

Kyoto University Economic Review

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

VOLUME XV

1940

京 都 大 学
経 済 学 部

2001239

図 書

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

KYOTO UNIVERSITY ECONOMIC REVIEW

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

VOLUME XV

(January 1940)

NUMBER 1

THE PLANNING OF AGRICULTURAL PRODUCTION IN WARTIME

By YOSHINOSUKE YAGI

1.

As the Sino-Japanese hostilities drag on, various factors operating to lower the productive power of agriculture—as, for instance, the callingup of able-bodied young farmers, the flow of farm labour into the munitions industry, the commandeering of horses and the inadequate or defective supply of fertilizer and other materials necessary to production—grow ever more formidable, while the war itself demands a rising scale of production in all kinds of agricultural products, especially of the staple foodstuffs of the nation, and of such farm products as are required for military use and foreign trade. In such circumstances, the first and foremost objective of wartime agricultural policy must necessarily be to ensure an adequate supply of these agricultural products. The tendency of various features of agricultural production

to deteriorate with the progress of the hostilities will, if left unchecked, lead to a serious decline in agricultural production, with the result that the successful prosecution of the war itself may be rendered difficult. Thus, the urgent need of the moment is to increase the production of important agricultural crops of various kinds by planning and systematizing agricultural production, with a view to counteracting this factor of deterioration. The present programme for the planned production of agricultural crops is intended for the adjustment of two contradictory phenomena which confront the wartime agricultural activities of Japan, namely, the deterioration, on the one hand, in various features of agricultural production, and on the other, the demand for the maintenance and expansion of agricultural productive power. In other words, it is designed to deal effectively with the inconsistency inherent in the demand for increased production of agricultural goods in face of the steady development of many factors operating to reduce such production.

In order to make clear the essential character of the planned agricultural production which is projected in the present emergency situation, let me compare this scheme with the one adopted under the economic rehabilitation programme, which was undertaken for the benefit of agricultural and fishing communities in order to offset the effects of the agricultural panic of 1929—1930 and during more recent crises. Whereas the main objective of the production scheme, under the economic rehabilitation programme, was to establish an equilibrium between revenue and expenditure in the economy of agrarian families through an increase of their incomes; the present production scheme aims mainly at the reorganization of agricultural management itself, in conformity with wartime national requirements, so as to cope successfully with the changes which have taken place in the various factors of agricultural production, thereby ensuring an increased production of the principal agricultural products. Under the former scheme efforts were made to prevent a fall in the prices of agricultural products by adjusting agricultural

production to the diminishing demand for such farm products, due to reduced purchasing power consequent on a period of depression. In this way, it was hoped that it would be possible to check the growing loss of balance between the prices of agricultural products and the cost of industrial goods, with the ultimate object of increasing the incomes of farmers and of enabling them to make both ends meet. In laying down economic rehabilitation plans for individual agricultural villages, it was found that the only way to increase the incomes of farmers was to expand agricultural production. The intention of the authorities at the time, however, was rather to raise the prices of agricultural products either by restricting production or by reducing the acreage under crops. Under the present planned production scheme, on the other hand, it is intended to increase the production of important farm products without inducing any marked increment in prices, in spite of possible deterioration in certain factors of production, in order to meet the dire needs of the emergency situation.

Secondly, in carrying out the production scheme under the agrarian economic rehabilitation programme, the authorities ought to have conducted a coordinated inquiry into agricultural production of all kinds throughout the country in such a way as to secure the realization of the above-mentioned object. Then, on the basis of the results of this inquiry, they should have adjusted agricultural production on a nation-wide scale giving necessary direction to individual villages as to the kinds and the quantity of agricultural crops to be produced locally. Unfortunately, however, there was a grievous lack of unity in the inquiry into production carried out by the individual villages, so that it was next to impossible to organize a nation-wide production scheme on the basis of the results obtained, and this despite the thoroughness with which these inquiries were had been conducted by the individual villages. In the actual operation of the agricultural rehabilitation programme in question, therefore, there was no alternative but to leave to each village or each

farm family the decision as to what kinds of agricultural crops it should grow and what quantities of each should be produced. In such circumstances, a proper adjustment of production for the country as a whole could not be achieved. In a sense, the agrarian rehabilitation programme actually tended to prepare the ground for indiscriminate production. If a suitable inquiry into production had been carried out on a unified basis for the whole country at that time, that is, if an accurate survey had been made of the quantity produced by individual farm families, and an inquiry into agricultural production in each village, in each prefecture, and in the country at large had been conducted in connection with this survey, the authorities might now be in possession of the reliable statistical information concerning agricultural production, which is so badly needed in the execution of the present programme of planned agricultural production.

Inasmuch as the present programme for planned agricultural production aims at the expansion of production, in spite of the decrease in labour power and shortage of materials essential for production, it is obvious that the authorities cannot rely solely on the individual efforts of agricultural villages, or, in other words, on the movement for rehabilitation through self-exertions, for its successful realization, as was the case in the former economic rehabilitation project. Accordingly, it is necessary for them to devise adequate measures for the supply of essential materials and labour, if they want to ensure the supply of agricultural products in requisite quantities in a campaign for the maintenance and expansion of agricultural productive power. They must also see to it that the prices of agricultural products are properly regulated lest production should be retarded by a slump in prices. A high degree of state control and nation-wide planning are, therefore, imperative for the successful consummation of a programme of planned agricultural production.

In the present article, therefore, I propose to study in detail some of the problems which present themselves in connection with a planned agricultural production.

2.

The first question to be studied in connection with the present programme for a planned agricultural production, the objective of which is to expand production despite the deterioration of various factors of farm production, is a choice of the methods which should be adopted to attain this end. There are two alternative methods which present themselves in this connection. One is designed to increase the amount of yield per *tan* (*tan* being the unit area of Japanese arable land) and the other is to expand the total area of arable land or the area under agricultural crops. In the World War, however, it was conclusively shown that the former method, that is, the method of increasing production per *tan* of land already under cultivation, would have to be adopted in order to meet the rapidly increasing demand for agricultural products in wartime, and the advisability of adopting this method is also generally recognized in Japan as a means of meeting the needs of the present war situation.

Professor Wygodzinski, of Bonn University in Germany, in a book written during the World War says: "It is obvious to men of discernment that the expansion of arable land does not necessarily ensure the largest possible production. This also applies very often to small lots of land in urban or suburban districts. As these lots are not fertile—apart from the consideration of labour expended—it has happened not infrequently that the seeds sown on them could not by any means be brought to full germination. The same thing may be said of the cultivation of waste lands. As the best possible use has to be made of the limited amount of productive material available, the question of whether its best utilization can be secured by the intensive cultivation of the arable lands in existence or by the expansion of arable areas must be left to the conscientious judgment of the producers concerned." This warning was, however, practically ignored because Graf v. Schwerin Lowitz, Chairman of the German Agricultural Council, and

others recommended the cultivation of marshy lands as the best way to alleviate the food shortage. This amateurish view, which, while confining attention to the lands lying uncultivated, left the shortage of agricultural productive means out of account, was responsible for an inestimable waste of German agricultural productive power.

As the shortage of in the essential elements of agricultural productivity in Germany during the World War was incomparably greater than it is in Japan today, the expansion of arable areas was by no means calculated to increase the aggregate yield of agricultural products, in that country. What was true of Germany is not necessarily true of Japan today. Accordingly, in Japan it is also necessary to secure a positive expansion in the areas under cultivation in order to meet the present wartime requirements. Nevertheless, seeing that the supply of agricultural productive materials is becoming more and more restricted under the stress of war, the maintenance and expansion of agricultural production ought to be sought, in the first instance, in the maintenance and expansion of the yield per *tan* of land already under cultivation.

The prosecution of the war makes it imperative that the total production of all kinds of agricultural crops should be maintained and expanded, but since it is difficult, in wartime, to maintain and expand agricultural production by extending the area of arable land, the only alternative is to endeavour to increase the yield per unit area, for any decline which may take place in the yield per unit area, when there is no corresponding expansion of the areas under cultivation, must necessarily lead to the reduction of the total agricultural production, thus rendering the prosecution of the war more difficult. The wartime agricultural policy must, therefore, aim at the maintenance and expansion of agricultural production through the increase of the yield per unit area.

In wartime, however, the supply of farm labour diminishes and the same is true of the supply of fertilizer and other productive materials. To make matters worse, the prices of

these materials tend to rise. It may appear irrational, therefore, to attempt to maintain the intensity of agricultural management in such circumstances solely for the purpose of maintaining and increasing the yield per unit area. However, if things were left to take their course, there would inevitably be a decline in the yield per unit area, and accordingly a falling-off in the total amount of agricultural production. For this reason, it is urgent that agricultural production should be increased, despite the deterioration of various factors of production, by careful planning and systematized production. It follows, therefore, that planned agricultural production must not be of such a negative character as to permit a superficial extension of agricultural management or of a decline of the yield per unit area, which cannot but result in the reduction of the total agricultural production.

3.

In wartime, there is an increase in the demand for agricultural products, though supplies tend to diminish in consequence of the deterioration of all factors of agricultural production. This makes it necessary to increase the yield of agricultural crops under a programme of planned production. This does not mean that all kinds of agricultural products need to be increased alike and to the same extent in time of war. Nor, indeed, is it possible, in the existing national situation, to secure a parallel increase in the production of all kinds of agricultural crops. Under the circumstances, although every effort must be made to increase the production of (1) staple food crops, (2) agricultural products necessary for military purposes and (3) agricultural products for export, the output of other products may either be maintained at the present level of production or somewhat reduced without any serious hindrance to the prosecution of the war. In wartime, it is, therefore, necessary to control the production of various kinds of farm products according to a definite plan, so that the production of such

crops as have little relation to war economy may be reduced, as far as possible, while those which have a direct and vital bearing on the conduct of hostilities may be increased. It would not be advisable, of course, for the state to exercise prohibitory control over the production of certain crops simply because they had no direct bearings on war economy. For instance, although it might appear proper to restrict or prohibit the output of certain horticultural products, which have no direct relation to war economy, such a course, if taken, would inflict serious hardships to the farmers in these districts. Farmers in horticultural districts cultivate, for the most part, very small areas and their incomes would diminish considerably, if they were to abandon the cultivation of fruit and high-class vegetables, which bring them relatively high rates of revenue per *tan*, substituting the growing of rice, barley and wheat crops, which produce lower rates of revenue. Prohibitory control of this kind is, therefore, uncalled for. If ever the Government should be forced to have recourse to such drastic control, farmers in these districts would have to be compensated for their loss.

It should be pointed out that the planned agricultural production under review does not mean planned production in the strictest sense of the term. That is to say, it is not intended that all agricultural management should be placed under strict State control, that the extent of the public demand for each agricultural product should be minutely investigated or that compulsion should be used to obtain the requisite quantities of all agricultural products by allotting to individual farmers the quantity of each crop which they should produce according to the size of their farms, their labour power and the means of production at their disposal. That a planned production project of this extreme type is impossible in Japan is obvious when the organic character of her agricultural production and the existence of multitudes of farm families are taken into consideration. In connection with the planned agricultural production programme under review, the independence of judgment and initiative of

individual farmers is safeguarded so that they may choose for cultivation such crops as they believe suited to their purposes and also so that they may use or organize their means of production and labour power in as rational a manner as possible. In order to attain the object of increased production under the programme for planned agricultural production, therefore, it will be necessary for the Government first to provide individual farmers with such economic aids as are requisite for this purpose, and then to contrive to induce them to give increasing attention to the production of the crops which are particularly required by the State.

When, in time of war, there develops a shortage of labour power and the means of production prove inadequate, it is inevitable that intensive cultivation should, for economic reasons, gradually be replaced by more extensive forms of agriculture. If, under such circumstances, individual farmers are allowed absolute freedom in the selection of crops for cultivation, the result can hardly be expected to accord with the wartime requirements of the State. It is, therefore, necessary to put agricultural production and management under more rigorous control than in time of peace. In this connection, the method of production allotment and marketing allotment is commended in regard to the production of staple food crops, such as rice, barley and wheat, and, other agricultural products in military demand. Even when such methods are adopted, it will be necessary, in the first place, to furnish individual farmers with such economic aids as are needed to facilitating their successful application. In other words, steps must be taken to increase the profits accruing from the growing of these essential crops as distinct from other crops. Until this preliminary aid is provided, any scheme for the allotment of production can hardly be expected to produce the desired results. Secondly, as agricultural management in Japan is generally multilateral, in so far as a single farm family is usually engaged in various lines of agriculture, such as the raising of cereals, the cultivation of vegetables, sericulture and stock-breeding, the balance of agricul-

tural management, can easily be upset, if hasty attempts are made, to increase production in one particular line. In order to avoid a decline in the incomes of farmers, therefore, care must be taken to see that the increase of production in certain specified crops does not affect seriously the cultivation of the other crops, in other words, that a rational adjustment is effected in the utilization of land, labour, fertilizer and other means of production.

If, on the other hand, farmers are allowed to carry on their programme of cultivation as they please oblivious of the present situation, in which there is considerable shortage in the supply of agricultural productive materials, and of fertilizer in particular, they will undoubtedly use their supply of fertilizer to increase the productivity of crops which are most profitable to themselves, and which are not necessarily the farm products most needed by the State. Under such circumstances, when the deficiencies in the supply of these agricultural materials reach a certain limit, it will become imperative to impose restrictions on the farmers' requirements, and to enforce control of the use of fertilizer, in order to ensure adequate provision of the kinds of agricultural products which the State requires. Should these contingencies arise the planning of agricultural production must inevitably enter a more compulsive phase. To what extent this compulsion will be intensified depends on future developments in war economy.

4.

As already mentioned, the first step to be taken in the planned production of agricultural crops is to furnish individual farm families with the economic elements requisite for increased production in such a form as to induce them to concentrate on the production of the crops of which the State stands in most need. As the war economy develops, however, the necessity may arise for the Government to take more positive steps in order to induce farmers to grow

certain specific crops. In order to secure this objective the State must provide the farmers with the necessary technical and economic guidance. This is particularly necessary in Japan where the majority of farmers are "mere agricultural operatives."

What then are the specific measures which must be taken in order to facilitate the execution of the programme for planned agricultural production? Let me enumerate here the measures which are deemed most necessary:—

1. To begin with, the kinds of crops suited to the different districts must be improved in quality by mobilizing agricultural skill, that is, through the employment of scientific and rational techniques.

2. Exceptional efforts must be made to prevent the failure of crops. With this end in view, the equipment for the extermination and prevention of all kinds of parasitic and other diseases to which rice plants are subject must be improved and perfected.

3. In order to supply supplementary farm labour where its shortage is acute, a greater number of "labour service" groups and "mobile labour" corps must be organized on an efficient basis.

4. In view of the present shortage in "human resources" in rural districts, special care must be used in inaugurating plans for the settlement of Japanese in Manchoukuo. At the same time adequate control must be exercised over the influx of farm workers into "peace" or non-military industries. It is also necessary to devise plans under which farm hands who have already obtained employment in such industries may be returned to their farms during the season of greatest agricultural activity.

5. Efforts must be made to mechanize agriculture in compensation for the present shortage in farm labour and animal power. Inasmuch as the main objective in wartime is the maintenance and expansion of the total agricultural production, the mechanization of agriculture—in particular the mechanization of the process of cultivation—must be

so designed as to enhance labour efficiency and to maintain and expand the yield per unit area.

6. In order to make up the shortage of farm labour and to increase labour efficiency, co-operative work must be encouraged in matters of tillage, planting, weeding, harvesting, and adjustment.

7. Suitable measures must be devised to facilitate the supply and distribution of fertilizer, agricultural implements and other agricultural means of production. At the same time, steps must be taken to maintain an equilibrium between the cost of these productive materials and the prices of agricultural products.

8. As agricultural production has to be increased, in time of war, despite the more limited quantities of productive materials available, it is most imperative that these materials should be put to the best possible uses. The common use of agricultural implements by neighbourhood groups of farmers must, therefore, be encouraged, and the individual farmers must be adequately instructed in the methods of applying their fertilizer to the various crops in a manner advantageous to themselves and to the State.

9. In view of the fact that the major portion of agricultural produce is destined for the market, a suitable price policy designed to stimulate production must be adopted. In view, moreover, of the multilateral character of Japanese agricultural management, care must be taken to see that the balance of agricultural management as a whole is not affected seriously through a disproportionate emphasis on some particular crop.

10. Through exchange, division and merger, groups of cultivated fields should be organized so as to facilitate the mechanization of agriculture and the development of co-operative cultivation projects.

11. In wartime, it is desirable that agricultural production should be increased without forcing up the price of agricultural products. In order to meet this wartime requirement, the basic cost of agricultural production must be

lowered by every available device, and it is hardly necessary to add that, for this purpose, the prices of the materials of agricultural production and the necessities of life in rural communities must be fixed at a proper level. It is no less essential to seek the regulation of farm-rents and to secure a fair incidence of taxes for urban and rural communities alike.

5.

Lastly, it is necessary to say a few words regarding the bearing of the planned increase in agricultural production on the prices of agricultural products.

If the Government should desire to increase the production of certain specific agricultural products, it should issue in advance a public announcement as to prices—these prices should be sufficiently high to stimulate production—and then proceed to perfect the organization which is concerned with the purchase of these products at the prices announced. It is hardly necessary to say that, in time of war, farmers, in common with all other classes, ought to demonstrate their patriotism and be content with relatively low prices for their produce. If the purchase price is fixed at too low a level, however, it will cause the impoverishment of agrarian communities, with consequent impairment of economic activity. The prices in question must, therefore, be fairly determined on the basis of cost in such a way as to stimulate production.

Secondly, even when the purchase price is thus fixed on a fair basis, if the number and variety of agricultural products to be augmented is considerable, farmers are likely to exercise scrupulous care in choosing the more profitable crops for cultivation. In fixing official purchase price for the various kinds of agricultural produce, therefore, special attention must be directed towards maintaining a proper balance between the price schedules so that farmers may be led to produce each necessary crop in the quantities required by the State.

Thirdly, if official prices are determined solely in respect

to those agricultural commodities whose increased production is specifically desired, while leaving all other products to find their own price levels, the desired increase may not be realized; for it is quite possible that farmers may not devote sufficient areas or productive materials to the cultivation of the crops falling under the former category. It follows, therefore, that official purchase prices must be fixed for all staple agricultural products. In this regard, it may be noted that the determination of the official price for rice is comparatively easy because rice is the only crop planted in paddy in the summer months and has no competitor.

Fourthly, under a wartime programme of planned agricultural production, production must be increased in strict relation with a certain degree of control of the prices of agricultural products. The only way to increase production without raising the prices of agricultural products proportionately is to reduce the cost of production. That is to say, the prices of fertilizer, agricultural implements and other productive materials as well as the prices for the necessities of life, which represent the cost of labour of the agrarian family unit, must be reduced as far as possible, while, on the other hand, efforts must be made to establish a suitable equilibrium between these costs and the market prices of agricultural products. In this connection farm-rents, which form an important item in the cost of production, must also receive proper regulation.

Fifthly, if the Government wishes to stimulate agricultural production while at the same time upholding the policy of controlling the rise in the prices of agricultural products, it must devise measures to increase the net receipts of farmers within the limits of the officially fixed price schedules. To this end, it is advisable to improve the system of collecting agricultural products and to control and adjust the system for the distribution of these products in urban districts. The cost of distributing agricultural productive materials must also be reduced with a view to ensuring an economical supply. The active cooperation agricultural co-operative

societies and agricultural associations will need to be secured in this connection.

In short, as we have seen, the present programme for planned agricultural production has a very important mission to fulfil, namely, to increase production in face of the steady deterioration of productive factors under the stresses brought about by the war situation. In view of the fact that a plentiful supply of foodstuffs is one of the important requisites for ensuring victory, it is incumbent on all those concerned in agricultural pursuits to do their utmost to fulfil their mission successfully. The Government, for its part, must devise suitable measures to secure this end, in close consonance with the future developments of national wartime economy.