to incorporate "modern" ideas in marketing. The dominant general objective seems to

have been the desire of producers to gain control of marketing and to build up more direct relations with consumers.

With the idea of affording a solution to problems of this character the Anglesey Produce and Supply Society was registered in 1914 before the outbreak of war. The leading agriculturists of the island were impressed with the scope for improved marketing by the adoption of grading as a means of obtaining greater uniformity of products. The island was a considerable exporter of oats and other produce which could be handled in bulk with considerable ease and with greater satisfaction to producers. Moreover the existence of four or five requisite societies in the island formed a suitable nucleus of organisation. The idea of the promoters was to bind these societies together into a selling federation, which should undertake the sale of produce on behalf of the members of affiliated societies. The society was not intended to act as a body buying outright from producers, but to act on agency terms for them at a commission rate of 2½%. Individual farmers having produce for sale were invited to inform their local society which would then get into touch with the sales manager of the central society. The interesting feature of this scheme, especially from the standpoint of present-day notions of marketing, is that the importance of organising on an area basis was recognised.

The proposals made for the government of the society were also interesting. Control was to be vested in a committee of representatives of affiliated societies, the number from each being dependent on its turnover. Expenses were to be met by contributions from societies and individuals and their payments went into an inalienable reserve fund, from which members could not draw in the event of their ceasing to do business with the society. These ideas of co-operative government were not incorporated in the rules of the society as registered.

Five general purpose societies took up shares, and the society soon started selling oats on behalf of members. The first balance sheet showed a deficit of about £9, but the outbreak of war, and the demands of the War Department for forage gave the society an opportunity of extending its business. Co-operative societies were naturally regarded by the Government as organisations which could assist in assembling cereals and straw, and the Anglesey Society started supplying army needs. They were then faced with practical difficulties which greatly hampered the expansion of this trade.

In 1915 considerable trouble was encountered with the authorities in the fulfilment of contracts, and as regards the punctuality of payment. On the other hand forage dealers were very active in the island, and the continual rise in prices put a premium on procrastination and the farmer was in too strong a position to feel urgent need of his society. The result was that after doing a trade of nearly £4,500 in oats and hay in 1915, the society did no business until 1919. During that year it traded in conjunction with the North Wales Fruit and Vegetables Society. In 1920 the Anglesey Produce and Supply Society seems again to have traded on its own account and after sustaining a heavy loss in that year it decided to liquidate in the summer of 1921.

In its later stages the society changed its character very considerably, and concentrated on supplying requisites. Of a trade of £45,600 in 1920, only about £9,000 represented sales of farm produce, and this was in the form of fruit and vegetables. One interesting innovation was introduced in that year in the sphere of livestock selling. The society acted as introducer of the C.W.S. to the cattle feeders of the island and arranged for the purchase of cattle to the value of £20,000, on which it earned a commission of 0.5%. The meteoric rise of the society's trade in its last stage, followed by a sudden and disastrous collapse, form an interesting episode in the history of co-operation in the island.

Judging from the experience of co-operatives elsewhere, especially in Wales, it might have been expected that the "requisite" character of the business in the years immediately following the war would have done something to avert the disaster. Whereas requisite societies, when carefully managed, were able to weather the storm of falling prices, produce societies generally were hard hit. It would seem that the Anglesey Produce and Supply Society collapsed because it did not possess sufficient resources either in management or finance for the task to which it set itself. With headquarters at Llanfair P.G. and a depôt in Llangoed, the society endeavoured to cover the whole area of the island with three lorries. Little attention was devoted to securing economy in running the vehicles, and operating costs proved to be very high. This is clearly demonstrated by the expenses shown in the following summary:—

TABLE 6.
INCOME, COSTS AND FINANCIAL POSITION.

Period.	Sales.	% of Sales.			Balance Profit or Loss.	Proportion of Members' Interest in Capital to Total. (per cent.)
		Gross Profit.	Ex-penses.	Trade Profit or Loss.		
1919	£ 30,718	4.8	4.3	+ 0.5	+ 105	18.0
1920	45,688	5.9	7.0	— 1.1	— 692	20.6
1921 (6 months)	12,513	4.65	12.35	— 7.7	— 1655	28.0

The preceding table also clearly indicates the handicap which the society had to face in the lack of capital. All the working capital was derived from external sources and interest payments added greatly to the working expenses. The society left behind it no permanent contribution to the problem of marketing farm produce. On the requisite side its failure probably did harm to the movement since its spasm of activity over the island did much to bring about the downfall of an old-established business—the Anglesey Eastern Co-operative Society.

North Wales Fruit and Vegetables Society.—Another effort to put the marketing of produce on a better footing took the form of the North Wales Fruit and Vegetables Society. One of the ways taken to stimulate food production during the war was by the formation of allotment societies for promoting the growth of fruit and vegetables. The campaign met with considerable success and the growers of small produce turned their attention to the possibilities of market organisation. This matter was taken up by County Horticultural Committees in 1918, and a regional market scheme was contemplated. It was suggested that one central marketing society be formed for the whole of North Wales. Membership of this society was to be taken up by county societies which should be registered separately. Each county society was to have depôts at suitable points for the collection and handling of produce. The main function of the county societies was to stimulate the production of garden, orchard, and allotment crops and market as much as possible of the produce locally. By the terms of its membership with the central association, the local society agreed to dispose of produce surplus to local requirements *via* the North Wales Fruit and Vegetables

Society. It was contemplated that local societies, whilst registering separately would take up shares in the central organisation and also contribute to its finances by paying a sum based on their trade with the central society. In short the scheme was another example of a society which was to organise the marketing of the produce raised over a large area by selling surplus produce supplied by local associations.

The elaborate scheme set out above never materialised in practice. It is true that the North Wales Fruit and Vegetable Society was formed in 1918, and received share capital from some co-operative societies and several individuals. But the network of depôts which had been contemplated were never established. With headquarters at Llandudno Junction, the society operated depôts at Welshpool, Blaenau Ffestiniog, and at Llanfair P.G. (in connection with the Anglesey Produce and Supply Society).

The society only functioned for about three years, 1918-21, when liquidation was decided upon. Changes of management were frequent and indicate the difficulties which the business had to face. It seems that much trouble was experienced in keeping satisfactory records of stocks, especially with such perishable goods as fruit and vegetables; and the management problem was necessarily intricate when the society was operating scattered depôts. Moreover, management expenses, especially wages, were heavy because of the number of centres at which business was conducted and these heavy costs were further increased by payments for working capital for the society had little of its own. In 1920, when a loss of nearly 4% was made on a turnover of £28,656, the society had to borrow and pay interest on four-fifths of the capital employed. The relation of income and costs to sales is given below.

TABLE 7.
EXPENSES AND GROSS PROFITS, 1920.
PER CENT. OF SALES.

Wages	6.3
Motor and Travelling	1.9
Other Expenses	2.4
Total Expenses	10.6
Gross Profit	6.7
Loss	3.9

It is evident from the above analysis that the overhead charges were too heavy, and that the buying and selling ability of the management could have been of a higher order. It is evident that a society such as this, owing to the area over which operations were conducted and the type of goods handled, would require a high degree of managerial ability to ensure good results. The failure of the venture also provides another example of the grave difficulties of successful trading without adequate capital. It must be admitted that the slump in prices and the diminished production of gardens and allotments following the war militated against the society's success. But in view of the small amount of market-garden production in North Wales, it is doubtful whether an organisation on the lines attempted would succeed even if given good management.

Criccieth Produce Society.—Criccieth was the home of another society established for organising the sale of garden and small produce in North Wales. In 1917 the local branch of the Women's Institute formed a co-operative trading society for the purposes of assembling the produce of growers and poultry-keepers in the vicinity and placing them in a stronger selling position. The first stages of the society's activity were of the nature of collective bargaining with local distributors, little attempt being made at sending away surplus produce. An agreement was arrived at with local retailers, who were given an option of purchasing produce assembled by the society at a fixed percentage above cost price, and considerable limitations were placed on the retail transactions of the society. War time conditions, together with the trammels of Food Control, made business difficult, although the society made substantial profits for some years.

The character of the society's business underwent considerable change about 1920, when its name was changed to the Criccieth and District Produce Society. The retail side of the business was expanded and to an increasing extent attention was devoted to sending away produce to consuming areas. With the decline in the growing of garden produce after the war-time pressure, the society turned its attention to marketing eggs. These were collected by motor and tested before despatched from the depôt. The maximum turnover of £7,000 was secured in 1920, net sales diminished progressively to £2,748 in 1923, when a loss was made on the year's trading. Accumulated losses brought about liquidation early in 1925.

During its career the society had five years of profitable trading, when substantial bonuses were paid out to members. In view of the strong financial position of the society at the end of 1922—when the burden of falling prices was greatest—it might have been expected that the more favourable conditions obtaining after 1923 would have ushered in a period of profitable trading. Scarcity of owned capital—which has so often spelt ruin in co-operative business—cannot be held responsible for the failure of this society. The business was adequately capitalised and very little outside capital was employed. The real cause of failure is seen in the burden of working expenses, which showed excessive payments for management, service, labour, and collecting charges in relation to sales. Supplies were small and scattered and costs of collection were necessarily high. The volume of business done in 1920 and afterwards did not justify the heavy motor costs which were incurred in collecting produce. Trading margins were wide, but expenses were greater than gross profits.

TABLE 8.
TRADING STATISTICS, 1918-23.

Year.	Total Sales.	Gross Profit.	Expenses.	Profit or Loss.
		% of Sales.		
	£			
1918	6,762	10.7	4.5	+ 6.2
1919	6,407	9.7	5.0	+ 4.7
1920	7,013	13.1	12.8	+ 0.3
1921	5,291	23.3	17.7	+ 5.6
1922	3,556	24.0	21.1	+ 2.9
1923	2,748	20.8	25.5	— 4.7

The preceding table shows the big increase in working costs which set in with the collection of produce in 1920. For a time subsequent to this, profitable trading was possible because the society was able to meet heavy charges with wide margins. But the ultimate effect of excessive costs is seen in the marked decline in turnover, which cannot be accounted for by the fall in prices. This decline clearly points to the fact that the society could not offer to producers a sufficiently attractive price to retain their custom. Even assuming that the management was able to find outlets for produce at favourable prices, it is evident that in an attempt to save itself, the society would have to penalise the producer. The experience

of the society clearly indicates the importance of a marketing business commanding a turnover large enough to cover operating expenses, especially if much capital and labour is devoted to handling the produce concerned.

Agricultural Production.

Turning to the production side there are examples of societies organised for the purpose of increasing production or improving the standards of produce. They may be compared with such organisations as the Stock Improvement Societies of Denmark in so far as their main purpose is not to purchase supplies or market produce, but to introduce better stock into these areas.

A Poultry Society.—An example of this form of association is seen in the Vale of Clwyd Poultry Society, which was registered in 1918. Although the initial reason for the formation of the society was the difficulty encountered by cottagers and smallholders in obtaining supplies of poultry food and appliances, subsequent developments followed different lines. The society was chiefly engaged in purchasing stock birds for re-sale to members, and the distribution of eggs for hatching. Attention was also turned to raising the standard of stock by offering prizes at local shows and exhibitions.

The society was faced with a trading loss after the first year, and though not yet de-registered has done very little business since 1922. The losses sustained by the society seem to have been due entirely to selling goods at a margin which was insufficient to meet expenses. The society was adequately capitalised, and, by the nature of its work, operating costs were low. But the following comparison of margins and costs shows the position in 1918-1920:—

TABLE 9.
TRADING STATISTICS, 1918-20.

Year.	Sales.	Gross Profit.	Trade Costs.	Profit or Loss.
		% of Sales.		
1918	£ 782	6.4	4.9	+ 1.5
1919	564	0.7	3.0	— 2.3
1920	504	6.9	7.54	— 0.64

It is impossible at this time to trace in detail the difficulties of the society in this matter, but it offers a good example of a potentially sound venture which was marred by ignoring a fundamental business principle. A partial explanation of the failure may be found in the fact that the need for an organisation formed specifically to supply the requirements of poultry-keepers was of a temporary character, since conditions became much easier after the cessation of hostilities. Yet the society did useful pioneer work in directing attention to the need for stock improvement and this aspect of the work has since been largely taken over by the Egg and Chick Distribution Scheme of the County Agricultural Committee and the Ministry of Agriculture.

The Mona and District Livestock Improvement Society.—Another society which had the improvement of livestock as its original object came into being with the formation of the Mona and District Livestock Improvement Association, which was registered as a co-operative society in 1912. The society foreshadowed the Ministry's scheme whereby approved sires were to be placed on selected farms. Farmers in the area were especially interested in improving the quality of pigs and while this work was naturally absorbed in the Ministry's scheme, the society turned its attention to other aspects of pig husbandry in the island. Attention soon began to be diverted to the marketing of stock, and considerable dissatisfaction was expressed as to the inefficiency of the existing system. A private enquiry was made into the state of pig marketing in 1911 and one result of its work was to establish the existence of rings and of fairly well-defined territorial boundaries which were respected by dealers.

The upshot of the inquiry was the consideration of organised marketing on the part of producers. Discussion centred on the possibilities of operating a bacon factory, but in view of the expected irregularity of supply, alternative methods were deemed more satisfactory. The consensus of opinion seems to have been in favour of establishing a pig-feeders' marketing association, operated on lines similar to those now followed by the Eastern Counties Farmers' Association.

Mona Bacon Factory.—The above scheme never matured, but the idea of a bacon factory was not allowed to lapse. In fact the Mona Livestock Association changed its name and function in 1915 and entered the field as a bacon factory under

the name of Mona Bacon Factory and Farmers' Association, Ltd. A site was chosen at Pwllfanog Mill on the Menai Straits, where at some previous time a small private bacon curing business had been conducted at a loss. The co-operative factory was only operated for one year, during which the turnover was £2,250. Apart from the mistakes which were attributable to ignorance in the matter of curing, the failure of the venture can be largely attributed to conditions created by the war. During the war years, the stock of pigs of this country was seriously depleted and circumstances favoured the sale of pigs as fresh meat rather than as bacon. It is significant that with the advent of peace and a subsequent increase in the country's pig population discussion again turned on the possibilities of operating bacon factories in North and South Wales. Several schemes were put forward between 1920 and 1924, but the Mona factory is the only instance of the actual establishment of a co-operative bacon factory in the Principality.

The Mona Pig Society.—One offshoot of the bacon factory was the formation of the Mona Pig Society as an unregistered body for the improvement of stock in the district. The Mona Bacon Factory seems to have combined the maintenance of boars with the curing of meat and the factory had four service boars for disposal when it went into liquidation. The Mona Pig Society was consequently formed to supervise the placing of these boars and the society is still in existence. In conjunction with this society the Ministry places four boars in the island, although independent grants are also made to individual custodians.

The Anglesey Black Cattle Improvement Society.—When the Ministry of Agriculture scheme for the improvement of livestock was first introduced there was some doubt as to whether the registration of local societies was necessary. Though it was subsequently ruled that registration was unnecessary one or two societies were actually registered under the Industrial and Provident Societies Act. Such a case is the Anglesey Black Cattle Improvement Scheme registered in 1913 and still in existence, though not as a co-operative society. This body forms a co-ordinating centre for the local bull societies of the island and is the medium through which the Ministry operate their scheme. Bulls are purchased by representatives of the central society and the Livestock Officers, and the records of each local unit are kept by the central organisation. Grants in

respect of bulls are paid by the Ministry to the central society, which passes on the money to bull custodians after being satisfied that everything is in order. Apart from helping in administering the scheme, the society is doing useful work in fostering interest in raising the standard of Welsh Black Cattle.

Anglesey Beekeepers' Association.—An example of a society formed for increasing production is seen in the Anglesey Beekeepers' Association, which, after functioning for some time as an unregistered body, was incorporated as a co-operative society in 1915. The object of the association was to develop beekeeping in the island and assist members in the marketing of their honey. The society did useful work in co-ordinating the activities of scattered beekeepers within the island, but was a failure as a marketing association. The sales of the society between its registration in 1915 and the cancellation of registry in 1921 were practically nil. Suitable purchasers of the surplus honey could not be found and this, coupled with the ravages of Isle of Wight disease in the island, crippled the society's activities.

Anglesey Bulb-Growers' Association.—Though formed prior to the war, the Anglesey Bulb-Growers' Association was a society similar to the above, and not subscribed to by the general farming community. Following on a discussion by the Anglesey Industries Association, a few experiments were conducted in 1907-10 to test the possibilities of the commercial growing of bulbs in the island. The favourable results obtained in growing narcissi led to the formation of the association in 1911, which was later registered as a co-operative society and affiliated to the A.O.S. A farm of 25 acres was rented with the idea of growing bulbs and flowers, but a considerable amount of market garden produce, including early potatoes, was raised in order to secure the best results from bulb culture. Apart from the production of bulbs, the sale of flowers in February to May was an important part of the society's business. Besides being a producer, the society of necessity had to take up marketing. The three years prior to the outbreak of war covered an experimental period in the society's history, during which it was proved that Anglesey could produce bulbs which were good and sound, though smaller than those coming from Holland. By the end of the 1913-14 season the society was in a sound financial position, although some difficulty had been experienced in

marketing the produce. But the outbreak of war produced difficulties which caused continued losses from which the society did not recover and it went into liquidation in 1922. The immediate effect of the outbreak of war was felt in the cancellation of large orders, and during ensuing years the demand for bulbs was very seriously curtailed. Moreover the increasing scarcity and cost of labour made profitable production practically impossible during the war years. Matters improved for a short time in 1920, until the competition of foreign produce largely offset the advantages derivable from more favourable conditions of production. But the experience of the Anglesey Bulb Growers is sufficient to show that with care the equable climate of Anglesey can be turned to good account in the direction of more intensive culture.

Portmadoc Osier Growers.—An adaptation of co-operation to develop the particular resources peculiar to various localities is seen in the case of the Portmadoc Osier Growers. The suitability of areas near the town for the growing of osiers led enthusiasts to believe that organisation would create a willow-growing and basket-making industry. Consequently in 1919 a society was formed for growing basket materials with the object of selling osiers at the start and ultimately of making horticultural and other baskets at Portmadoc. The society only functioned for one season, during which it suffered loss owing to the heavy labour expenses incurred in clearing the ground and keeping weeds from strangling the shoots. Had the experiment continued for a subsequent year, the reduction of labour costs might have made profitable trading possible. But the markets for the osiers or baskets could only have been found in distant centres and heavy transport costs would have hampered the operations of the society.

The Co-operative Ownership of Farm Machinery.

In small holding communities agriculturists have often discussed means of reducing the overhead charges on implements used by small cultivators. On very small holdings all implements, and on larger holdings certain classes of implements are not in constant use, with the result that the burden of depreciation and interest charges per unit of work done becomes very heavy. On the continent the co-operative ownership of implements is common, and with a little organisation the work is performed cheaply for groups of small cultivators.

Organised effort in this country has been limited in scope, although there are many examples in Wales of informal co-operation. Farmers generally help each other at harvest and shearing time, and in several districts a few farmers jointly own a manure distributor. One co-operative society in North Wales selling requisites has recently bought a manure distributor which it intends hiring out to members. As a means of extending the society's trade in fertilisers the manager proposes to offer a rebate of 1s. per ton on manure bought from the society which goes through the drill.

There are one or two areas of intensive cultivation in England where small holders have co-operated for the purchase of horses and implements, the most notable case being the Roxton Society in Bedfordshire. Though Wales is a country of small holders this form of co-operation has not developed at all. There are one or two factors which seem to account for this situation. Farms in Wales are rather small, yet the intensively tilled holding of ten or fewer acres is not common, and there are no areas in which a sufficient number of such holdings to call for co-operative organisation lie together. Moreover the organisation of societies for the joint ownership of tillage and sowing implements among farms varying from 20-40 acres would present considerable organising difficulties. The heavy rainfall and the great number of days on which rain falls over the greater part of Wales, calls for immediate action on the part of farmers if they are to take advantage of favourable conditions. Work is less urgent in districts where the rainfall is lower and soil more friable, with the result that organisation of work becomes easier. The uncertain weather experienced during the harvests of 1926 and 1927 illustrates the type of problem which would present considerable difficulty in operating an implement society with satisfaction to all concerned.

In view of this latter consideration it is significant that the only societies formed in North Wales for joint ownership have been in respect of threshing tackle. The urgency of threshing is not generally so great as to make the loss of a day or so owing to bad weather a serious matter. Another reason is to be found in the fact that the majority of farmers acting individually could not command sufficient capital to enable them to purchase equipment of this sort.

During 1917 and 1918 four societies were registered, three of which are still in existence, although two show heavy deficits. One society registered in Flintshire only seems to

have worked for one season, whereas two in Anglesey and one in Lleyllyn are still operating. The big increase in ploughland during the war was the chief reason for their formation and farmers were doubtless anxious to reduce the heavy charges demanded by private owners. The high denomination of shares—which varied from £5 to £10—suggests that these societies were not organised by small holders but by large farmers who were forced to adopt arable farming by the D.O.R.A. Regulations. In each case the society bought a threshing machine which was hired out to farmers at rates determined by the committee. Farmers informed the secretary when they wished to thresh and plans for the movement of the machine were made accordingly.

Naturally societies of this type do not attempt to make big profits, since by reason of their formation they wish to pass on operating economies to their members in the form of low charges. But the committees seem to have been over-anxious to benefit members at the expense of the society. The rates charged in the case of the two societies showing deficits have not been sufficient to cover all costs. The actual expense each year is relatively small since apart from wages, fuel, oil and repairs there are practically no payments to be made, especially if the society is adequately capitalised. But depreciation is a charge which must be met and this has often been ignored or under-estimated when charges for services were fixed. The only satisfactory method in this connection is to depreciate at about 10% on cost each year, and spread this charge over the fees for threshing. Only in this way can a society build up a reserve from which to meet charges for repairs and ultimately replacement. These societies, through not allowing sufficient depreciation, have failed to build up reserves, and two societies are faced with deficits, just at the time when the machines will have to be scrapped or overhauled at a high cost. Societies of this kind should take a long view and realise that funds for keeping equipment in efficient working order can only be secured through building up reserves by charging more to members than current expenses demand. As it is, these societies, if they are to continue, will have to ask for more share capital or borrow capital when the time for replacement arrives. Provided that committees adopt the principle of estimating charges over a long period—perhaps 15 years or so—and fixing rates accordingly, there is no reason why societies of this type should not prosper and render useful service to agriculture.

Miscellaneous Enterprises.

In addition to the societies connected with marketing or with production more or less of an agricultural character, there have been other enterprises connected with rural industry and the amenities of village life. Some of the miscellaneous experiments were made without the assistance of agriculturists and were the results of the ideas and efforts of public-spirited persons rather than of the conscious efforts of producers to meet new economic conditions. Two examples may be given.

Newborough Matmakers' Association.—Formed in 1919 and still in existence the Newborough Matmakers' Association has had a fairly successful career.* The abundant supplies of sedge or sea reed in the Malldraeth Marsh of Anglesey long ago gave rise to the matmaking industry. The sedge was made into "thatching mats" which farmers used to throw over stacks while they awaited the time of thatching. A subsidiary line was to make straw ropes used for packing fragile goods for which there was a considerable demand. After harvesting, the reeds were taken to the cottages and all the work was done individually by female and child labour. The traditional method of sale was to barter the articles for necessities in the local store, and consequently local merchants reaped a double profit. The association was formed to encourage the industry by placing the marketing on a sounder basis. The association now buys mats from cottagers, pays cash for them and undertakes their sale in markets all over the country. The competition set up by the society has materially improved prices in the area, and in its flourishing days handsome profits were made on an annual turnover of about £600. Now, however, demand seems to be restricted, and the barter system is reasserting itself with the result that the society's trade is much smaller and losses have been incurred during the past few years.

Apart from the improvement in marketing methods the society justly claims to have materially helped the industry. In view of the declining demand for thatching mats due to the smaller arable area and the wider use of Dutch barns or roofed sheds, the villagers have been encouraged to produce horticultural mats. A good demand is still found amongst gardeners and seedsmen for mats of this kind. A still wider market could be obtained if the mats were made to specification and

* v. *The Rural Industries of England and Wales*, Vol. IV. Anna M. Jones. p. 75—79.

to exact measurements. Attractive offers have been received from firms specialising in house decorations for mats made to certain measurements. But the villagers are unwilling to readjust their methods, and efforts made to improve the standard of goods by having the work done under supervision at one centre proved a failure.

Electricity Supplies.—A splendid example of the adaptation of co-operation as a means of increasing the amenities of country life is offered by two societies in Montgomeryshire which operate electricity generating plants. The older of these two societies, the Llanfair Caereinion Electric Supply Society, has a business record of over 10 years which, from the standpoint of service and financial results, may well excite the envy of many co-operative societies or even private businesses. The Llansantffraed Electricity Supply, Ltd., was registered in 1924, and also has a good record of service behind it. As in several other villages of the Principality, experience in these two cases has proved the feasibility of extending the utilisation of electricity throughout the countryside.

Up to 1914 Llanfair was not supplied at all with electricity, and apart from the household need, residents were anxious to improve and reduce the cost of lighting their village institute. Consequently, after consultation with an engineer, an electrical plant capable of supplying about 2,000 lights was installed. Water power was and is used for generation. The installation required a capital outlay of about £1,000, which was advanced by a local bank on the guarantee of about 30 individuals. This arrangement existed until the end of 1916, when, owing to an increase of 1% in bank charges, the guarantors considered the formation of a corporate form of business. Eventually a co-operative society on the usual lines was formed, the whole of the capital being subscribed by the guarantors. They, while anxious to reap a fair return on their investment, were not unwilling to pass on other benefits to the consumers. Since its inception the society has been successfully operated and has declared a substantial profit each year. Moreover, it has been progressive and has materially improved the lighting equipment of the village. In 1920 and 1921 the mill premises which had hitherto been held on lease were bought outright, and in addition a building was erected in the village for housing cells and a switch room, with the result that the village is now supplied at all seasons of the year with sufficient light. These extensions necessitated the employment of a large bank

overdraft, but owing to a substantial increase of share capital and the conservation of reserves, the society now owns practically the whole of the capital employed.

From the standpoint of co-operation in general the various rules adopted from time to time by this society are interesting. When registered, individual share holdings were limited to £50, since some members, not appreciating the rule as regards voting, feared that control might fall into the hands of a few individuals. A modification of rules was registered in 1925, when the maximum capital holding was raised to the legal limit of £200. But at the same time it was ruled that members should have voting power in the general meeting in proportion to their share holdings. Moreover the feeling that the interests of pioneers in the society should secure financial recognition was expressed in the rule "that all members taking up new shares after January 1st, 1926, shall pay an entrance fee of 2s. per share." While the new rule as to voting power savours of joint-stock principles it may be useful for co-operative societies to know that such a rule is not *ultra vires*. On the other hand, the payment of an entrance fee by new shareholders is in harmony with the common practice of allocating bonus shares to early members.

CHAPTER III.

THE ANGLESEY EGG COLLECTING DEPÔT.

Anglesey—the home of so many experiments in co-operation—is the centre of a society which has long since endeavoured to give producers some control of marketing on a co-operative basis. The Anglesey Egg Depôt was formed in 1911 at the instance of public spirited leaders rather than as a result of the conscious and expressed desires of the farming community, but their leaders did not misjudge the needs. The prices ruling for eggs in the island were deplorable at the time, largely owing to the absence of any machinery for sending poultry produce into consuming areas.* Consequently, local markets were heavily glutted, and prices did not encourage more extensive poultry production. There was, therefore, a definite need for a marketing organisation, and the fact that the Anglesey Egg Depôt is the only produce society in Wales which has traded continually since pre-war days is some indication of the way in which this need has been met. The following table gives the society's trading record over a period of fourteen years:—

TABLE 10.
BUSINESS STATISTICS, 1912-27.

Year.	Share Capital.	Sales.	Profit.	Loss.	Reserve Fund.	Deficit.	Investments.
	£	£	£	£	£	£	£
1912	183	1,257	..	275	..	275	..
1913	303	3,216	86	..	..	189	..
1914	304	5,521	..	54	..	243	..
1915	304	8,252	182	..	..	61	..
1916	306	11,232	477	..	..	..	..
1917	370	15,820	287	..	..	..	390
1918	921	29,357	426	..	..	..	670
1919	1,177	32,443	368	..	..	..	984
1920	1,495	35,848	208	..	623	..	1,092
1921	1,584	28,015	299	..	727	..	1,094
1922	1,630	20,666	156	..	837	..	1,150
1923	1,660	15,599	..	425	564	..	1,150
1924	1,660	14,317	49	..	613	..	1,150
1925	1,660	11,086	..	245	368	..	1,150
1926	1,660	7,676	..	502	..	134	1,150
1927	1,660	6,391	..	383	..	518	597

* Economic Series No. 1, p. 67 *seq.* Ministry of Agriculture.

After emerging from the period of initial organisation the society traded profitably until 1922, since when heavy losses have been made. In the course of its history the society has organised a collecting system whereby eggs are lifted from the farm by motor van, are tested and graded on arrival at the depôt, and sold in consuming markets with a guarantee of quality. By the methods of handling produce which have been adopted it has done pioneer work in marketing produce on sound co-operative lines in Wales.

Reference to the preceding table will show that the present position is not satisfactory and an analysis of the factors responsible for this will be helpful as indicating the problems which the society, and, to some extent, egg societies in general, must face. Previous studies of co-operation on the marketing side in England and Wales indicate some of the business difficulties which have to be overcome, and similar problems emerge from an examination of the Egg Depôt's record.*

From the standpoint of capitalisation, the society has received adequate support from members. Up to the end of 1925 the society owned upwards of 75% of the capital employed, and sufficient working capital to finance the society's business had been obtained from members. It is true that owing to losses in recent years the position has gradually deteriorated in this respect and more reliance has had to be placed on borrowed capital, but the burden of interest charges can in no way account for the losses which have been sustained.

Trading Margins.—In all businesses, profits depend on the relation of costs to income and the trade margins which can be secured are of fundamental importance. The difference between buying and selling prices depends largely on the location and character of the markets at which produce is bought and to which it is consigned. Whereas the choice of the selling market is to a certain extent dependent on the management, a produce society has to buy in its local market, where competitors have an important voice in determining prices, especially if the society is not sufficiently strong to control them. In this respect the depôt is not in an enviable position because a good deal of the island's produce is bought by retailers selling in the coast towns of North Wales. Consequently the keenness of competition at the producing end

* Economic Series No. 1. Ministry of Agriculture.

narrows very considerably the margins which can be secured on produce sold in wholesale quantities in distant consuming centres. A part of the eggs of the island must be sent to English towns and it is this part of the trade which has tended to go to the society, while the more irregular but perhaps more profitable trade with the near-by towns has fallen to its competitors.

The gross margins on which a business can trade profitably are variable; and in assessing the adequacy of margins to meet expenditure, the business is interested in the income yielded by such margins rather than in maintaining a given relation between selling and buying price. Over a period of years the percentage differences between purchase and sale price may remain fairly constant, while the income which such margins yield to the business fluctuates greatly. This is clearly demonstrated in the first two columns of the following table showing the depôt's percentage margins and income since 1922 :—

TABLE II.
MARGINS AND INCOME, 1922-6.

Year.	Gross Profit.	Selling Price as percentage of Buying Price. (100.)	Gross Profit per 120.	Buying Price per 120.	Sales (eggs).
	£		s. d.	s. d.	
1922	4,125	125	4 0½	16 3½	2,439,015
1923	3,034	124	3 2½	13 4	2,270,324
1924	3,003	121	3 9	14 3½	1,915,802
1925	2,165	124	3 4½	14 3	1,534,130
1926	1,460	124	3 1	14 4½	1,137,402

Though the percentage of sale to buying price was fairly constant over the period, the income from which expenses had to be met shows wide differences. The remaining part of the table explains why this has occurred. The income per unit handled tends to vary in the first place with the buying and selling prices that rule from time to time. Gross margins per unit show a tendency to expand with rising prices and *vice versa*. In other words a given income is yielded by a narrower percentage margin in times of high prices than in times of low prices. This has been the experience of the Egg Depôt, and every business has to bear this possibility in mind, especially when prices tend to be falling.

The other reason for the apparent discrepancy between the retention of a fixed percentage margin collateral with a difference in income yield is the volume of turnover. From the standpoint of the relation of percentage margins to the income yield, a decline in turnover is the same as a decline in price. To provide a given gross income, a business must secure wider percentage margins if turnover is declining whether by reason of lower prices or actual loss of trade. Both factors have been seriously against the prosperity of the Anglesey Society in recent years. In fact during the years of profitable trade the margins on which it worked varied between 10 and 15% on buying price, and were therefore much narrower than those prevailing since 1922; but the decline in the volume and value of business has been so great that profitable trading has become extremely difficult.

Handling Costs.—The importance of maintaining turnover in order to secure profits is indicated by an analysis of working costs in recent years. The Egg Dépôt offers a good example of the great difficulty of cutting down expenditure sufficiently to meet reductions in turnover, and the increase in unit handling costs since 1923 is shown below.

TABLE 12.
HANDLING COSTS AND RESULTS, 1923-6.

Year.	Total Costs.	Collec- tion.	Salaries and Wages.	Total Costs.	Balance— Loss.
		Pence per 120.			
1923	3,512	16.3	10.5	44.6	6.06
1924	3,016	17.3	11.3	45.3	0.204
1925	2,466	17.75	12.3	46.3	5.652
1926	2,025	19.5	12.28	51.2	14.3

It is evident that drastic reductions have been made in expenditure only to be accompanied with a great increase in the unit costs of handling. The staff at the dépôt has been greatly curtailed, and the number of collecting vans has been reduced to an absolute minimum. In fact, the axe has been applied so heavily that the dépôt has now reached the limit of economy consistent with the maintenance of a collecting system. A falling-off of supplies in a business which has started a system of farm collection of produce quickly sends up unit collecting costs because vans have to travel greater distances

for a given amount of produce. In any business it is possible to cut direct working costs to an extent approximating to the decline in trade, but the reduction of overhead charges is a much more difficult operation. As a rule the premises occupied cannot be varied easily in proportion to the trade done, with the result that establishment charges tend to remain stable. In the history of all businesses on the down grade there comes a point where the trade done is insufficient to produce the necessary income from customary margins.

Seasonality of Supply.—Apart from the general principles which contribute to the determination of margins and operating costs, there are complicating factors which present difficulties peculiar to the egg trade. The chief of these is the seasonal fluctuation in egg production which causes fairly regular swings in the movement of prices within each year.* Statistics relating to the depôt's trade in 1925 can be taken as evidence of the inevitable relationship between production and prices.

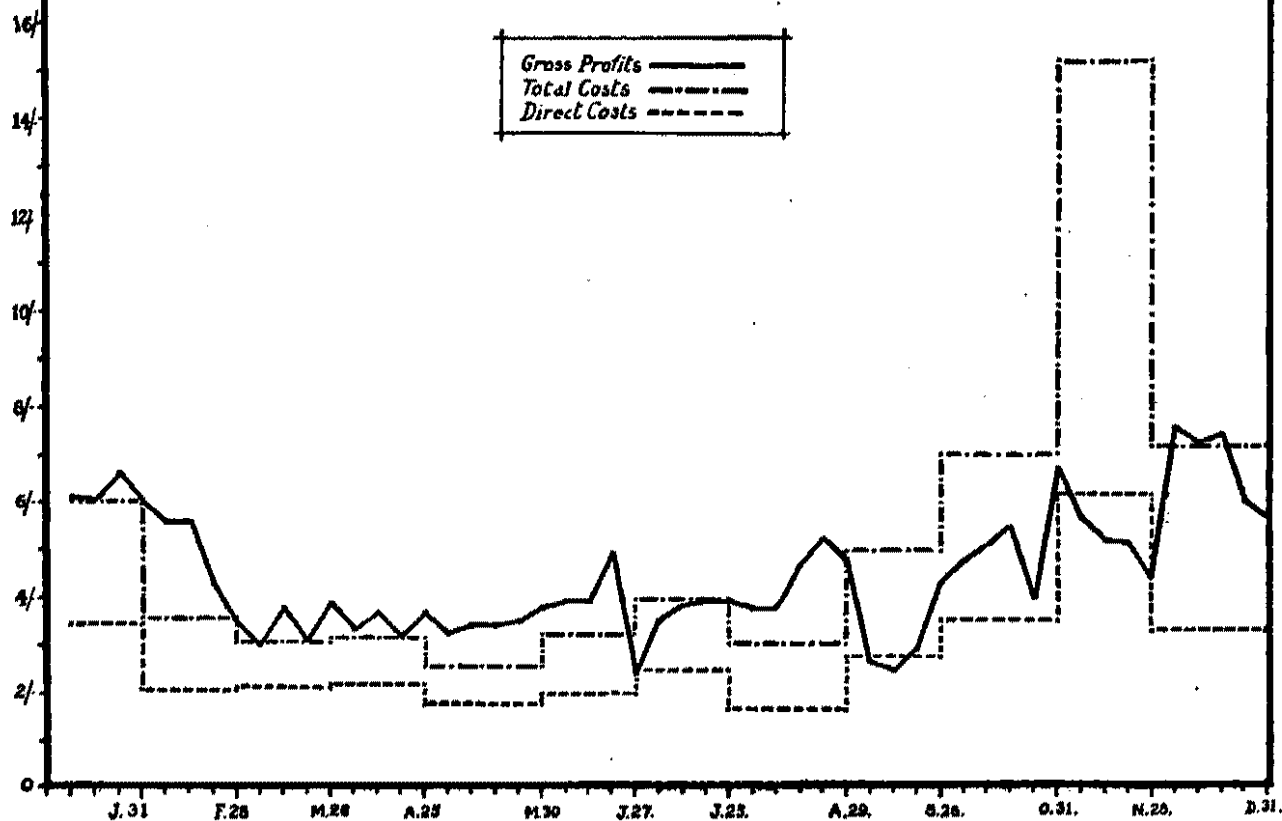
TABLE 13.
SUPPLIES AND PRICES, 1925.

Months.	Average Weekly Collections.	Deviation from Mean.	Actual Buying Price. (per doz.)	Deviation from Mean.	Estimated Deviation in Welsh Egg supply.
	(1)	(2)	(3)	(4)	(5)
			s. d.		
Jan. ..	19,459	65.9	2 0	114.2	72.0
Feb. ..	32,692	110.8	1 8½	98.7	104.4
March ..	49,952	169.3	1 0½	59.5	148.8
April ..	50,915	172.5	0 11	52.3	175.2
May ..	52,190	176.8	1 0	57.1	168.6
June ..	40,754	138.1	1 0½	59.5	128.4
July ..	34,228	116.0	1 4	76.1	99.9
Aug. ..	27,679	93.8	1 10½	107.1	92.4
Sept. ..	22,554	76.4	2 0½	117.8	74.4
Oct. ..	11,509	39.0	2 2½	120.2	54.0
Nov. ..	5,490	18.6	3 2	180.9	42.0
Dec. .	10,531	35.6	2 7	147.6	48.0
Average	29,503	100	1 9	100	100

This seasonality of supply which is an inevitable concomitant of prevalent methods of poultry production in Wales, creates a difficult situation for an egg marketing society. As

* (1) Report on Egg Marketing. Economic Series No. 10, Chs. 1 and 2.
(2) *Poultry Industry of Wales.* J. Morgan Jones, Section 4.

ANGLESEY EGG DEPOT 1925. MONTHLY VARIATIONS IN MARGINS AND HANDLING COSTS. (PER 120.)



may be seen in a comparison of columns 2 and 5 above the supplies obtained by the society tended to show greater fluctuations than those in the supplies available to general traders in Wales. In order to cater for the spring and early summer glut the society has to control staff and labour, collecting and marketing equipment which is much in excess of normal requirements. It is true that some expenses, such as the labour of testing, grading and packing, and rail charges, and to a less extent the running cost of collecting vans, are more or less proportionate to the volume of goods handled. But all skilled and some unskilled workers must be retained throughout the year, and the overhead charges of collecting and other equipment must be met irrespective of seasonality in supply. Moreover, financial and establishment charges are almost independent of the fluctuations in supply from week to week within the year. The accompanying graph illustrates the variations in respect of direct and total charges per unit of eggs handled which were caused by fluctuations in supplies. With a more even distribution of supplies throughout the year, more eggs could be handled with the same expenditure or the same number could be handled with lower unit costs. This type of problem is evident in the milk market and efforts are made in price agreements to reduce seasonal fluctuations by placing a premium on winter production. The premium on winter eggs, given in prices, has not greatly stimulated production, although it could scarcely be doubted that winter production has been profitable in recent years.

The supplies of the Anglesey depôt are more variable than the normal, and there is considerable evidence that producers are unloading surpluses on the society during the glut season, while selling elsewhere when prices are favourable. An egg society which is bound by rule to take all fresh eggs offered by customers, is affected to a greater extent by seasonal changes than its competitors. Logically it should be binding on suppliers to sell all marketable supplies to the society if it is bound to take supplies offered by them.

Examination of the graph will also show that seasonality in price materially affects the margin which the society can secure on its trade. The principle, already stated, that margins expand with high prices applies to seasonal changes within the year. The low supplies in the winter months enable the depôt to secure wide margins per unit handled, whereas it has to be content to handle the spring glut on a very low margin of profit. This state of affairs puts the business on

the horns of a dilemma since the possibilities of profit making are curtailed whether the supply is light or heavy. Wide margins during the lean months do not yield much profit owing to the small volume of business and the consequent high handling costs per unit. On the other hand the profits derivable from low handling charges per unit during the glut season are restricted by the narrow margins which can be secured. These conditions were not entirely under the control of the society, although adjustments might have been better than in fact they were. But it is evident that a successful egg society has to secure a manager who carefully scrutinises all costs and is an expert salesman.

The Quality of Produce.—The relation of the quality of produce to the demand of consuming markets creates a problem of great importance to a co-operative egg business. The Anglesey Society is to be commended on the fact that it tested and graded eggs before sale practically from the start. But taking this very necessary and desirable step often renders profitable trading very difficult if supplies are not bought on the same basis as that on which they are sold, since in this way the door is opened for losses in respect of small, dirty and bad eggs. The general grading system adopted has been that of including fresh eggs of two ounces or more in Grade 1; small but fresh eggs in Grade 2, and relegating the remainder, except "blood" and bad eggs, to Grade 3. Eggs are bought by count and the selling problem has been to get a sufficient premium on Grade 1 eggs to cover the losses which are often incurred on selling the remainder. Quality competition is so keen to-day that most distributors have difficulty in finding reliable and remunerative outlets for anything but first grade. During the past few years the Anglesey Depôt has been able to sell about 70% of its eggs in the first grade, but the extra price offered for first grade is often insufficient to cover the costs of selling Grades 2 and 3. Furthermore, the proportion of Grade 1 eggs varies considerably at different times within the year. Again, statistics of sales in 1925 offer some evidence in this matter. The proportion of Grade 1 to the week's sales varied between 47% at the end of November and 88% in the end of February. Generally speaking, the proportion tends to be high in the glut season when prices do not tempt producers to overhold. The quality of supply tends to deteriorate with the advent of warm weather and the marketing of pullets' eggs in November and December is largely responsible for a high

ratio of smalls during this period. The variations in the quality supplied really aggravate the selling problems created by variations in total supplies.

The Dépôt has taken some measures to guard itself against loss on this score. For a short time in 1926 an attempt was made to place a premium on size by paying a different price for large eggs. The scheme was hastily launched and the price paid was determined by sight grading at the farm on the part of collectors. Supplies fell off immediately, as there were plenty of competitors ready to take all eggs at a flat rate and the society was forced to revert to its former practice.

More success attended the methods of obviating losses sustained through bad eggs. In 1924 each member received a serial number which he was required to stamp on each egg, collectors being instructed to refuse those unstamped. That there was need for some such scheme and that the stamping system was justified is indicated by the decline in the number of bad eggs received after stamping began. In 1923 12,000 bad eggs were received compared with 4,382 in 1924. Partly to meet competition in relation to the objections of suppliers and because of the views of retailers, the society has now practically relinquished the stamping system. Wales is in need of a system whereby egg producers will be paid a price which will reflect market requirements, and unless producers agree to accept payment by results as some other British co-operators do, it would seem that legislation alone can give distributors the necessary protection in this matter.*

General Management.—In all marketing enterprises, good management is essential to success, and in this respect the dépôt has been none too fortunate. It is significant that as soon as competition became really keen after the war, the society failed to hold its own. The unit working costs were high even in 1922, when a substantial turnover was made, and indicate lack of care in organising the collection and subsequent handling of produce. A society such as this, of necessity covering a fairly wide area, had to maintain a collection system which needed constant attention if good results were to follow. The management did not exercise sufficient control over the daily movements of collectors to see that all members received weekly calls and that the area was adequately covered

NOTE.—† s.s.— In some districts of Scotland egg producers sell eggs to their Society by weight, whereas in some Societies eggs are paid for on the results of the testing and grading analysis made at the depot.

with the minimum mileage. The result of the lack of careful control over district collectors was that the management tended to lose touch with suppliers, and did not receive those complaints the cause of which can so often be removed by personal inspection. To-day the *depôt* has really ceased to exist, for the large majority of even its members and other possible suppliers show little interest in it. Maintaining the *morale* of a society and retaining the enthusiastic support of members is essential to success and in this the personal influence of the manager and members of committee is of the utmost importance.

But the records of the society indicate the supreme importance of good salesmanship, especially in selling a commodity like eggs, the prices of which change frequently and abruptly and where the article is highly perishable. The profitable handling of heavy supplies during the spring glut in the face of steeply falling prices taxes the manager's resources in salesmanship. The flooding of markets from all quarters soon tests the stability of trade connections with regular customers and brings out the manager's capacity to find alternative outlets. The importance of the need for keen selling in the rapid clearing of stocks when prices are falling is indicated by the following statistics:—

TABLE 14.
SALES. STOCKS AND PRICES—SPRING, 1926.

Week Ending	Eggs Bought.	Eggs sold.	Stock at end of week.	Prices realised.	Buying Price.
				Per 120.	
March 6	44,781	9,684	56,900	s. d. 19 6	s. d. 15 0
" 13	46,136	31,938	70,589	13 0	10 5
" 20	49,671	57,846	61,855	11 8	8 5

This is an example of the way in which indifferent management is all too often the cause of failure in co-operative enterprise. Hitherto the movement in Wales has never secured the personnel with the business qualities and experience which is essential to the successful marketing of farm produce. As has been pointed out in another section the outlook of farmers is largely responsible for this weakness, and it can be confidently asserted that a new attitude is necessary which will attract suitable servants to the movement.

The Attitude of Suppliers.—The support given by egg producers to the depôt has not been commensurate with the services which it has rendered. It has done valuable pioneer work in giving the producer that control over the marketing process which is being discussed so widely to-day. Allowing that all individuals cannot be expected to realise the value of such enterprise, they should give practical recognition to the society for the direct financial benefits which they have derived from its operations. Since its inception the depôt has paid £750 to members in the form of interest and bonus, and this sum represents a rate of interest of about 5½% per annum on all the members' capital used. But its influence on prices has been more marked and is of greater importance. Before the society was started, Llangefni was a poor sellers' market. To-day prices in that market compare very favourably with those ruling in similar North Wales markets from which the bulk of the produce must be exported to distant centres. Compared with Pwllheli, for example, average egg prices are about 2d. per dozen higher in Llangefni. The work of the society in draining off the bulk of the produce into wholesale channels has undoubtedly contributed largely to this result. Moreover, it should be borne in mind that the society pays market price at the farm, thus saving market costs to suppliers. The direct financial advantage which members and non-members alike derive from such action is not capable of measurement; but it can be confidently stated that prices in the island have been elevated and sustained by reason of the society's activity. Having seen the society build up the level of prices in the island, farmers are undoing the good work by selling to competitors. That the society does not pay more than its competitors should not be used by intelligent producers as an excuse for not selling to it. It is to be hoped that in the future criticism of their own organisation by farmers will be fairer and more intelligent than it has been in the past, and that co-operation will be accorded praise for benefits which are none the less real for being obscure to superficial examination. In view of the possible steps to regulate the marketing of eggs under a scheme which is contemplated under the provisions of the Agricultural Produce (Marking and Grading) Bill now before Parliament, and the probable application of the Merchandise Marks Act to imported eggs, it is extremely unfortunate that the depôt should have been allowed to reach such a position as to be unable, with ease, to take advantage of legislation which is likely to create an environment favourable to the organised marketing of eggs.

CHAPTER IV.

CO-OPERATIVE DAIRYING IN NORTH WALES.

HISTORICAL SURVEY.

The co-operative dairy system as practised in North Wales was primarily the product of the food crisis of 1916-1918. As a full pound of cheese can be produced from one gallon of milk, as against about six ounces of butter the Ministry of Agriculture decided to promote cheese-making. The two objects arrived at were an increase in the national food supply and the teaching of scientific cheese-making in districts hitherto unconnected with this form of dairying. County authorities were given assistance in the organisation and financing of peripatetic cheese schools and the work of these led many milk producers to consider the advantages to be gained by co-operation. The travelling schools were followed, when required, by other more permanent institutions which worked on co-operative lines and when their stay, usually of two or three months' duration, was over they often left behind them the nucleus of a new co-operative dairy society. With few exceptions, all the twenty-four dairy societies that were registered in North Wales after 1916 came into being in this way.

The districts of North Wales in which cheesemaking societies were established varied considerably in their economic characteristics. Whereas North Wales farming is mainly concerned with stock rearing some districts are more closely associated with dairying than others. Towards the English border most farmers are producers of milk for sale in liquid form or for conversion into cheese. In moving towards the western areas the production of liquid milk for sale, while prevalent around towns, becomes less a feature of the farming system. Over the greater part of North Wales dairying is supplementary to stock rearing, the milk, surplus to calf-rearing, being converted into butter on the farms. The sale of milk in any form, therefore, is definitely a by-product of cattle rearing over the greater part of North Wales.

Apart from districts definitely concerned with liquid milk selling and the mountain sheep areas, co-operative cheese factories sprang up over all parts of Flint, Denbigh, Carnarvon

and Anglesey. The characteristics of each locality were so varied that no rigid classification can be made. But in actual practice, cheese factories attempted to serve their respective districts in two ways. In areas where conditions of transport did not warrant the sale of liquid milk and where accordingly milk production was not an end in itself, the cheese factories served to absorb the summer milk surplus. The opening of the factories resulted in surplus milk being converted into cheese rather than churned into butter on the farms. Societies in these districts usually only worked during the summer season, and what surplus was available in winter was made into butter on the farms.

The position of societies bordering on liquid milk areas was rather different. Dairying was more a feature of farming in such districts, though transport facilities were not sufficiently well developed to justify farmers embarking wholeheartedly on liquid milk production. Consequently, although some stock-raising was done, there was a surplus of milk in summer above the requirements of the liquid milk market; whereas these areas were sufficiently near consuming centres to justify the despatch of liquid milk in winter. Several factories in areas such as these responded to local conditions by functioning as cheese-makers in summer and wholesalers of liquid milk in winter. At other centres cheese-making operations were confined to the summer months, and in winter farmers sold liquid milk on their own account. In some districts there was little winter milk to be handled. All societies had this in common—that they made cheese in summer of milk which would normally have been converted into butter on farms.

The first society to be established was the Llangerniew Co-operative Cheese Factory, Ltd., which operated in an upland village in Denbighshire ten miles from a railway station. This society commenced cheese-making in 1918, and soon afterwards was followed by societies in Chwilog, Carnarvonshire; Nerquis, Flintshire; and Berriew, Montgomeryshire. The example of these societies and the extension of the Cheese School scheme resulted in a rapid growth of the movement. Cheese manufacturing societies sprang up in all parts of North Wales until, three years later, there were nineteen such societies actually in operation, with a total membership of 736. The table below indicates the rise, and subsequent decline, of the movement in North Wales.

TABLE 15.
RISE AND DECLINE OF CHEESE FACTORIES.

Year.	Societies in operation.	Total Membership.	Members per Society.
1918	4	95	24
1919	11	382	35
1920	17	670	39
1921	19	736	39
1922	19	716	38
1923	13	378	29
1924	9	276	31
1925	7	234	33
1926	6	185	31

NOTE.—Two societies that have never made cheese but have always been concerned with the liquid milk market are not included in this table. They are :—The Vale of Conway Dairies, Ltd., which originated in 1919, and is still working with 67 members, most of whom are not suppliers; and Flintshire Farmers, Ltd., which commenced operations in 1925, also still working and which has a membership of 51.

From 1922 onwards it will be noticed that the movement suffered a decline almost as phenomenally rapid and extensive as its rise. By 1926 the number of cheese-making societies in operation had been reduced to six and it is some satisfaction to record that these six are in existence and comparatively sound financially at the present time.

The membership figures of the societies are interesting from two points of view. The largest society, Abergele Co-operative Dairies, Ltd., had at one time a membership of 144, while the later returns of the Caersws and District Dairy Association, Ltd., on the other hand, register only nine members. Although there was a wide difference between the largest and smallest societies, the average North Wales dairy society was a small unit of some thirty members, the majority of whom were also milk suppliers in most cases. The second aspect is concerned with membership variations from year to year. The table shows that the average number of members per society increased from 24 to 39 during the rise of the movement and decreased by an average of 10 per society during the years of decline. Though this is in itself some indication of a lack of loyalty and a falling away of enthusiasm among participators in the movement it is no real criterion of the actual state of affairs. It has been already stated that the majority of members were originally also milk suppliers, but in the more recent years it would be more correct to say that the majority of members were not suppliers. The

table below shows the movement of members of certain societies from the active, milk supplying, status to that of mere shareholders with little interest in the societies' welfare:—

TABLE 16.
VARIATIONS IN MEMBERSHIP OF 4 SOCIETIES.

Year	Society A.			Society B.			Society C.			Society D.		
	A.	P.	T.	A.	P.	T.	A.	P.	T.	A.	P.	T.
1919	18	3	21	24	..	24	..	..	..	..	..	..
1920	11	10	21	36	12	48	16	13	29	27	..	27
1921	15	6	21	27	20	47	14	15	29	22	5	27
1922	12	9	21	15	31	46	12	17	29	20	7	27
1923	7	14	21	11	36	47	12	17	29	17	10	27
1924	..	..	..	8	39	47	8	19	27	11	16	27
1925	..	..	..	6	41	47	4	23	27	10	17	27

A.—Active. P.—Passive. T.—Total Membership.

Societies A and B in the above table are now defunct, but C and D are still trading. It would appear, therefore, that the comparative success of the survivals cannot be accounted for so much by superior enthusiasm and loyalty as by other factors which will be discussed at a later stage.

The year during which the growth of the North Wales Co-operative dairy movement, measured in terms of the number of businesses and membership, reached its zenith was 1921. After this date the decline set in. The number of societies decreased; the membership shrank; the societies became smaller; and the switching over of the membership from the active to the passive side became more and more marked. There were many reasons for the decline of the movement, but the heavy slump in cheese prices in 1921 challenged the strength of all societies and proved too much for several. There is a fairly definite relation between the time of starting and subsequent failure. Of the eleven societies registered between 1920 and 1922, nine have been now wound up after an average trading life of just over three years. Three of the seven societies registered in 1919 failed after an average existence of five years. Whereas only one of the four societies registered before 1918 was in business in 1926, two survived until 1925, while the other, registered in 1918, went into liquidation in 1922. Of the six cheesemaking societies trading in 1926 four were registered prior to 1920, whereas the other two began operations in that year. Table 17 gives a graphic indication of the decline in trade that followed the price slump. The maximum sales (£86,000) occurred in 1920 and we find only four years later that sales had shrunk to under one-seventh of this figure.

TABLE 17.
TRADING STATISTICS, 1920-24.

Year.	Number of Societies.	Number of Members.	Total Sales.	Sales per Society.*	Sales per Member.
1920	17	670	86,001	5,059	128
1921	19	736	51,795	2,726	70
1922	19	716	28,327	1,491	40
1923	13	378	17,315	1,332	46
1924	9	276	12,710	1,412	46

* The limited extent to which the decline in trade was due to the fall in prices is seen in the following table, the prices of English Cheddar and Cheshire Cheese as given by the Ministry of Agriculture:—

			Prices per cwt.			
			Cheddar.		Cheshire.	
			s.	d.	s.	d.
1920	..	..	176	10	219	4
1921	..	..	126	6	170	4
1922	..	..	105	6	124	0
1923	..	..	125	0	128	8
1924	..	..	119	6	116	8

The decrease in trade, caused by the ever-decreasing supplies, and the fall in prices, and complicated in many cases by managerial and technical difficulties and the lack of sufficient financial reserves, made it impossible for most societies to operate successfully. Society after society went into liquidation or became de-registered, often with considerable loss to members, guarantors, and creditors in some cases; and now only six societies remain as testimony of the efforts towards co-operative cheese-making in North Wales.

Financial and Business Analysis.

Reference to Table 15 shows that the majority of the dairy societies had but a short life. Some succumbed with heavy deficits and loss to the holders of capital. The causes of the break up of the movement are varied and intricate, some of them being purely local and temporary in character. It is possible, however, to isolate some factors, the application of which is general to most forms of co-operative effort. In dairy organisation, as with other enterprises, financial results depend on the relation of margins to costs and these in turn are closely related to conditions of finance and business management.

Though the financial position of farmers at the time when these societies were formed was such that a liberal subscription of share capital might have been expected, several societies

were inadequately supported in this respect. Some societies started with heavy borrowing, while others, as business developed, relied to an increasing extent on external capital. It is extremely difficult to determine the capital needs of a group of societies working under such varied conditions as those now reviewed. So much depended on the necessity of erecting or buying suitable premises, the degree to which vehicles were required for collection, the frequency with which payments were made for milk and the margin retained for the society. Lastly, the policy of the society in the disposal of profits determined to a large extent the fund of working capital which it controlled. Most of the societies were started at a time when cheese prices made it possible to declare large profits. The income of some of the older societies was augmented by substantial grants from the Ministry of Food. But in several instances these profits were not retained to provide the business with working capital. Subsequently, conditions were not so favourable to profit making and societies which had not built up reserves had not sufficient capital to meet current needs.

In the following table a comparison is made, at two stages, between two groups of societies, one consisting of societies still in existence and the other of societies which were wound up soon after 1922:—

TABLE 18.
FINANCIAL CONDITION OF SOCIETIES.

	1920		1922	
	6 Alive 1925	5 Dead.	6 Alive 1925	5 Dead.
Total Capital	£10,491	£14,498	£8,923	£10,885
% Owned	78.8	53.1	60.8	46.1
% Borrowed	21.2	46.9	39.2	53.9
<i>% of Sales.</i>				
Total Capital	30.0	38.6	58.4	170.5
% in Fixtures	10.2	20.7	37.3	90.7
Trade Capital	19.8	17.9	20.6	45.3
Borrowed Capital	6.38	18.1	22.8	92.2
Societies' Working Capital	+15.42	—0.2	—2.2	—46.9

The relatively heavier borrowing of the unsuccessful societies is evident from the start, and their position had deteriorated in this respect by 1922. Associated with this is the fact that the dead societies invested larger amounts of

capital in buildings and fixtures in relation to sales which caused a shortage of working capital. All societies suffered as a result of the movements in cheese prices, but the way in which financial conditions contributed to the deficits of the unsuccessful societies is seen in an examination of the position in 1922. At that time those societies which no longer exist were relying on borrowed capital not only to meet current needs, but also to finance permanent requirements in the form of buildings and fixtures. Naturally the extent to which borrowed capital was used materially increased working costs by reason of heavy interest payments.

The total handling costs incurred by societies varied very considerably apart from financial charges. Some societies operated throughout the year, whereas others manufactured cheese only during the months when milk was plentiful. Two or three societies with a short career spent much capital in vehicles for collecting milk, whereas in the majority of cases, farmers brought supplies in daily. The costs section of the following table shows the variation between the two groups, and illustrates the principle of the relationship between handling costs and turnover. Gallonage costs can only be given for 1920, when the handling costs in the case of the six healthy societies was 2.25d. per gallon, compared with 3d. for the other five.

TABLE 19.
COSTS, MARGINS, AND FINANCIAL RESULTS.

	1920		1922	
	6 Alive.	5 Dead.	6 Alive.	5 Dead.
Sales	£ 34,922	£ 37,528	£ 15,269	£ 6,387
% of Sales.	%	%	%	%
Expenses of Management*	7.5	10.5	12.4	27.4
Financial Costs	0.3	0.4	1.2	4.1
Total Costs	8.8	12.6	16.5	41.5
Gross Profit	24.7	15.1	25.4	17.67
Total Margin	25.1	19.4	25.9	19.68
Net Profit or Loss.. ..	+16.3	+6.8	+9.4	-21.82

* "Management Cost" here is as defined for purposes of Form A.R. 17 sent to the Registrar General of Industrial and Provident Societies.

The societies which failed are characterised by heavy management costs, which were augmented by reason of three societies operating a collecting system, which proved to be particularly expensive in 1920. By 1922 the reduction in turnover, coincident with the payment of heavy overhead charges in respect of borrowed capital, was responsible for a great increase in unit handling charges. It is difficult at this stage to measure the efficiency of management, but it is fairly clear that insufficient care was devoted to handling milk with the maximum economy.

The second section of the preceding table shows important variations in the trade margin secured by the two groups of societies. The difference between gross profit and total income is attributable mainly to fees for the use of utensils, grants from the Ministry of Food in 1920, and, in some cases, interest on bank balances and investments.

The amount of gross profit secured by individual societies varied immensely, the chief determining factor being the price policy of the committee. As a rule payments were made monthly for milk, a charge estimated to cover the total costs of handling being deducted. The failure of many of these societies is partially due to their deliberately ignoring business principles in this matter by making an excessive immediate cash payment to suppliers. In several cases, if individual years are taken, the business was not earning any gross profit; that is, that suppliers were being paid more for milk than it realised when converted into cheese. This defect, common to many co-operatives engaged in the sale and manufacture of produce may be quite natural in a system where the control of purchase prices is in the hands of interested but inexperienced suppliers. The society's interests must be safeguarded by paying to suppliers a sum which will allow a liberal margin to cover all costs, together with reasonable allowances for expected adverse changes in the prices of the finished product. Although during the period at which these societies operated it was admittedly difficult to estimate prices, especially in a rapidly falling market, the comparative accuracy with which such estimates were made by some of the more successful societies gives ample support to the view that it was not impossible.

The comparative failure to do this is noteworthy in an examination of the gross margin retained by the two groups mentioned above. At the two periods the societies which failed were not allowing themselves sufficient gross margins.

The interests of the suppliers did not demand such high payment as was allowed, and the interests of the societies were certainly jeopardised. Cash payments on delivery to farmers were normally supplemented by the distribution, at the end of the year, of a dividend on the basis of the butter fat supplied. When these two payments are taken into consideration the prices per gallon received by members of the two groups in 1920 were as follows:—

TABLE 20.
RETURNS TO SUPPLIERS, 1920.

		(Per gallon.)		6 Live Societies.		5 Dead Societies.	
				s.	d.	s.	d.
Initial Cash Payment		1	6.25	1	7.75		
Dividend (at end of year)			3.32		1.6		
Total		1	9.57	1	9.35		

Farmers who received a lower initial payment during the year secured a larger final payment, together with the satisfaction of owning societies which were financially sound. Co-operative societies generally have been too much of the nature of middlemen, buying from, rather than selling for, their members, and it is evident that the latter methods benefits the society without necessarily penalising the member. The society should be regarded as engaged in converting and selling milk for its members and not merely a cheese factory purchasing its milk in the open market from external sources. It is significant that among flourishing co-operatives abroad to-day the principle of advance payments, supplemented by a final disbursement on the basis of produce supplied when the "pool" has been completed, is generally applied.

In the period 1920-22, many failures were attributable not only to over-payments for milk on receipt, but also to an indiscriminate distribution of profits. Without consideration of their capital position and the desirability of building up reserves to meet contingencies, most societies—especially the failures—paid out big dividends. Some of these payments were made possible by the Ministry of Food grants, others came from genuine profits. Furthermore, the societies which failed paid out dividends when they were heavy borrowers of capital, and in some cases the fact that the society had no working capital was ignored. In the disposal of profits the first consideration, certainly after, and possibly before, the payment of share interest, should be given to the capital position, so that accumulated profits would take the place of borrowed capital. The group of five societies (now dead)

discussed above paid out dividends at the rate of 7.1% in respect of 1920 supplies, when they had, as a group, no working capital, and were borrowing nearly half the capital employed. It is true that the "live" societies, in paying 13.8% on 1920 supplies were rather too liberal, but their capital position justified this to some extent. The true interests of members of all these societies are in the maintenance of efficient businesses of their own, even at some sacrifice of temporary advantages. The members of one group kept their businesses for future assistance and protection, while the members of the other took immediate advantages and threw away future protection.

The above discussion of the financial and business management which contributed to success or failure, can be summed up by a special comparison of the position of two societies over a period of five years. One society went into liquidation in 1922, whereas the other ceased operations in 1925 for reasons which are discussed elsewhere. In the one case careful management and sane finance are in marked contrast with the short-sighted policy adopted by the other.

TABLE 21.
CAPITALISATION AND TRADING OF TWO SOCIETIES,
1918-22.

Year	Society A. (Success).					Society B. (Failure).				
	1918	1919	1920	1921	1922	1918	1919	1920	1921	1922
Share Capital	£ 123	163	271	281	281	109	345	427	427	483
Reserves	£ 148	1161	727	40	16	610	865	..	..	..
Borrowed Capital	£ 845	79	9	65	33	634	864	4305	3878	3488
Total Capital	£ 1116	1403	1007	386	329	1353	2074	4729	4305	3971
% Members' Interest	24.3	94.5	99.1	83.2	96.8	53.1	58.0	9.0	9.8	12.2
Sales	£ 3241	4598	6032	2418	1156	3676	6892	9137	5745	1304
% to Sales :—										
Total Capital	34.4	30.5	16.7	15.8	28.5	36.8	30.1	51.6	75.0	30.10
Trade Capital	27.7	24.78	11.57	4.52	6.7	24.7	20.8	31.0	21.0	27.4
Society's Working Capital	1.7	23.06	11.42	1.86	3.7	7.5	8.4	—16.1	23.3	—224.6
Borrowed Capital	26.0	1.72	0.15	2.66	3.0	17.2	12.4	47.1	46.7	252.0
Gross Profit	14.6	30.8	18.7	20.33	24.8	32.24	17.1	6.0	—1.1	—5.8
Trade Margin	15.04	31.56	22.55	20.9	25.0	34.97	29.8	19.7	3.32	..
Expenses of Management	8.22	7.3	7.68	16.5	23.4	10.6	14.8	14.25	10.9	21.6
Financial Costs	..	0.8	0.3	0.35	0.4	0.5	0.58	0.67	2.8	12.0
Total Costs	8.7	8.06	8.7	18.8	26.0	19.01	17.7	16.78	16.48	45.0
Net Profit or Loss	6.34	23.5	13.85	2.1	—1.0	15.96	12.1	2.92	—13.16	—50.8
Actual Profit or Loss	£ 206	1081	836	49	—11	587	841	267	—754	—661
Dividends distributed	£ ..	..	1247	722	..	..	537	1282	..	..

In the above comparison, Society B had a collecting system and invested heavily in buildings and fixtures. The contrast in sources of capital, handling costs, gross margin, financial results, and use of profits is quite clear throughout and summarises the business problems, the solution of which was vital to ensure successful organisation.

Of the 24 dairy societies registered there are six cheese societies still in existence which have traded continuously since 1920. While these differ considerably in their financial strength and business efficiency, their continued existence can be largely attributed to the regard paid to business principles. They have been able to weather the storm of falling prices by working on sufficiently wide margins and being careful in the distribution of profits. Despite the difficulties with which they have been confronted in recent years they all show a favourable balance as the result of seven years' trading. The average position as regards capitalisation and trading for these six cheese-making societies, together with one engaged in milk selling, is shown in the following table:—

TABLE 22.
AVERAGE RESULTS OF SEVEN SUCCESSFUL CHEESE-MAKING SOCIETIES, 1920-26.

Society	1	2	3	4	5	6	7
% of Total Capital:							
Members' Interest ..	97.1	97.2	98.7	97.8	45.5	62.4	39.4
Borrowed Capital ..	2.9	2.8	6.3	2.2	54.5	37.6	60.6
% of Sales:							
Gross Profit ..	33.2	19.3	29.6	22.5	13.0	21.2	22.1
Trade Margin ..	33.7	19.8	30.8	22.8	13.2	21.7	22.1
Expenses of Management ..	16.3	8.6	7.4	12.4	7.9	15.0	16.5
Financial Charges ..	0.3	0.1	0.1	0.3	1.4	0.9	2.0
Total Charges ..	20.0	9.7	9.3	15.5	12.0	18.4	20.2
Net Profit or Loss ..	13.7	10.1	21.5	7.3	1.2	3.3	1.9
Total Payments to Suppliers ..	72.3	86.3	92.3	83.5	91.9	86.6	78.3

While the turnover of these societies is not great to-day, and while more than one of them are thinking of winding up, the very fact of their being in existence is a thing of which their committees can be justly proud.

The Organisation of Cheese Factories.

Problems of Control.—Whereas business mismanagement can be held largely responsible for the failure of most societies, other factors were of equal, possibly greater, importance in determining the history of dairy organisation in North Wales. In the first place, the movement was not of sufficient duration to win a body of capable servants or to allow certain principles of control and organisation to work themselves out. As in the case of all movements in the pioneer stage, co-operative dairying suffered from mistakes which were largely attributable to inexperience on the part of those concerned.

The societies experienced some difficulty in securing suitable cheesemakers, although the normal practice was to engage trained females. One or two societies experimented with male cheesemakers, but gallonage handled was not sufficient to justify the extra cost. In addition to the cheesemaker, the indoor staff was often supplemented by females who had received some tuition at the local cheese school. Though trained in cheesemaking, several of the employees were not skilled in manipulation on a factory scale, with the result that a considerable quantity of bad or unsaleable cheese was turned out. The difficulty of securing reliable assistance was often accentuated by the fact that most factories did not operate throughout the year and each season opened with a new cheesemaker unaccustomed to local conditions.

On the administrative side there was much variation in policy. In some cases the committees attempted to keep the reins too closely in their own hands. As a committee is always a somewhat unwieldy body it cannot effectively control a manufacturing business and the denial of control to the manager often deprived societies of authorised leadership. In the bigger factories the fact that there was no one directly responsible for the entire management resulted in all employees assuming some control and this was the cause of considerable ill-feeling in the factory which adversely affected the work. On the other hand, some committees left too much in the hands of one person, usually the cheesemaker, with the result that he or she had to be a combination of manager, cheesemaker and salesman, and did justice to none of these duties. The medium course followed by the more successful committees proved to give better results in every way.

In such a movement as this, where a cheese factory was an entirely new departure in each locality, it was almost inevitable

that the committee should not include anyone with an expert knowledge of the business it was about to control. Had the secretary or manager of each of the newly-formed cheese factories possessed good practical knowledge of cheese-making and the cheese trade much loss would have been averted. Without this knowledge it became essential to provide societies with an external intelligence service, on which societies could draw for advice in their difficulties as regards production, sale, accounting, and general organisation. The nucleus of such a service whereby the combined experience of the movement was applied to local problems, came into being in 1920 with the setting up of a Central Book-keeping Scheme, administered by Stapleton Cotton House, for dairy societies in North Wales. Apart from providing the specialised knowledge required in the proper keeping of dairy accounts, the North Wales branch of the A.O.S. fostered the movement by propaganda and supervision. A special dairy organiser was appointed whose duty it was to keep in touch with societies to advise them on all problems and warn them of impending troubles.

Types of Manufacture.—There were other problems of a more technical character, being closely allied to the objects for which societies were operated. All except two of the North Wales societies were concerned with the manufacture of cheese. Generally speaking, cheesemaking was confined to the summer months, the usual season of operation extending from April to October. During the rest of the year the majority of the societies lay dormant, only one society ever attempted to make cheese all the year round. This was the Eifionydd Cheese Factory, Ltd., now defunct, and this society also reverted to milk selling from time to time under the direction of the Ministry of Food. Four other societies were in operation summer and winter, making cheese in summer and selling liquid milk in winter.

Buildings.—The seasonality of the work was responsible for several difficulties peculiar to the movement. Apart from the difficulty of securing "continuous" assistance the societies were burdened with heavy overhead charges in respect of buildings, plant and premises. Some societies adopted a conservative policy in this respect, and were content to commence operations with limited equipment and unpretentious premises. Other societies, having greater faith in the future of the movement and in their own ability to organise the work, spent heavy sums on the erection or modification of premises at a time when

building costs were exceedingly high. These societies having tied up so much capital in fixtures were without working capital, and consequently had to borrow heavily at rates which reduced the possibilities of profit making.

Collection.—Connected with the question of sinking capital in building was the wisdom of the establishment of a collecting service by societies. In some districts it was affirmed that a system of collection by motor was essential as farmers would not deliver their milk to the factory themselves. In many cases, indeed, they could not, owing to the lack of a suitable conveyance, because the old farm float or other light vehicle had on many farms already fallen before the advance of the ubiquitous 'bus service. Five societies instituted a motor collection service during the course of their existence. Of these, three were operating in western Carnarvonshire, the farmers of which district appear to have been always unwilling to deliver their own milk to the factories. In all cases where collection was undertaken it was found that the cost was prohibitively high, whether the transport were owned or hired, and this contributed quite largely to the downfall of the societies concerned. This is amply brought out in the instance of Abergele Co-operative Dairies, Ltd., which employed three motor lorries to collect their milk from farms extending over a radius of six miles. In 1922 the "management" costs of this society reached the phenomenally high figure of 37.4% of sales and a considerable proportion of this was directly attributable to the cost of the collection service. None of the societies at present in operation have attempted a collection system for their milk supply and the only form of transport now in use is concerned merely with the retail milk rounds or with the local sale of cheese and cream. Some societies endeavoured to bring into operation a scheme whereby the onus of collecting and delivering milk from adjacent farms fell in rotation upon the farmers concerned, thus making unnecessary a daily journey to the factory by each supplier. Such schemes, however, never met with much success as the personal factor entered too strongly into their composition.

Payment for Milk.—One of the rocks on which many societies foundered was the question of payment for supplies. This can be viewed from two angles—the physical basis on which payments are to be made, and the amount to be paid on delivery.

As regards the basis of payment, most societies followed the advice of organisers and general practice elsewhere by adopting the butter-fat basis. This system can be outlined as follows:—All milk supplied to the factory is weighed and sampled and the sample submitted to the Gerber test for butter-fat content. A price for milk of an average fat content of, say, 3.5% has been fixed, usually by the committee, and is in operation for a month. This price has been estimated with reference to the condition of the cheese market and to probable conversion costs in the factory. As the higher the fat content the higher the yield of cheese, it is also customary to fix a sum to be paid as bonus to suppliers of milk above the average fat percentage and to be deducted from the price paid to suppliers of milk below that average. Thus if a bonus of 1d. per 0.1% fat per hundred pounds of milk be decided upon and if the price per hundred pounds of milk of 3.5% fat content is 5s. 0d. then suppliers of milk containing 4.0% fat will be paid 5s. 5d. per hundred pounds and suppliers of milk yielding 3.0% fat will receive 4s. 7d. per hundred pounds. An encouragement is thus given to farmers to improve the quality of their milk and it has been found in practice that the extra care given to the dairy herd, with this in view, leads to an improvement in cleanliness and keeping quality also.

As regards the amount of the payment the price fixed by the committee should leave an ample margin to cover the costs of the society. Any surplus in hand at the end of the year's trading, after the payment of share interest and the allocation of what sum be considered proper to the reserve fund, can be distributed as a dividend to suppliers, again on a butter-fat basis. Thus the monthly milk cheque must be looked upon by the supplier as merely a payment "on account," while his final price per gallon may be considerably higher than the initial price fixed.

While this was the ideal striven after by most of the societies in the past and realised to a great extent by those societies still in existence, there were several instances where the co-operative basis of the movement was lost sight of completely. Whereas the majority of societies adhered fairly closely to the butter-fat test as a basis of payment, the majority were guilty of over-payment for milk. The way in which such unbusiness-like practices contributed to the failure of factories is discussed on page 62.

Utilisation of Whey.—The profitable disposal and use of the by-product, whey, is another problem of cheese factory

organisation which was never satisfactorily solved by many societies in North Wales. This matter—so easily dismissed in theory—is of considerable importance in actual practise. The custom of most of the North Wales cheese factories was, and is, to sell back to the farmer whey from the factory and for him to take a load of whey to his farm on returning from the delivery of his milk. A charge of $\frac{1}{2}$ d. or 1d. per gallon was usually made, but in some cases it was found impossible to dispose of the whey even when no charge at all was made for it. As the supply of milk, and hence whey, at the factory was subject to considerable variation it became a practical impossibility in many cases to ensure a daily, or even less frequent, emptying of the whey tank. In addition to this, the facilities for whey storage were often poor and the whey demands of the farmers were more irregular than the supply. The result was usually a tank more or less perpetually full of sour whey, the state of which did not tend to improve as the summer advanced. This whey was, of course, useless for the feeding of any stock except pigs and sometimes became too bad even for that. In consequence the demand for it decreased rather than increased and, in districts where few pigs were kept, the disposal problem became a serious one. The presence of large quantities of sour whey in close proximity to the factory was not without its effect upon the cheese. To make matters worse, such of this whey as was taken by farmers ordinarily travelled to the farm in the milk churns that would return to the factory on the next day with fresh milk after but a more or less casual cleansing.

One of the present societies, that at Nerquis, encountered these difficulties, and has overcome them to a great extent by making against suppliers a charge for whey of $\frac{1}{2}$ d. per gallon on two-thirds of the milk supplied whether the whey is actually taken or not, and in practice all the whey is cleared.

An alternative method of utilisation is for the society to keep pigs in premises preferably adjacent to the factory. Pigs would be reared on whey with little extra food and little labour expense and sold to members for finishing purposes. In addition to finding a convenient and profitable outlet for its by-product, the factory would probably prove to be a comparatively cheap source of strong store pigs for its members. None of the societies adopted this practice and it appears reasonable to surmise that had more attention been paid to this side of cheese factory organisation the possibilities of success would have been considerably augmented.

Methods of Sale.—All the North Wales societies engaged in cheesemaking specialised in the production of hard-pressed Cheshire cheese of the 50-60 lbs. size usually manufactured. It was the custom, also, in most societies to manufacture a certain number of small cheese during the season for sale to members. Certain societies, conveniently situated, extended this trade to the production and sale of a limited number of small cheeses to visitors to the seaside resorts.

Provided the quality was good, there never was any difficulty in disposing of North Wales factory cheese at, or in many cases above, the current market price. Most of the product has in the past been sold to cheese factors in Manchester or Liverpool or to wholesale provision merchants in the latter city. Sales were made at somewhat irregular intervals depending upon the state of the market, the condition of the cheese, the availability of storage facilities and the financial needs of the societies. The majority of the societies spoke highly of their treatment at the hands of the buyers and gave full credit to their willingness to give them the benefit of a rising market. On the other hand, so good a reputation for quality have some of the societies acquired that cheese might be sold "on sample," and there is at least one society contracting to supply cheese to a certain specification before it is actually manufactured.

During the 1921 cheese price slump there were a number of particularly poor sales made, and these contributed very largely to the downfall of the societies concerned. It must be admitted, however, that in many of these cases the quality of the cheese was exceedingly low and even where the cheese was of good quality, the keen judgment of the market position shown by the more successful societies was lacking and sales were delayed much too long with consequent severe loss.

In more recent years a somewhat different sales policy has been adopted by several of the surviving societies. More attention has been paid to local sales and in at least three cases the whole of the output is disposed of in this way, the societies keeping the control of their cheese in their own hands until it reaches the retail stage. A number of shops in the northern coastal resorts, the Vale of Clwyd and other towns in Flintshire and Denbighshire are now supplied with Welsh factory cheese. In this connection it is significant to note that one society finds a ready market for its cheese in the home town of another some few miles away. Other societies still find a market through Manchester factors, and, in the main, through one such factor

who has handled cheese at one time or another from practically every co-operative cheese factory in North Wales.

Generally speaking, although errors of judgment have occurred from time to time with serious effect upon societies, in very few instances can the actual system by which the cheese of the North Wales societies was, or is, marketed, be regarded as one of the chief causes of weakness. Had the movement generally been more successful some improvement might have been obtained by working to standards and possibly by marking, but with conditions as they were the better societies did their marketing fairly well. Yet there is little doubt that had such an organisation as the Cheshire Cheese Federation existed sooner, many of the marketing difficulties would have been overcome.

Farm Production and Marketing Organisation.

Apart from the technical and business problems with which co-operative cheese factories were concerned, their success or failure was largely determined by the way in which they harmonised with the system of dairy farming adopted in the various districts.

In an examination of co-operative dairying in North Wales it must ever be borne in mind that the movement originated in years when the urgent food demand of the nation had produced an entirely false and temporary set of prices and values. It would appear in the light of our present knowledge that some of the societies should never have been started at all, and doubtless but for the inability of many of the people concerned to realise the temporary nature of the price inflation, much fewer cases of failure would have to be recorded. While prices remained at their high level most of the societies did well, but when the slump came in the early post-war years it became evident that co-operative dairying, and particularly cheese-making, in many North Wales districts was only a superficial attachment and had not worked its way into the farming system.

One feature that was experienced by successful and unsuccessful societies alike, was the serious depletion of supplies following upon the slump year of 1921, and Table 23 shows this very clearly. The figures are taken from the returns of one of the most successful societies and great as the drop in supplies in 1922 is here it is very much smaller than what occurred in some of the societies now extinct.

TABLE 23.
PRICES OF CHEESE AND SUPPLIES OF MILK, 1919-1927.

Year.	Average realised Price of Cheese per lb. s. d.			Total Milk Supplied. Gallons.
1919	..	..	1 9½	59,417
1920	..	..	1 8½	94,917
1921	..	..	1 1½	103,190
1922	..	..	0 10½	65,085
1923	..	..	0 11½	60,474
1924	..	..	0 10½	43,723
1925	..	..	0 11½	45,032
1926	..	..	0 9	43,721
1927	..	..	0 9½	31,774

To a considerable extent this falling off in supplies may be taken as indicative of a lack of confidence and of the true co-operative spirit but the matter cannot be so easily dismissed. Numerous other features of the various complex farming systems followed in the country bring their influence to bear at this point.

In a country so devoted to stock rearing as many parts of North Wales, the dairy herd and its milk production are distinctly subservient to the main interest. Primarily the purpose of the cow is to produce calves and sufficient milk to rear them. What happens to any surplus milk there may be is strictly a secondary consideration. The prevalence of spring calves accentuates the summer milk flush and the irregularity of the weaning period serves to induce an equally irregular surplus milk supply. These features, peculiar to stock-raising areas, make it difficult indeed for the farmer to enter the liquid milk market even in those districts of North Wales where such a market is within comparatively easy reach, except where there is a seasonal demand for milk due to the influx of summer visitors. In the past butter-making has been the means of dealing with the milk that was surplus to rearing requirements and it was from milk usually put to this purpose that the majority of the cheese factories drew their supplies. This fact brought them up against a number of problems having their roots in the system of farming.

One of the chief advantages of butter production in its close relation with stock rearing is the availability of quantities of skim- or butter-milk for the latter purpose. Although large quantities of whey, both fresh and scalded, are used for calf-feeding in the specialised cheese-producing areas of England, it is a custom to which the Welsh farmer does not take easily,

and in supplying milk to the factories he felt he was denying his young stock a food for which no equally efficient substitute could be obtained. In addition storage difficulties already discussed made much of the whey unfit for calf-rearing needs and as very few extra pigs were kept its value on the farm was strictly limited. It is significant that in the majority of districts the decline and collapse of co-operative cheese-making has been accompanied by a reversion to farm butter-making.

An interesting side-light on the farming system is given by the labour difficulties that were experienced in certain areas—notably Western Carnarvonshire—as a result of setting up cheese factories. The fact that an ample supply of butter-milk was not available made labour difficult to obtain on the farms supplying the factories, since workers regarded butter-milk as an essential part of their diet. This, incidentally, is one of the reasons why certain districts still hold fast to the old-fashioned system of butter-making by churning whole milk rather than cream.

Another custom that weighs heavily in favour of farm butter-making as opposed to factory cheese production is a personal one connected with the housekeeping arrangements of the farmers' womenfolk. It has long been the custom on very many farms for the butter money to be looked upon as the housekeepers' perquisite, or, perhaps more accurately, housekeeping allowance. Perhaps the poultry, too, form part of her department, and the income from these two sources goes to keep the household in purchaseable necessities. The ultimate destination of any surplus there may be is not a matter on which many farmers are able to give accurate information. During the cheesemaking season other arrangements have to be made and neither the wife, who has lost her "pin-money," nor the farmer, who has perforce to put his hand in his pocket somewhat more frequently, is likely to find much to say in favour of the position. In several districts, failure of cheese factories was partially due to inability to solve this apparently trivial problem.

It is also necessary to consider the position of farmers whose custom it is to exchange their butter for goods at the grocer's shop. This is the system adopted by a fair number of North Wales farmers and it is to be feared that the credit position of many of them rendered a sudden stoppage of butter supplies, to say the least, undiplomatic. Many farmers, too, have regular butter customers of long standing with whom possibly relations of more or less close friendship are

merged with those of business. The farmer finds it hard to discontinue trade with these customers even though the alternative is more profitable.

While all these factors operated in opposition to the co-operative dairying movement in North Wales, the price slump tended to give them undue prominence in the farmers' mind, and, once there, they become strong enough to hasten his already wavering steps away from the society.

In the more eastern districts another set of factors was coming into operation at the time which proved to be the turning point in the fortunes of the movement. Farmers in Flintshire and East Denbighshire were coming into closer contact with the liquid milk trade of Liverpool and district, and many of them deserted their societies in favour of the more profitable liquid trade. Motor collection, chiefly by industrial co-operative societies, assisted considerably in sounding the death knell of the Nannerch and Caerwys Societies in Flintshire, and the easily available railway facilities performed a like service for the societies at Minera and Hope. The liquid trade was not without its effect, too, upon societies more remotely situated. Where a summer resort was near by and the influx of visitors considerable, the temptations of the retail trade, especially for summer months, proved too powerful to be resisted by quite a few suppliers to cheese factories.

There is little doubt that in so far as the failure of societies can be attributed to one cause, that cause was the instability of the milk supply. No system of contracts was adopted by any of the societies and in this lay one of the great weaknesses of such a movement. While it has been stated previously that the system of farming practised in most of the North Wales districts makes a contract for the liquid market a practical impossibility, the question of contracting for factory cheese production is of a somewhat different nature. The relatively hard and fast maximum and the surplus problem do not enter into the situation with quite the same importance. It should be possible to contract, even under the present farming systems, to supply a certain minimum quantity of milk during each month of the season and thus provide the society some definite basis on which to work. Milk supplied over and above the minimum contract figure would be of secondary consideration, particularly as most of the North Wales societies possessed a plant and buildings capable of dealing with considerably more milk than they ever received. It was

mainly with reference to this question of milk supply that the statement was made that some of these societies should never have been started. Societies attempting to operate in districts where the supply was too meagre or too irregular to be profitable were fighting a losing fight against overwhelming odds from the outset.

Other factors to which failure is, to some extent, attributable were concerned more closely with individual societies than with the movement as a whole. Two societies came into direct opposition with private creameries. In both these instances the members of the society preferred to support the opposing camp at the slightest sign of higher payment for their milk. In one case the private concern was being sold up on the day the society went into liquidation, and in the other instance the society suspended operations only a month before the opposition was also withdrawn.

In other cases bad feeling was unfortunately created between the society and some of its suppliers because of complaints as to the cleanliness of the milk and, again, suppliers sometimes became suspicious of the butter-fat tests, particularly if their milk had a relatively low fat content. More than one society had to suspend the system of payment upon a butter fat basis for this reason and reverted to payment at a flat rate. Such instances are, of course, to be expected in all concerns of this nature, but it appears to be unfortunately only too true that the farmer is more ready to look for mismanagement and more ready to take offence when dealing with his fellow farmers than when dealing with external private enterprise.

The Factory Butter-making Alternative.

It has been pointed out that the co-operative dairying movement in North Wales was primarily, and to a greater extent is still, concerned with the manufacture of cheese and that the choice of this policy was originally governed more directly by war-time food production demands than by any other incentive. From the standpoint of possible lines of action there is also to be considered the relative profitableness of the three methods of disposal of milk, as cheese, as butter, or in the liquid state. This relation in immediate cash returns is made clear by reference to Table 24 below.

TABLE 24.
YIELD OF ALTERNATIVE USES OF MILK, 1918-1926.

Value of One Gallon of Milk as :—		Liquid Milk.	Cheshire Cheese.	Butter.
		s. d.	s. d.	s. d.
1918	..	1 10	1 6½	0 10½
1919	..	2 2½	1 5½	0 11
1920	..	2 2½	1 11½	1 3½
1921	..	1 11	1 6½	0 11
1922	..	1 3½	1 1½	0 8½
1923	..	1 3½	1 1½	0 8
1924	..	1 2½	1 0½	0 8½
1925	..	1 2½	1 1½	0 8½
1926	..	1 2½	0 11	0 7½

NOTE.—Some adjustment to this table is necessary in order to get a fair comparison between the three uses. The price of Liquid Milk is the wholesale price in consuming centres, and therefore transport costs at 1½d. or 1¼d. per gallon should be deducted in order to arrive at the "Farm" price. The prices for Cheese and Butter are average prices received in producers' markets, and some deduction should be made for marketing expenses in order to arrive at "Farm" prices.

The final profits from the three systems cannot be stated with accuracy, but they certainly would not be in the same proportion as the immediate cash return. There is no doubt whatever that the liquid milk trade normally offers the best cash return of the three, but in most North Wales societies neither the market nor the supplies were available for reasons previously discussed. With the passing of regulation soon after the war, farmers were free to turn their milk to any use, and it would be expected that judgment would be based on financial considerations. It would appear from the above table that throughout, cheese making was more profitable than butter production, and here is an apparent case for the retention of the cheese factory. But the career of societies clearly shows that account must be taken of factors other than the immediate cash return.

That a co-operative dairy movement must dovetail into the existing farming policy of the area in which it is to work is a fact that cannot be over-emphasised and it has already been shown that factory cheese-making did not fit into place in many of the North Wales districts. The greatest difficulty was and is in connection with the prevalence of stock-raising and the pressing need for skim-milk or butter-milk for the feeding of young stock. The North Wales farmer does not consider whey a suitable substitute for butter by-products and, indeed, under small factory storage conditions, it is not a food for young cattle. In view of these considerations it is

natural to speculate how far the dairy societies of North Wales would have succeeded had they undertaken the manufacture of butter, since this procedure would not interfere with the rearing of young stock. Factory butter-making could be arranged so that there would be no decrease in the supply of skim-milk for calf-rearing and this milk would be in fresher condition than that on those farms where hand skimming is still practised.

Another advantage to be obtained from co-operative butter-making as opposed to cheese-making would be a reduction in operating costs, particularly in the collection of milk. This mill-stone of collection costs served to drag several cheese factories into deep water, but it does not follow that history would repeat itself in the case of a butter factory. Where collection is necessary—and it appears to be necessary in certain districts of North Wales—it would seem reasonable to suppose that a collection of cream would prove much less of a burden than the transport of such a bulky commodity as whole milk. Furthermore, it has been suggested that considerable trouble was caused in the cheese factories by the absence on committees of those who were well versed in the technicalities of cheese-making and in the cheese trade itself. Butter-making, on the other hand, has long been a part of the farming system of most of North Wales and it would be impossible to discover a district where as little is known of this aspect of dairying as was known of cheese-making in the early days of the movement.

All these considerations lead to the conclusion that it is to butter-making that the co-operative dairy movement must look for its future extension in North Wales. The need for co-operation in this direction is as urgent as in any other branch of agriculture in the area. Butter is being produced in fair quantity all over North Wales and the organisation of production and sale are very far from ideal. Much of the butter is of inferior quality and is marketed in second rate condition. Supplies are irregular in quantity and quality. Even from individual farms the butter production is seldom constant in either respect for many consecutive weeks. Consequently the farmer has little or no control over the price he receives and each struggles along selling his little output individually as best he may. Were this butter made under a co-operative factory system, with a slightly altered system of herd management on the farms, it would mean the production

of comparatively regular quantities of first class butter of a standard quality which could command ready sale at a fair price in the open market.

There are two methods of butter factory organisation that appear suitable for North Wales conditions. Under the first method milk is separated on the farms and the cream supplied to the factory and paid for on a basis of butter-fat content. By the other method, a somewhat larger factory might be centrally situated to a number of separating stations; these, in turn, so arranged as to be convenient to farms in their locality and to supply separating service to farmers bringing their milk to the station. In either case the separated milk would be available close to or on the farms.

A number of such societies in North Wales should greatly assist in solving co-operative dairying problems, should decrease the labour of the farmer and his wife, and, working through a central sales agency, should greatly increase the income from butter-making without interfering with any other branch of the farming system.

Unfortunate experiences with cheese-making societies are apt to make the farmer somewhat loth to risk a second bite, but it is to be hoped that he will realise that such experiences are not due to any basal fault in the co-operative principle or even in co-operative organisation as applied to dairying. They are to be attributed rather to such factors as have been set out in this chapter and it is to be remembered that future co-operators will have the guidance of these unfortunate occurrences of the past.

CHAPTER V.

GENERAL CONCLUSIONS.

Perhaps few movements have been subjected to as much criticism—much of it of an unfair character—as the co-operative movement in agriculture. Some of this criticism can be easily understood, especially when it comes from quarters where interests have been challenged by the growth of the movement. Criticism of this character can be regarded as a distinct compliment to the achievement of co-operation, although it is often harmful when making capital of some cases of failure. Personal interest almost dictates that the cases of failure should be well advertised, undue advantage being taken of the fact that the knowledge of failure must become public property. Moreover it is not always realised that this form of business is still in its infancy.

Some criticism comes from unexpected quarters. Farmers themselves are often guilty of passing unfair judgment on their own organisations and their attitude cannot be easily understood. In some districts this attitude is largely excusable because co-operation has not brought the millenium prophesied in propaganda. But apart from this, farmers often disparage co-operation without realising that they themselves are largely responsible for its results—whatever they may be. It is irrational to expect any movement to flourish without harmony and the active support of those whom it is designed to assist. To an undue extent, co-operation has been regarded as an intrusion forced on farmers by propagandists seeking their own interests. In view of this it is perhaps surprising that the movement has flourished so well. In fairness to the farming class it must be recognised that the successful undertaking of new ventures necessitated a vital breach with custom and personal ties of long standing. Moreover a quarter of a century of experience in the control of business has been necessary to produce the "societal" outlook and enable principles of government to be worked out. In the requisite business these difficulties have been overcome to a large extent, although the necessity of offering adequate payment for good management has never been clearly or generally realised. But the experimental stage should now be over, and it is to be hoped that the near future will witness a more business-like attitude

on the part of the general body of members. In the collective sale of produce the position is rather different since a higher level of business understanding is required from members. It takes a long time to create the outlook which will appreciate the nature and necessity of a supply contract, the influence of quality on price, and the relations of local prices to those obtainable at central markets. It may even be argued that these demands of the average farmer are too exacting, but there is no doubt that inappreciation of such principles even among committee-men has been responsible for much loss in the past.

Moving from the personal aspects to business and economic factors, the experiments of the past focus attention on the salient features of successful co-operation. In the first place it is evident that co-operation cannot succeed unless societies are created to fulfil a conscious want and are capable of providing better service than existing machinery offers. This line of distinction largely accounts for the success of the requisite societies which is in marked contrast with the fate of produce societies. Ignoring differences in the business problems involved in the various enterprises, requisite societies have succeeded because they fulfilled a necessary function. They have given farmers some control of price in one aspect of the farm business, besides elevating the standard of goods, and changes in farming during the past 20 years have provided these societies with an ever-widening field of business.

Without discounting the value of legitimate efforts in the sale of produce, it must be admitted that the need of organisation, though present in theory, was less conscious in North Wales. From the opening of the present century to the beginning of the war, farming conditions were fairly easy, and prices tended to rise in the farmers' favour. Conditions were still more favourable for the next seven or eight years, and it is only during the last four years or so that organisation for the sale of produce is being widely discussed. Generally speaking, the need for organising in this direction has only recently become a conscious one.

The record of the dairy societies—where failure has been most notable—illustrates the necessity of basing effort on a permanent need. The dairy societies' bubble is an example of the many enterprises which were started during the war to meet exceptional conditions of a temporary character and were doomed to disappear when these conditions were altered. The ploughing orders offer a fitting comparison on the production side. Consequently it would be grossly unfair to view the

failure of the cheese societies as evidence of the impossibility of handling produce on co-operative lines. They were formed to assist in the national effort of wringing the utmost from the soil, and were inevitably affected by de-control and reversion to normal conditions. The survival of some societies does not invalidate this statement since their continued existence has been explained on other grounds.

It is true that ignoring business principles has been a common cause of failure among produce societies, but their history points to factors of even greater importance. The connection between production and marketing is intimate, and a marketing mechanism which ignores basic elements in the farming system cannot succeed. A selling system which demands important modifications in the organisation of production must almost inevitably be surrendered, however great its theoretical advantages, unless the new selling system is sufficiently successful and efficient to change or modify the system of production.

The cheese societies failed primarily because they robbed the farm of a milk by-product which was considered necessary for the production of store stock; and any form of organisation for handling milk in store-producing areas must bear this factor in mind. The inter-relation of production and marketing invites the question which is to be modified first, and the only answer to this is that better marketing must proceed hand in hand with better farming.

There is every indication that the economic environment is constantly becoming more favourable to the organisation of collective sale. The standards of quality and uniformity which are constantly being raised by foreign produce are necessitating joint action on the part of producers. To meet this competition the marketing of home produce must be controlled by some means, so that the market can be supplied with more produce which is uniform in quality. The movement towards better marketing will be undertaken by various agencies, but it is reasonable to expect that the co-operative movement will play its part.

Whatever are the activities which will be attempted by co-operation in the future, there is no doubt that conditions are developing which will demand the utmost efficiency of societies and understanding of their constituent members. The farmer, the farm and his market are continually related to each other and advance must be made all along the line if Sir Horace Plunkett's ideal of better farming, better business, better living, is to be realised.