
Kyoto University
Economic Review

MEMOIRS OF
THE DEPARTMENT OF ECONOMICS
IN
THE IMPERIAL UNIVERSITY OF KYOTO

VOLUME X
1935

PUBLISHED BY THE DEPARTMENT
OF ECONOMICS IN
THE IMPERIAL UNIVERSITY OF KYOTO

CO-OPERATION IN THE PRODUCTIVE PROCESS OF AGRICULTURE

I

The efforts to eliminate by co-operative economic action the economic defects with which small farmers in this country are burdened find expression in co-operative movements of various kinds. This co-operation among small farmers has hitherto more commonly appeared in the circulation process, such as the sale of agricultural products, the purchase of agricultural implements and daily necessities, and farm financing, than in the primary productive process of agriculture.

How is it, then, that co-operation in the primary agricultural productive process is difficult and its development slow? To answer this question, it is necessary to make a genetic study of agricultural co-operative societies, in the first place, and then to study the whole problem in the light of the essential character of agriculture.

Let me discuss the first-mentioned point, to start with. The capitalistic system freed small farmers from the feudal yoke and enabled them to secure emancipation as independent individuals. In the feudal society, a village formed a sort of personal unit, and taxes were imposed on it as a whole. Thus, the inhabitants of a village assumed joint and unlimited responsibility for these taxes. This joint responsibility for the payment of taxes, coupled with the system of *goningumi* (a combination of five or ten farm-families for mutual help under the feudal system), which administrative expediency brought into being, caused all phases of the economic life of farmers assume the character of joint liability. Take the instance of agricultural production. It was then the concern

of the inhabitants of a certain specified district to see that each lot of farm land in their locality was properly cultivated, and the neglect of the cultivation of any piece of arable land by a villager for his own personal reasons had to be prevented by the whole village. In other words, although individual farmers were nominally left to cultivate their own fields, their cultivation was, as a matter of fact, forced on them by an irresistible power in the background, namely, the village which represented the collective will of the members of the community. Joint responsibility and mutual aid among the villages in the feudal days were, in many cases, necessitated by such a circumstance.

As capitalism developed, however, the feudal relationship of joint responsibility among the farmers ceased to exist, and all individuals gained freedom. It was, indeed, inevitable that as the traditional basis of farm life became unworkable and individualism developed, the feudal and conventional mutual aid should suffer a decline. On the other hand, the emancipation of small farmers, whose economic position was necessarily weak, did not prove of unqualified benefit to them, for not all of them could accommodate themselves successfully to the new age. For instance, the revision of the taxation system in the early years of Meiji brought about a situation in which farmers were exposed to the menace of fluctuations in the prices of agricultural products, for under the revised system they had to pay in cash the taxes and public imposts which they had formerly paid in kind, a circumstance which compelled farmers to put their produce on the market more and more. Again, the separation from agriculture itself of the business of working up agricultural products wrought havoc with the self-sufficiency economies that had previously ruled. Although farmers were now able to obtain cheap and convenient industrial goods, they were obliged to give great attention to the sale of their products in order to get the money necessary for the purchase of such industrial goods. Thus, farmers were brought into contact with commerce and industry through

the sale of their products and the purchase of agricultural implements and daily necessities. It is, however, impossible for isolated individual farmers to deal favourably with large-scale commerce and industry both of which are being steadily modernised. As individual farmers are gradually awakened to the advantages of co-operative purchases and sales, co-operative movements arise. Whereas the idea of co-operation in old days had no existence in the consciousness of farmers, their co-operation to-day embodies the voluntary will of socially awakened farmers. The full development of the individuality of all persons is, indeed, the first requisite for the development of the present-day co-operative movement. As agriculture advances, the provision of financial facilities become necessary for the improvement of arable land, the purchase of machines, live-stock and fertilisers, and the sale of farm products. This need cannot, however, be adequately met either by usurer-capitalists or by the present-day banking organs designed for commercial and industrial purposes. Thus, co-operative credit societies come into being, through which the farmers' money, which otherwise goes out into urban districts, can be retained in their villages for the utilisation of the farmers themselves. In this case also, their combination is rendered possible by the well-developed individuality of farmers.

Since the mentality of farmers is characteristically conservative and retrogressive, it is rare that the farmers themselves take the initiative in combining and co-operating. In order to induce them to co-operate, either a strong impetus must be given or pressure exerted upon them from outside. As they come to take their place in the field of the production of merchandise, they find themselves subject to a series of oppressions in the circulation process, such as credit, sales and purchases. Their contact with merchants, industrialists and bankers, who had entered the profit-making arena before them, results in a gradual awakening, which sets them on the road to co-operation. Thus, the co-operative movement of farmers first arises in the circulation process,

in which they come into greater contact with the outside world than in the primary productive process of agriculture which has no direct contact with outside.

Secondly, the difficulty attending the organisation of farmers on co-operative lines in the primary productive process of agriculture is, in part, due to the characteristics inherent in agricultural production. In the first place, in organic production like agriculture, there is no large-scale management to exert such dominant influence as is exercised by big enterprises in the field of industrial production. Accordingly, small farmers feel no pressure from large-scale management, with the natural result that there is a lack of outside pressure such as is necessary for inducing small farmers to embark on co-operative production. In the second place, whereas in the intensive cultivation of small farms, the closest care is required on the part of those who have charge of management, the sense of responsibility is apt to be somewhat lacking in co-operative management, and consequently good results do not always attend such form of management. Thirdly, there is much difficulty in the matter of the division of profits among those who have contributed land, capital or personal services. Fourthly, in co-operative undertakings, management and family finance, which are closely associated among small farmers, get separated, and the livelihood of the affiliated farmers is rendered less secure. For these reasons, co-operation in the productive process of agriculture is considered difficult. This phase of the problem will be dwelt with more fully later on.

But in agricultural production, co-operation is actually going on in the field of working up agricultural products. Even in the primary productive process of agriculture, it is going on in the form of the joint utilisation of machines and in sectional co-operative work. In this short article, I propose to study the extent of co-operation in these matters and how such co-operation is organised, and then to discuss the relations between this organised co-operation and *sangyō kumiai* (farmers' co-operative societies which are incorporated),

lastly explaining the supreme difficulties besetting co-operation which covers the entire productive process of agriculture.

II

Co-operation in the productive process of agriculture first manifests itself in the field of working up agricultural products. Why is this the case? In the days of self-sufficiency economies, when urban districts were still undeveloped and the exchange economy was unknown, agriculture also embraced various phases of the business of working up agricultural products, and farmers were engaged, either as night work or as occupation in their slack seasons, in a variety of businesses belonging properly to the industrial section. As urban industry developed, however, the more profitable of such businesses gradually passed from farmers into the hands of urban people. This led to surplus labour in the agricultural districts — in the winter season especially. How to put this surplus labour to profitable uses is a very important problem confronting the farmers. The industrialisation of agricultural districts is now urged by capitalists who desire to lower the cost of production by mobilising this surplus labour by transferring to it some part of urban industry. The farmers, equally desirous of utilising their surplus labour, are also urging the industrialisation of the business of working up primary products. In the present article, I shall study the process by which the business of working up agricultural products is put on co-operative lines in Japanese agrarian communities.

As already mentioned, farmers are naturally of a conservative turn of mind, and a strong stimulus or pressure from outside is necessary to induce them to act co-operatively. This is equally true in regard to their co-operation in the business of working up agricultural products.

(1) Surplus labour in agrarian communities resulting from the separation of manufacturing industries from agriculture, acts, as already mentioned, as pressure in stimulating

co-operation in the business of working up agricultural products. The necessity of farmers engaging in such business has become more urgent in recent years for the reason that the rural population has steadily increased since the general business depression set in; for not only has the customary outflow of the farming population into urban districts been checked, but many who have lost their work in urban districts have returned to their former agricultural pursuits. As it is disadvantageous for this business to be conducted by small farmers individually, both in respect of the purchase of the necessary machines and in regard to the sale of the manufactured goods, there grows a tendency among the farmers concerned to co-operate.

(2) The necessity of farmers selling their produce profitably stimulates the co-operative marketing of agricultural products. And it is often found more profitable to sell farm products properly worked up than to sell them in their crude form, for it increases their value as merchandise and strengthens the position of farmers as sellers. For instance, it is more profitable to sell cocoons properly dried than to sell them in their original state. As another instance, the sale of tinned fruit and vegetables may be mentioned as bringing bigger profits to farmers than does selling the fruit and vegetables as they come from the orchards and the fields. As it is obviously beyond the power of small individual farmers to provide the necessary canning equipment, their co-operation results as a matter of course.

(3) When the industry of working up farm products is detached from agriculture and is undertaken by big capitalist interests, farmers who produce raw materials are often put in a disadvantageous position in their dealings with the buyers of their produce. There are cases where the co-operation of farmers in the business of working up their products is induced for the purpose of securing reasonable prices for agricultural raw materials by restraining capitalistic power. The establishment of filatures by farmers' co-operative societies was prompted by the above-

mentioned motive of improving the position of producers in their relations with the regular filatures. The co-operation of Hokkaido farmers in the creamery business also had its origin in the desire to protect the interests of farmers from the inconsiderate attitude of condensed milk companies. To cite still another instance, the object of the wheat five-year plan, which aimed at the increase of the wheat output by 9,000,000 koku, was attained in the second year of the programme, viz., this year, but owing to the fact that big Japanese flour manufacturing companies — the purchasers — are suspending purchases under an agreement concluded among themselves, a rise in price is considered hopeless. This situation is stimulating co-operative milling among the farmers concerned as a means of restraining big flour manufacturing companies from their present tactics. The co-operation of small farmers in the manufacture of tea was brought about for the purpose of reducing the cost of production by economising the cost of hired labour in competition with big farmers who can afford to buy and make use of tea-manufacturing machines.

(4) As another factor tending to stimulate the co-operative working up of agricultural products may be mentioned the perishability and the limited transportability of farm produce as industrial raw materials. Although the development of the means of transport made it possible for a market to draw its supplies of farm produce from more extensive areas than formerly, there are certain limits to this extension of areas — limits which are set both by the perishability of farm products and by freights. Farmers in the districts far removed from the market are, therefore, compelled to supply their products after they have been adequately worked up. The manufacture of milk into butter and cheese and the supply of fruit, tinned instead of raw, are necessitated by the perishability of farm produce, while the work undertaken by farmers of extracting alcohol from potatoes and of making sugar out of beet is prompted by the desire of increasing the transportability of the produce

by removing heavy substances from crude products. The co-operation of small farmers in the line of working up products is stimulated by such circumstances.

(5) So far I have considered the co-operative tendency observable chiefly in the field of working up farm products. I would now endeavour to show that the necessity of producing articles of standardized quality so as to meet the requirements of the market, and also the need of fixing the marketing season for the farmers' produce so that it may be put on the market when it is in actual demand, tend to induce co-operation in the preparatory process of production. The co-operative raising of young silk worms and the cultivation of common mulberry fields for such worms, now being carried on by sericulturists' societies, are cases in point. The object in the former case is to economise labour and heating expense, which will be greater if they are used to raise young silk-worms individually, since each individual sericulturist would raise only a limited number of silk-worms. In the latter case, co-operation aims at obtaining supplies of mulberry leaves of uniform and superior quality upon which to feed young silk-worms. Again, the co-operative seedling beds, widely operated by farm cultivators' societies throughout the country, have for their final object the harvesting of crops of unified quality. In order to ensure the marketing of products during a certain fixed season, the unification of the sowing season is called for also. In the preparatory stage of production, moreover, co-operation is witnessed in the pulverising and the mixing of fertilisers.

I have so far considered how co-operation has been brought about in the business of working up agricultural products and in the preparatory stages of production. The reason for the comparative ease with which co-operation is effected in these phases of agriculture is to be found in the fact that it does not affect the main part of agricultural production and therefore does not impair the independence of individual farmers, with the result that quite unlike the

case of the co-operative mechanisation of farm cultivation and the collective system of farming, to which reference will be made later on, it does not involve the private ownership of farm land in any way. Besides, as all Japanese farmers operate their farms on a small scale, they cannot hope to make gains except through their co-operative efforts. Nor is this all. As Japanese farmers form villages in order to live gregariously, co-operative working societies can be very conveniently established for the utilisation of surplus labour. The ampler supply of electric power now obtainable as agricultural motive power has, furthermore laid the technical basis for the mechanisation of the methods of working up agricultural products.

The following table shows the various kinds of co-operative working societies which were being operated at the end of May, 1931:—

Table I.

Agricultural co-operative working societies

Founders	For improving and working up cereals	For pulverising and mixing fertilisers	For working up and disposing of horticultural products	For manufacturing tea	For working up straw	For improving and working up agricultural products for special use
Cities, towns or villages	93	46	2	76	8	1
<i>Sangyō kumiai</i>	814	468	65	56	42	26
Agricultural societies	284	117	33	10	26	32
<i>Mōshi-awase kumiai</i>	5,825	276	335	535	352	208
Others	824	58	47	154	164	49
Total	7,840	965	482	831	592	326

From the above table it will be seen that the business of working up agricultural products is operated more by *mōshiawase kumiai* (co-operative societies which are not incorporated) than by *sangyō kumiai* (farmers' co-operative societies which are incorporated). *Mōshiawase kumiai* are what are commonly called small agricultural societies, which are formed with individual hamlets as units. Their organisation is simple. They are co-operative societies of small farmers, not affiliated to *sangyō kumiai*.

III

I have thus far discussed co-operation in the business of working up agricultural products and in the processes of preparation for production, and I must now proceed to consider the co-operative utilisation of machinery in agricultural production.

Needless to say, in co-operative workshops where agricultural products are worked up or refined, motor-driven machines are being more extensively used. They are in rather wider use there to-day than in the primary processes of production. The mechanisation of agriculture does not, however, necessarily take the form of the co-operative utilisation of machinery. For in a country like America, where farming is on a large scale, individual farmers can afford big machines. In a country like Japan, however, where farming is on a small scale, the co-operative utilisation of machines comes about partly because individual farmers are too poor to purchase them and partly because the materials produced by individual farmers are not of sufficient quantity for motor machines to be employed economically for working them up.

The distribution of machines for working up or finishing agricultural products is shown in the following table:—

Table II.

The distribution of working-up and refining machines

	In May, 1931	In November, 1933
Threshing machines	55,954	67,688
Hulling machines	76,744	95,330
Barley and wheat threshers	11,893	12,173
Rice-cleaning machines	35,970	41,067
Barley-cleaning machines	9,812	12,640
Milling machines	5,855	7,265
Vermicelli-making machines	744	7,724
Machines for working up straw	27,450	47,508
Machines for making fertilisers	5,795	6,682

These advanced agricultural machines are generally of small types, and the motors used are only of two or three horse-power.

Then why are small machines used generally in Japanese agriculture? There are two main reasons. One is that in Japan the tendency is marked for the need for agricultural implements to arise at one time, and the other reason is that Japanese agricultural management is on a small scale. For instance, with regard to threshing operations, although, technically speaking, it may appear that sufficient time is allowed for finishing these operations, the fact that farmers have to make over to their landlords by the year-end part of their produce as farm rent, and to sell the remainder quickly in order to get the money with which to pay their taxes and bills, greatly restricts the period in which agricultural implements are made use of. And as to the machinery utilisation societies, the more their membership expands, the more difficult do they find it to enable their members to use machines at the most opportune moment. Such being the case, better facilities for the co-operative utilisation of agricultural machines are afforded by the *mōshiawase kumiai*, consisting of several or a dozen farm families, which provide small machines for their members,

than by the utilisation societies formed on the lines of *sangyō kumiai* boasting a membership of a few hundred or more, though such societies are, of course, able to provide bigger and more efficient machines.

In the primary productive processes of agriculture, vortical or vertical motor pumps are quite widely utilised for irrigation and draining purposes¹⁾. Co-operative utilisation in this field, as in the case of co-operation in the working-up and refining processes, meets with few obstacles connected with farm management. There is, however, very limited utilisation of mechanical ploughs or tractors²⁾. The reasons for this may be sought in the natural circumstances peculiar to Japanese agriculture, as, for instance, the difficulty of the mechanisation of labour in paddy fields and the remarkable extent to which mountain-sides are cultivated. As another contributory cause may be mentioned the fact that in addition to agriculture in this country being organised on a small scale, the fields belonging to one farm family are often far apart, instead of being concentrated in any particular area.

In a country like America, where arable areas can be easily extended, a situation even develops in which agricultural machinery conditions the scale of farming. For although such new agricultural machines as are suited to the scale of farming actually existing may be at first adopted, it gradually become obvious, as the productive power of agricultural machinery is more and more demonstrated, that it is more economical to extend agricultural areas so as to be able to make the most effective use of the most efficient machines than to purchase such machines as are fit for the scale on which agricultural operations are actually being carried on. On the other hand, in a country

1) At the end of November, 1933, 16,677 vortical and 16,023 vertical pumps were in use.

2) At the end of November, 1933, only twelve cable-style ploughing machines and 120 tractors were in use.

like Japan, where the agricultural districts are so over-populated that the arable area per farm family is very limited, with no prospect of its extension, the efficient utilisation of machinery cannot be hoped for, unless the collective system of farming is introduced in place of the present practice of cultivating small and separated lots of land by individual farmers. As to the possibility of the successful operation of the collective system of farming in Japan, I shall have occasion to discuss that question later. At any rate, it is by no means easy to form collective farms by bringing together scattered fields. Nor has any attempt been made so far to prepare the ground for such a development. In the work of adjusting arable land hitherto undertaken in this country, attention has been directed exclusively towards bringing together fields owned by each landlord, the necessity of bringing together the fields cultivated by one and the same farm family being neglected. Especially where the cultivator is a tenant farmer, little attention has been paid to the question of promoting the technical advantages of management, since under the existing circumstances the permanence of leasehold (right of cultivation) is not guaranteed to tenant farmers. So long as such a state of things persists, the co-operative mechanisation of farm fields involves almost insufferable difficulties.

Co-operation in the working up or refining agricultural products, such as has already been mentioned, partakes largely of the nature of an attempt to recover from urban industry such manufacturing businesses as were formerly covered by primitive agriculture. It may be regarded as an effort to put surplus labour in agrarian districts to profitable uses. On the other hand, the co-operative mechanisation of agricultural fields rather tends to save farm labour, and is calculated to accentuate the over-supply of such labour. In all other countries, the mechanisation of agriculture followed the absorption of farm labour by prosperous urban industry, which caused a shortage of labour in agrarian districts. It was induced both by this labour shortage and by higher

wages, occasioned by a rise in urban wages. This order is reversed in Japan where the agrarian districts are overpopulated. I have already stated that pressure from outside is necessary to stimulate co-operative action among the farmers, but in the existing state of things in Japan, there is little outside pressure to stimulate the co-operative mechanisation of agricultural production.

The difficulty of mechanising labour in agriculture operated on a small scale and depending largely on family labour, as in Japan, arises from the fact that mechanisation renders vital labour power useless. This difficulty is bound to remain, unless new fields are available for a more profitable use of the labour displaced by machinery. In this respect, agriculture makes a singular contrast with capitalistic enterprise in which there is a clear division between management and labour. Especially in Japanese agricultural districts where there is an over-supply of labour, co-operation in the productive process, which operates to reduce the labour required, is rendered the more difficult because there is now a decline in the capacity of urban industry to absorb labour in consequence of business depression.

IV

I have already described how co-operation in the productive process of agriculture has gradually been brought about in the section devoted to the working up of agricultural products by the necessity of utilising surplus farm labour and also in the preparatory work of production by the need of standardising the grades and quality of farm produce. Co-operation has also been gradually stimulated in the primary productive process of agriculture. For instance, co-operation is witnessed in the operation of common rice-beds and in the co-operative transplanting of rice, and the co-operation in these matters is prompted partly by the desire to meet a shortage of family labour in the farming season and partly by the wish to save wages which farmers

would otherwise have to pay for hired labour. This co-operation, together with the co-operation in the business of working up agricultural products and in the preparations for production, such as has already been described, comprises the co-operative work in the productive process of agriculture or what is commonly called sectional co-operative management.

Now, I shall consider the more advanced form of co-operation covering the entire productive process of agriculture, which is known as the peasant societies for the collective system of farming, the co-operative farming societies or the comprehensive co-operative farming societies. In co-operative management of this kind, all component farm families pool their land, capital or labour, or transfer their land and capital to a society for collective cultivation, the profits accruing being divided among the members of the society in proportion to the amounts of productive factors they have contributed. Under perfect collective management, therefore, the productive economy of agricultural management becomes divorced from the affiliated individual farm families and forms an independent body of management in the shape of a corporation, in which they are merged, leaving only the consumptive economy of family finance with individual farm families. That is to say, societies for the collective system of farming sever the bond between management and family finance, the inseparable union of which is a prominent feature in small farmers. In this respect, the society for the collective system of farming differs from co-operation in the forms already mentioned, in which the component farm families, while maintaining their status as independent bodies of management, enhance their efficiency through co-operation.

Setting apart a few earlier cases, this society for the collective system of farming in this country dates from the grant of Government subsidies and the encouragement given by agricultural societies in 1923 or 1924. The main motive was to save labour through the utilisation of agricultural

machinery. The urban industry which attained remarkable prosperity, stimulated by the war-time boom, absorbed many country people. This caused not only a temporary shortage of farm labour but forced up wages for hired farm labour. In such circumstances, it was conceived that labour should be saved by the use of agricultural machinery under societies for the collective system of farming. There were also cases where the collective system of farming was initiated as a sort of buffer to weaken the force of farm tenancy disputes. Through this system, it was intended to improve the relations between landowners and tenant farmers, and to ensure the establishment of proper terms of farm tenancy.

Note: How many peasant societies for the collective system of farming of this kind there are in this country at present is not clearly known, but in a report compiled by the *Kyochokai* (Capital and Labour Harmony Society) the number is given as twenty-four, while the report of the Imperial Agricultural Society mentions fourteen societies. In a similar report compiled by the agricultural society of Aichi prefecture, it is mentioned that there are nine of them in that prefecture. The latest inquiry made by the Department of Agriculture and Forestry shows that there are fifteen of such societies. Judging from the figures so far published, the number is still small, and it may fairly be said that the collective system of farming is still in the experimented stage.

As to the merits of the collective system of farming, it may be mentioned that (1) by the most advantageous employment of labour (with due regard to the skill, intelligence, age and sex of labourers), and through mutual stimulation to greater efforts between members, labour efficiency can be enhanced. Again, in doing farm work by machinery instead of by manual family labour, the productive power of labour can be increased, with a resultant economy of labour. Particularly noteworthy is it that the seasonal shortage of labour can be made good by the collective system of farming. That is to say, the shortage of labour in the busy farming season of May and June can be alleviated. Moreover, hired labour can be eliminated through the regulation of the supply of family labour from the affiliated farmers. (2) If a collective farm is created under this society, foot-

paths between rice-fields can be somewhat reduced in number, with a corresponding increase in the acreage of arable land, which leads to increased revenue.

Technically speaking, the society for collective farming has many advantages, but technical advantages do not necessarily mean economic advantages. Economic advantages will attend it only in districts where arable land is comparatively extensive and sufficient farm labour is not obtainable, or where the labour saved by collective farming can be put to profitable uses.

Next, in order to ensure collective farming, management must be organised on a large scale by bringing together the arable fields of member families. This concentration process involves the exchange and the division or annexation of fields, but under present conditions, where owners of arable land and cultivators are separate entities and the right of cultivation is not yet established, it is beset with supreme difficulties. As I have already stated, the adjustment of arable land in the past has not necessarily been performed with such objectives in view. Although labour efficiency can be enhanced by the mechanisation of farming under collective farming, the present state of surplus labour, as has already been explained, renders collective farming difficult.

The conclusion is inevitable that the stimulus to collective farming is weakening, because in consequence of the decline in the capacity of urban districts to absorb people from rural districts due to business depression, there is surplus labour in agrarian communities generally. Furthermore, various obstacles arise in regard to the internal organisation of collective farming to impede its development. The chief obstacles are as follows:—

- (1) In Japanese agriculture, which is generally managed on a small scale, goods for family consumption are produced as well as those for marketing. The result is that productive economy and consumptive economy, that is to say, management and family finance, remain inseparably united,

Under collective farming, however, these two things become necessarily separated. Where collective farming, pure and simple, prevails, therefore, vegetables even for farmers' own use are planted collectively, and the produce is distributed among the member families, due entry being made in the account-book each time such distribution is made. This occasions great inconvenience to the member families. In order to obviate such trouble, it is considered necessary for each member family to have some land left for its own private cultivation. This necessity prevents perfect collective farming being realised.

(2) Whereas, under collective farming, pure and simple, there is the advantage of ensuring the most efficient employment of labour, the way is blocked for the utilisation of the labour of old people and children or such family labour as may be available in the leisure hours of regular farm workers. If labour of this kind were to be made use of, it would involve troublesome forms of supervision and accountancy — so troublesome, indeed, that the attempt would be practically impossible. The farm family has many fragmentary pieces of work which can be done by old people and children, as, for instance, the taking of a cow or a horse to and from a meadow by a child on his way to and from school, and the work of weeding a vegetable garden, which can be done by an old person. In order that family labour may be utilised to the full, therefore, it is necessary for part of farm work to be left to individual management. It is even said that it furnishes a sort of safety-valve for ensuring the maintenance of collective farming.

Of the eleven societies mentioned in the following table, the one at Higashi Mikkaichi, in Ishikawa prefecture, affords the only instance of perfect collective farming. All the rest leave a residue of land for individual management. It is for the reasons given in (1) and (2) that truck farms to a greater extent than paddy fields are reserved for individual management. In the case of some of these societies, the acreage under individual management is more extensive than that

Table III.

Peasant societies for the collective system of farming

Name of society	Name of prefecture	Under collective management		Under individual management		Remarks
		Truck farms	Paddy fields	Truck farms	Paddy fields	
Daiichi Nōji Jikkō Kumiai	Fuku-shima	12.8 <i>tan</i>	—	—	25.8 <i>tan</i>	Established in 1921
Akagi Nōji Kyōdō Keiei Kumiai	Gumma	—	60.0 <i>tan</i>	—	55.8	Established in 1924 Joint settlement on newly-reclaimed land
Onoderamura Nōgyō Kyōdō Keiei Kumiai	Tochigi	84.2	24.0	177.0 <i>tan</i>	76.1	Established in 1923
Angenji Kyōdō Keiei Kumiai	Nagano	136.3	2.8	—	240.5	Established in 1924
Higashi Mikkaichi Nōji Jikkō Kumiai	Ishikawa	228.1	—	—	—	Established in 1918 (already dissolved)
Kune Kyōeki Kumiai	Shidzuoka	50.0	—	—	—	Established in 1914 (There is 5.4 <i>tan</i> of land for cultivation on contract, besides)
Suwahara Shinden Kyōeki Kumiai	Aichi	140.0	2.5	41.1	47.9	Established in 1923
Nakamura Nōgyō Kyōdō Keiei Kumiai	Gifu	110.9	—	152.4	46.7	Established in 1925
Higashi Takeda Shinnōkai Kumiai	Nara	115.3	—	—	3.3	Established in 1924 (Already dissolved)
Higashi Ayo Inasaku Kyōdō Keiei Kumiai	Shimane	117.6	1.0	—	51.0	Established in 1924
Yodomura Kyōdō Keiei Kumiai	Ehime	153.2	—	—	14.2	Established in 1924

Note: * One *tan* is about 0.245 acre.

under collective management. The collapse of the societies at Higashi Mikkaichi, in Ishikawa prefecture, and at Higashi Takeda, in Nara prefecture, was due to the fact that no land, or almost none, was reserved for individual management. The above-mentioned two reasons — the inconvenience caused to the livelihood of member families by collective management which covers even the growing of vegetables for their own use, and the inability to make use of the labour of old people and children and of fragmentary farm labour available in leisure hours — account for the dissolution of these societies.

(3) Such being the case, it is considered necessary for the maintenance of collective management that a fraction of land should be left for individual management, as it may serve as a safety-valve. If, however, the portion reserved for individual management is too large, it will lose its value as a safety-valve, and the piston will become unworkable through the escape of steam. That is to say, if too wide an area is to be allowed for individual management, the member of the society for collective farming will be liable to regard his work on the collective farm in the same light as ordinary hired labour and show a tendency to neglect it in favour of more profitable work, if such work is available elsewhere, leaving the work on the collective farm in the hands of other member families. It will also happen that, if there is land for individual management, the members of the society will not work on the collective farm until their work on their individual farms is finished in each busy farming season. Such a tendency is due to a lack of the co-operative spirit on the part of farmers, but it will persist so long as the present selfish disposition of farmers remains.

(4) Under the system of collective management, the profits are divided among the members of the society in proportion to the amount of labour, capital and land which they have contributed, but a fair division is very difficult since labour efficiency differs according to age, sex and personal habits, industrious or otherwise. Nor is it easy

to make a correct appraisal of fragmentary or fractional labour. Equally difficult is it to work out fairly the land-rent and the interest on capital, which embody the remuneration for the land and capital contributed. Herein lies the prolific cause of conflict and discord among the members of the society. Moreover, when the peasant proprietor cultivates his own land, he gets the rent for his land (productive value of land) in a form inseparably bound up with the remuneration for the labour bestowed on it, whereas under the system of collective management, the remuneration for labour and the rent for the land contributed are paid separately. This awakens the consciousness of land ownership hitherto lying dormant, and encourages the idea of obtaining as large a share as possible in the profits. This idea will introduce elements of unrest and impatience into the formerly contented and tranquil minds of farmers. It may also be observed that in the present state of things, in which the right of cultivation is not yet established, the participation of tenant farmers in collective management will rather impair the stability of the society concerned.

In order to ensure the sound development of collective management, therefore, it is necessary to leave certain tracts of land for individual management so that the member families may retain a sense of the security of living and so that they may be afforded an opportunity of making the best use of fractional labour. For this purpose, it is advisable to choose truck farms (farms for the cultivation of vegetables) as the most suitable for the utilisation of the labour of old folk and children and other fractional family labour available at odd moments, and to see that the vegetables grown on these farms are limited to the quantity necessary for family consumption. This device is necessary in order to keep all member families in the right co-operative spirit.

V

In the foregoing chapters, I have made a general survey

of the development of co-operation in the productive process of agriculture in this country. I have made it clear that modern agricultural co-operation among socially awakened farmers first develops in the circulation phases such as the sale of agricultural products, the purchase of agricultural implements and daily necessities, and farm financing, due to stimulation and pressure from commerce and industry which had entered the profit-making arena before agriculture, and then extends gradually to the productive stages such as the business of working up agricultural products and preparation for production. I have also pointed out that owing to the fact that Japanese agricultural districts are over-populated and the further fact that agricultural management is in most cases on a small scale in this country, co-operation in the productive phase is moving towards the objective of increasing the capacity of agricultural districts for supporting people, or, in other words, towards restoring the business of working up farm products which formerly formed part of agriculture, but that out-and-out co-operation in agricultural production directed towards the saving of labour, that is, progress towards true collective management, is attended with supreme difficulties. Thus, it seems fair to conclude that although co-operation in agriculture, which first appears in the circulation phases of sales, purchases and credit, will gradually spread to the preparatory stages of agricultural production and the section of working up agricultural products, the primary section of agricultural production will remain under individual management. The development of the co-operative movement among the Japanese farmers, and the direction in which such movement develops, must necessarily be determined by the actual conditions prevailing in Japanese agricultural communities and by the objective circumstances such as have been described.

YOSHINOSUKE YAGI