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COOPERATIVE MARKETING OF AGRICULTURAL PRODUCE AND COOPERATIVE BUYING OF FARM SUPPLIES IN FINLAND

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IN ORDER to form an opinion of the general background of the cooperative movement in Finland, and of the cooperative marketing of agricultural produce and the cooperative buying of farm supplies in particular, a few details as to the geographic, economic, and social conditions of the country and its agriculture are necessary.

Finland formed part of the kingdom of Sweden from 1154 to 1809. From 1809 until 1917 it was an autonomous Grand Duchy connected with Russia. In 1917 Finland declared her independence, and in 1919 became a republic.

Finland is one of the most northerly civilized countries in the world, situated as she is between 60° and 70° north latitude. The summers are extremely hot while the winters are long and cold. The area of the country is 388,279 square kilometers or 150,005 square miles (the area of Great Britain is 89,047 square miles). On the average, 6.3 per cent of the land is under the plow. In southern Finland, approximately 10.8 per cent of the land is under the plow, while the figure for northern Finland is only 0.9 per cent. Of the total land area, 25.3 million hectares (62.5 million acres) or 73.4 per cent is covered by forests. Lakes occupy 11.5 per cent of the total area. The average temperature at Helsinki, the capital of the country, is +4.6°C, compared with an average temperature of +5.4°C in Montreal, and +3.6°C in Moscow. In the south of Finland the ground is covered by snow for about 100 days while in Lappland it is covered for about 210 days.

The population of Finland is 3.6 millions compared with 3.5 millions in Denmark and 2.8 millions in Norway. There are 18.1 persons per square kilometer in southern Finland, compared with 2.4 persons per square kilometer in northern Finland, and 10.4 persons per square kilometer for the country as a whole. The population is relatively homogeneous as to historical development, language, and religion. Eighty-nine per cent of the people speak Finnish, while 97 per cent are affiliated with the Lutheran Church.

Finland is typically rural. Eighty per cent of the population

lives in the country. There are 38 towns and cities, most of which have populations ranging from 1,000 to 10,000 persons. The capital, Helsinki (Helsingfors), has a population of about 221,000, and there are three other cities with populations of from 50,000 to 60,000 each. The country is divided into 502 rural parishes, most of which are from 50 to 400 square kilometers in area, although some of the parishes in the northern part of the country contain as high as 7,500 square kilometers. The majority of the parishes have populations of from 2,000 to 10,000, while some few have populations of 15,000 or more. The foregoing figures explain to a large extent why most of the cooperative societies are in rural areas, and why the majority of the members of the cooperative stores belong to the rural population.[1]

In the southern and western parts of Finland the rural population lives, for the most part, in villages, while in other parts of the country they live on separate homesteads. Both villages and homesteads are usually separated from each other by large areas of forests and lakes.

Serfdom has never existed in Finland. The peasantry, taught by the Lutheran bishops, were literate as early as the 16th and 17th centuries. Only 1.0 per cent of all persons over 15 years of age are illiterate at the present time. There are 4,670 higher, and 3,081 lower primary schools in the rural parishes. For the vocational education of the agricultural population there are 53 folk high schools, 45 agricultural and farmers schools, 39 animal husbandry schools, 4 dairy schools, 5 forestry schools, 6 horticultural schools, 41 home economics schools and 108 manual training schools. The three principal agricultural societies have a combined membership of about 125,000 members. However, there are tens of other agricultural societies, such as cattle breeding societies, cow testing societies, and so forth. The leading men in the cooperative societies are principally farmers, with some few teachers from the rural schools.

The agricultural population of Finland is a little over two millions. Of the total land area, 52 per cent is owned privately (by farmers), 40 per cent is owned by the state, 6 per cent is owned by joint stock companies, while the balance is owned by the communities.

[1] In 1927, 4,937 of the 5,397 cooperative societies in Finland, or 91 per cent, were in rural areas.

The arable area, comprising 2.2 million hectares, is divided into 250,000 farms. About one-third of the cultivated area is in small holdings of from 0.5 to 10 hectares. Seventy-eight per cent of all holdings contain from 0.5 to 10 hectares of arable land.

Fifty-nine per cent of the rural population was classified as tenants in 1901. However, a land reform was started in Finland in 1918 which, within the course of the next few years, will change the status of about 106,000 farmers from tenants to that of independent farm operators. At the end of 1928 about 102,000 independent holdings had been established.

The value of the crops produced on arable land, meadows, and pastures, amounted to 5.8 milliard marks in 1927, while the gross return from livestock and livestock products amounted to 6.7 milliard marks. About 50 per cent of the gross output of agriculture is produced on small holdings of from 0.5 to 10 hectares of arable land. Approximately 50 per cent of all domestic animals are to be found on this same class of holding.

The above facts explain why the cooperative movement in Finland is so essential to agricultural progress, and why it is almost wholly a movement of persons in small circumstances. It is chiefly a rural movement and is at present deep rooted in the economy of the Finnish people.

At the beginning of the present century most of the small holders still lived in very straitened circumstances, since at that time the technique of agricultural production was not highly developed, and furthermore, only a small part of the gross returns from the sale of agricultural products went to the producer. Farm supplies, sold by the country storekeepers, were relatively high in price, and frequently of low quality. In many cases the peasant farmers became indebted to the storekeepers, losing their economic freedom and sometimes their cattle and farms. The national economy of the country was strongly commercial in character, resulting largely from the great expansion and development of the lumber industry. Under such conditions there was a wide field for cooperative action.

THE COOPERATIVE MOVEMENT IN FINLAND

The growth of cooperation in Finland has been from the center outwards on a preconceived plan. Cooperation, with a clearly defined objective, began in 1899, when, on the initiative of Dr.

Hannes Gebhard, a special organisation, "The Pellervo-Society" was formed with the object of promoting cooperation in Finland.[2] In the spring of the same year about 150 students left Helsinki for the countryside to lecture about cooperation to the farmers. The agricultural population of Finland eagerly took up the cooperative idea and put it into practice in several branches of agriculture. Thanks to conditions which favored its acceptance as well as to the influence of well-planned extension, education, and successful organisation, agricultural cooperation in Finland has since spread rapidly all over the country, and has become a remarkable power for good, not only for agriculture, but also for the whole country's economic, social and cultural development.

The most important of the agricultural cooperative marketing organisations in Finland are the cooperative creameries and cheese factories, and the cooperative livestock-selling, egg-selling, timber-selling, sawmill, and flour mill societies. Besides these there are the cooperative marketing organisations for the selling of agricultural produce of minor importance. Further, there are societies for the cooperative buying of farm supplies and implements. It should be mentioned that the cooperative distributive societies are acting in an increasing degree as agents and buyers of agricultural produce, and in selling farm supplies. They are usually members of the central agricultural cooperative societies, and of the Pellervo-Society.

COOPERATION IN THE DAIRY INDUSTRY

Of the various organisations for marketing agricultural produce in Finland, the cooperative creameries and cheese factories with their central organisation, "Voinvientiosuusliike Valio," (The Central Cooperative Butter Export Association), are the most important. This is natural since dairying is the most important type of farming in Finland, and dairy products have long been exported. In 1927, the number of milch cows numbered 1,282,757, and the total milk production was 2.3 million tons.

At the end of the last century all of the butter and cheese made in Finland was manufactured in privately owned creameries or cheese factories, or on farms. The cooperative creamery movement began after the cooperative law went into effect, September 1, 1901. In 1902 there were 28 cooperative creameries, and within ten years the cooperatives practically controlled the dairy produce

[2] "Pallervo" means "the boy of arable land" in the old Finnish myths.

trade of the country. Eighty-three per cent of all the creameries in Finland were cooperatives in 1927, and 94 per cent of all the butter manufactured in that year was made in cooperative creameries, while 68 per cent of the output of cheese was manufactured in cooperative cheese factories. The number of cooperative creameries in Finland, together with the number of members and the volume of sales is shown in table 1, for certain years during the period 1903-1927.

Table 1. Number of Cooperative Creameries in Finland Together with the Number of Members and the Volume of Sales, 1903-1927

Year	*Number of cooperative creameries*	*Number of members*	*Sales (millions of marks*)*
1903	75	5,500	27
1910	328	34,800	224
1920	485	46,000	423
1925	602	61,200	756
1927	664	68,100	844

* £1 = 193 Finnish marks.
$1 = 39.70 Finnish marks.

As the figures indicate, progress has been steady. In 1927 there were 26 cheese factories while 49 of the creameries produced cheese in addition to butter, bringing the total number of dairy factories manufacturing cheese up to 75. The greater number of the creameries and cheese factories are located in southwestern Finland.

Of the membership for 1928, 38.2 per cent owned from one to three cows, 55.4 per cent owned from four to fifteen cows, while only 6.4 per cent of the members owned more than fifteen cows. The average was 6.1 cows per member. In 1927 there were 417,900 cows, the milk from which was handled by cooperative dairy factories. This represented the production of about 33 per cent of the total number of cows in Finland. In 1920, the milk production from only 25.5 per cent of the total number of cows in the country was handled through cooperative plants. It is evident that there is room for still further expansion of the cooperative dairy factory movement in Finland.

Receipts of milk and manufactures of butter and cheese by cooperative dairy factories in Finland are shown in table 2 for certain

years during the period 1903-1927. Of the total quantity of milk received, 80.2 per cent was used in the manufacture of butter, 4.6 per cent in the manufacture of cheese, while 15.2 per cent was sold. Most of the butter and cheese was exported, only a small quantity being sold in the home market. In 1927, 15,066 tons of butter and 2,949 tons of cheese were exported. The total value of dairy products exported in 1927 amounted to 704 million marks. Great Britain purchased the largest quantities of butter, while Germany purchased the greater part of the cheese exports. The operating expenses of the cooperative dairy factories per 100 kilograms of butter manufactured are shown in table 3 for the year 1927. Gross

Table 2. Milk Received and Manufactures of Butter and Cheese by Cooperative Dairy Factories in Finland, 1903-1927*

Year	*Milk received*		*Manufactures*	
	Millions of kilograms	*Kilograms per cow*	*Butter (millions of kilograms)*	*Cheese (millions of kilograms)*
1903	38.0	856	1.5	—
1910	267.0	1,100	10.9	—
1922	327.6	1,053	10.9	1.6
1927	596.0	1,464	19.8	2.2

* 1 kilogram = 2.2 pounds.

returns per 100 kilograms of butter were 3,120.40 marks in 1927. Expenses amounted to 11.2 per cent of gross returns.

The cooperative dairy factories are showing greater interest than ever before in the quality of their products. Special efforts have been made to raise the standard of the butter produced. Dairy machinery has been renewed and brought into first class condition; ever increasing stress has been placed on the training of workers; competitions have been held to stimulate enthusiasm, and a premium has been placed on quality. The result of these measures has been a certain improvement in the quality of the butter, but it was not until serious measures were adopted to improve the quality of the milk used that permanent improvement was assured. The most effective of the means used to improve the quality of the milk was the introduction of the system of payment by quality, originated by the Danish professor, Orla Jensen.

Table 3. Operating Expenses of Cooperative Dairy Factories in Finland per 100 Kilograms of Butter Manufactured, 1927

Expense item	*Expense per 100 kilograms of butter manufactured (pennia*)*	*Per cent total*
Transport of milk and cream	7,914	22.0
Freight on butter	3,303	9.2
Rents, interest, insurance	3,759	10.5
Wages	8,732	24.3
Fuel	3,761	10.5
Packing materials	4,301	12.0
Ice	358	1.0
Salt, color, acid, chemicals, etc.	631	1.7
Cleaning materials	346	1.0
Office expenses	402	1.1
Sundry	2,218	6.1
Total	35,951	100.0
Expenses exclusive of freight and interest	20,975	58.3

* 1 penni = $ 1/100 mark

Under this system of payment the amount which the producer receives for his milk depends not only on the fat content, but also on the quality of the milk. Formerly, only from 40 to 50 per cent of the milk was first class, while investigations made during the period 1924-26 showed that 90.7 per cent of the milk used by the cooperative dairy factories was of good quality, while only 9.3 per cent was poor. During the same period, 95 per cent of the butter exported was of first class quality. As the quality of the milk received by the dairy factories has improved, the quality of the butter manufactured has improved. Almost all of the export butter is of high quality, whereas formerly, exports included an appreciable quantity of second grade butter. Another factor which makes for better quality is the increasing use of pure cultures of bacteria for turning cream. These cultures are now procured for the dairy factories by the Butter Export Association Valio.[3]

Valio was founded in 1905 by the Finnish cooperative dairies for the purpose of keeping butter sales, and the advantages arising from the control of such sales, in their own hands. Only 17 dairy factories originally joined the organisation, although there were about two hundred cooperative dairies and at least five hundred parish dairies in the country. The organisation grew

[3] "Valio" means elite.

Table 4. Number of Member Societies and Volume of Business of the Valio Butter Export Association, 1906-1927

Year	*Number of member societies*	*Received from member societies*		
		Butter (50.8 kilogram casks)	*Cheese (kilograms)*	*Milk and cream (litres)*
1906	80	56,595	—	—
1910	157	94,384	13,985	—
1915	251	160,698	352,163	—
1920	295	88,874	822,400	17,125,115
1925	401	245,641	2,329,281	40,544,881
1927	462	305,986	1,713,511	51,530,973

rapidly, however, as is shown in table 4. In 1927 the total volume of sales amounted to 656.8 million marks.

Valio has practically obtained a monopoly of the export butter market of Finland. It is also the largest firm in the domestic market. It controls well over 90 per cent of the butter export trade of Finland, a very remarkable achievement indeed, when it is considered that it controlled only 40.5 per cent of the butter export trade in 1910. Among others, Valio has its own sales office in Hull, and an agency in Glascow. It has six offices in Finland, four of which are in the largest cities in the country. They have their own manufacturing and distributing plants, and their own cold storage facilities.

In addition to carrying out its chief task, namely, the pooling and selling of butter, cheese, and milk, Valio has accomplished valuable results in raising the standard of quality of these products as well as in increasing the output. Valio employs twelve advisers in its technical department who collect statistics relative to the operations of the dairy factories, and who compile yearly records for the various establishments; take charge of the extension work; assist in projecting new factories, and so forth. Valio has energetically gone about the work of improving the cheese industry. It established an experimental cheese factory and provided training for cheesemakers. In all of the Finnish dairy leagues, 13 in number, Valio placed its own paid adviser to do extension work in modern buttermaking methods and to work for improvement in the quality of the milk brought to the creameries. To guide the extension work of these advisers, or specialists, an Extension De-

partment was established. There is a laboratory comprising both a chemical and bacteriological section. The extension work embraces the nutrition of cows and planning and taking care of cultivated pastures. The Valio publishes the periodicals, "Karjantuote" (Cattle Produce) and "Karjatalous" (Cattle Farming). In 1928, 3.2 million marks were used for cooperative educational work and an additional 0.5 million marks were granted for general purposes.

The Swedish districts of the province of Ostrobothnia have founded a separate cooperative butter export association "Centralandelslaget Enigheten" (Central Cooperative Association Unity). Its membership in 1927 consisted of 22 cooperative dairy factories. Its turnover was 42 million marks, and it exported six per cent of the total butter exports of Finland.

COOPERATIVE LIVESTOCK MARKETING

Up until 1909 the livestock trade was entirely in the hands of private butchers and dealers in livestock. It was not until that year that the first livestock cooperative societies were organised. The increased demand for beef for the Russian troops in Finland during the early part of the World War gave an impetus to the formation of these societies. During the period 1914-17, several of them were started, some of which developed into large concerns. They owned several slaughter houses and one of them even built a modern establishment for the manufacture of bacon.

In 1927 there were ten cooperative livestock societies in existence with a total membership of 6,900. Sales during that year totaled 5.5 million kilograms, valued at 110 million marks. Eight of the societies had retail shops. Eight of them had their own slaughter houses, and each had its own sausage factory. Some of them even had their own farms and swine houses.

In 1918 the livestock cooperative societies founded their own central organisation, "The Finnish Livestock Central Cooperative Association." In 1927 this organisation had 28 members, of which 12 were local cooperative livestock societies, 14 were dairy factories, and two were stores. The central organisation has three wholesale centers, three sausage factories, and 25 sausage, provision and butchers' shops of the most modern type in the country. The central association has done a certain amount of foreign trade in the produce of its affiliated members. Meat is sold at prices

prevailing in the open market. In 1927, 4.6 million kilograms of meat were sold, valued at 77.8 million marks.

The success of the livestock societies with their central organisation may be measured by the fact that meat exports from Finland during the past few years have been considerably larger than imports, while formerly, imports exceeded exports. The domestic market for meat is steadier than heretofore. Furthermore with the central organisation dealing directly with the farmers, the costs of distribution are relatively low. The central organisation is using modern machinery and modern methods in converting meat, so that consumers are assured of a high quality product. There is still, however, considerable scope for the expansion of the livestock industry in Finland, particularly the production of store cattle and pigs.

COOPERATIVE EGG MARKETING

Among the youngest of our agricultural cooperative societies are the egg marketing societies. The unusual conditions arising out of the late war also gave an impetus to the organisation of these societies. When the importation of eggs ceased, egg prices rose to a point where egg production became very profitable. The sale of eggs became an important source of income. The greater number of the egg marketing cooperatives were organised during the period 1919-22. There are 141 such societies at present with a membership of 4,000, and sales of 13 million marks. In 1921 the local societies organised a central concern known as "The Central Cooperative Egg Export Association Muna".[4] Besides its marketing activities the central cooperative distributes general information relative to the poultry industry, and furthers, as far as possible, the organisation of local cooperative egg marketing societies.

COOPERATIVE PURCHASING

Among the central cooperatives might be mentioned the Hankkija or Cooperative Agricultural Supply Society, founded in 1905.[5] It sells agricultural and dairy supplies, machinery for dairies, sawmills and flour mills, as well as electrical equipment. It also sells agricultural products. The Hankkija has a large experiment station and research laboratories for the production of improved seed.

[4] "Muna" means egg.
[5] "Hankkija" means purveyor or supplier.

The membership is made up for the most part of cooperative stores, dairy factories, and rural banks. The membership in 1927 was 1,002, and sales amounted to 691 million marks. The sales of agricultural supplies of 261 cooperative stores which were members of the Hankkija amounted to 241 million marks. The sales of agricultural produce by the same stores amounted to 109 million marks or total sales of agricultural commodities of 350 million marks. This represented 26.6 per cent of the total sales.

COOPERATIVE MARKETING OF FOREST PRODUCTS

Finland with her abundant farm forests, provides a good opportunity for the development of timber-selling cooperative societies. It is only recently, however, that such societies have been organised as the lack of sufficient capital proves a serious handicap. The small societies which were formed, found it difficult to obtain a satisfactory price for their products since they could not afford to buy modern machinery of the best type, and in any case they found themselves completely in the hands of the agents through whom they sold their products. In order to get around these difficulties, the Central Organisation of Cooperative Forest Societies was founded in 1921. In 1927 there were 10 member societies with a combined membership of 4,000. Sales totaled 32,000 standards valued at 90 million marks. The products of the member societies are marketed by the central organisation which owns lumber yards in the more important timber export harbours of Finland.

CONCLUSION

The general information given above concerning the agricultural cooperative marketing organisations of Finland shows that these organisations have gained a firm foothold in the marketing of agricultural produce and supplies. The cooperative movement is scarcely thirty years old, yet it has completely revolutionized the whole agricultural marketing system of Finland. Within two decades the necessary organisation has been created, working methods have been developed which are suited to the conditions peculiar to the country, and the professional skill, moral standards, and national well-being of the agricultural population have been greatly advanced.