CROP INSURANCE AS A MEASURE OF AGRICULTURAL SUPPORT
NATIONAL AND INTERNATIONAL ACTION

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AGRICULTURAL SUPPORT MEASURES

Agricultural support measures, as developed in various countries, generally have two basic objectives: (1) to stabilize agricultural income and the agricultural industry against certain fluctuations which are almost inherent to it, e.g., due to yield and price uncertainties; and (2) to improve the living standards of the agriculturists, either of the general body or of particular sections, by enabling them to attain a minimum measure of economic efficiency and profitability for their farms. The two objectives are complimentary and mutually supporting.

The first Expert Working Party on Agricultural Support Measures which met under FAO auspices in Rome in December, 1956, discussed the various measures adopted in different countries to secure these objectives. Grouped according to the objectives which they are primarily intended to achieve, the principal such measures are as follows:

For stabilization of farm income: price support and crop yield insurance, and direct income subsidies.

For increasing farm efficiency and profitability: tax remission, subsidies or price regulations to reduce costs of agricultural production requisites, and provision of short-term credit at low interest rates.

While these have more direct and immediate effect on the levels of farm income, there are other equally important measures which operate usually in the longer term, as for example, (a) direct government schemes, subsidies or long-term credit for land improvement including irrigation, drainage and soil conservation; (b) government aid and assistance through improved technological measures (such as agricultural education, research and advisory services; services for the control of diseases and pests of crops and livestock); and (c) improvement of agrarian structure.

The emphasis on any one or more of these measures naturally varies with countries. Speaking broadly, however, measures of price support assume a relatively greater importance in the economically developed countries, while in the less developed countries the major attention is given to strengthening the base of the agricultural industry through direct government schemes of irrigation, drainage, land reclamation, and other means of increasing agricultural productivity.

1. This paper was circulated at the International Conference of Agricultural Economists, Mysore (India), 24 August—4 September, 1958. As it deals with a matter of considerable topical interest, it is published here with the author's approval. The views and opinions expressed are of the author himself and not necessarily the official views of FAO.

Insurance against the uncertainty of crop yields due to multiple natural hazards is as yet inconspicuous, if only because it is practised as a measure of agricultural support in a small number of countries and still largely on an experimental scale, although protection against individual hazards, chiefly hail, has been available for long in many countries from commercial, co-operative and state insurance organizations. Nevertheless, crop insurance (all-risk) is of considerable importance as it is complementary to price and other income support measures. It offers protection to farmers against the physical failure of crops due to weather and other unavoidable natural hazards and thus advances the process of stabilizing the agricultural industry to the stage of production making such process more comprehensive, effective and useful.

NEED AND BENEFIT OF CROP INSURANCE

The need and justification for crop insurance has been ably summed up in one of the annual reports of the United States Federal Crop Insurance Corporation as follows:

"Large sums of money are spent each year in agricultural research to develop better varieties of seed, more effective means of controlling insects and diseases and improved methods of farming. Soil conservation practices have been encouraged by making available technical assistance as well as cash payments to the farmer. Price supports have been provided for more than a decade to help maintain some degree of stability in farm income. Despite all these measures the farmer will receive but little income in any year if he invests his time, money and effort to produce a crop only to be faced with a crop failure due to some cause over which he has no control. Insurance protection spans this crop failure gap. It is an essential part of a well-rounded agricultural programme designed to provide security to farmers."

The benefits of crop insurance, however, are derived not by farmers only but also by others. The farmers get through it an opportunity to help themselves against crop disaster (insofar as they pay premiums to be returned by way of indemnities), a contractual right to assistance in the event of crop failure, and a possibility of improving their credit by providing insurance as collateral for loans or extension of credit. At the same time the bankers and others including co-operative credit institutions that extend such credit are provided with an opportunity for larger and better loans since their borrowers can have more stable income and can give the insurance policy as collateral if necessary. The people of the rural communities and trade centres also find an opportunity of improving the stability of their incomes due to the stabilization of farmers’ incomes on which they depend so much. The community also gains insofar as the insurance gives the farmers greater confidence in venturing upon the adoption of new and improved farming practices and in making greater investments in agriculture for

4. The Corporation—an autonomous governmental agency within the United States Department of Agriculture—is responsible for the operation of the all-risk crop insurance programme ever since its beginning in 1939.
improving crop yields and increasing agricultural production. Again, if the insurance is integrated with food and other commodity reserves, the programme would go a long way to normalize the availability of supplies and to stabilize prices of the insured commodities. Finally, government’s obligation to provide relief in case of crop disaster is reduced to the extent farmers themselves pay for insurance.6

In view of these needs and benefit of crop insurance it has received in recent years an increasing attention at both national and international levels.

NATIONAL SYSTEMS OF CROP INSURANCE

At the national level, all-risk or multi-risk crop insurance has been in operation in Japan and the United States for more than two decades, and also in the U.S.S.R. for about a similar period. More recently a number of other countries have either already introduced it, e.g., Brazil, Ceylon and Mexico, or are considering the possibilities of introducing it, e.g., Colombia and Costa Rica in Latin America, Canada in North America, Sweden and Yugoslavia in Europe, Israel, Egypt and Turkey in the Middle East, and India, Taiwan and Viet Nam in South East Asia.7

A. COUNTRIES OPERATING CROP INSURANCE PROGRAMMES

Japan

In Japan, where crop insurance is compulsory for farmers growing major field crops,8 as much as 93 per cent of paddy area, 70 per cent of area under wheat, barley and oats, and 44 per cent of upland rice, were covered by insurance in 1955. In actual figures the respective areas were 2.7 million, 1.2 million and 79,000 hectares respectively. In addition, there was also insurance on silkworms and cocoons. Government spends annually large sums to meet a part of the administrative expenses, and also very substantial portions of premiums.

Between 1947-57 inclusive, of total premiums of nearly 103,000 million yen ($286.1 million) on account of crop, silkworm and cocoon insurance, Government paid roughly 55 per cent (56,429 million yen) and the balance of 45 per cent was collected from the insured farmers. Government’s share in premiums actually went up in later years considerably not only in absolute terms but also relatively to that of the farmers. In 1957, for example, the aggregate premiums from crop

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7. In addition, single or dual-hazard insurance of important plantation crops is in operation in Mauritius (insurance of sugar production against cyclone and drought, which is compulsory for all planters, estates with factories and millers); Puerto Rico (insurance of coffee tree and beans against hurricane, which is voluntary); and Jamaica (insurance of banana crop against windstorm, which is also voluntary).

8. The insurance of crops and also of domestic animals is carried under “Agricultural Loss Compensation System.” At the local level it is operated by the agricultural mutual relief association; where such an association is established the insurance is compulsory for all farmers satisfying certain designated standards. Farmers having farms too small to meet these standards may voluntarily apply for membership and for insurance.
insurance amounted to 13,875 million yen (US $38.6 million), of which Government’s share was 8,225 million (US $22.8 million) or 59 per cent. By contrast, the total premiums for crop insurance in 1947 was 12,560 million yen of which Government’s share was 5,367 million yen or 43 per cent.

*Total indemnities* received by farmers during 1947-57 inclusive, amounted to 119,218 million yen (US $331 million) as against premiums charged to them of 46,514 million yen (US $129 million). Therefore the net direct cash benefit to farmers from crop insurance during the eleven years was 72,704 million yen (US $202 million) or an average of 6,609 million yen (US $18.3 million) per year. The indemnities paid out to farmers exceeded the premiums charged to them in all the years except 1955, and also, in addition, the amounts of premium subsidy paid by the Government in all years except 1952, 1955 and 1957, the difference (i.e., the deficit) being met from special funds allocated annually to the Ministry of Agriculture and Forestry.

The total administrative expenses for operating the systems of agricultural insurance (both crop and livestock) during 1947-57 amounted to 42,536 million yen of which 24,114 million yen were paid by farmers and the balance, 18,422 million yen or 43.3 per cent, by the Government; while the costs of administering the insurance of crops only, including silkworms and cocoons, during 1952-55, averaged 2,000 million yen (US $5.6 million) per year.

The combined total expenses incurred by the Government on account of both premium subsidy and administrative expenses, during 1950-57 inclusive, amounted to 97,900 million yen or an average of 12,237 million yen (US $34 million) per year. The actual annual expenses have ranged from 9 to 15 per cent of the total expenditure of the Ministry of Agriculture and Forestry. Such large contributions from the Government of Japan for purposes of crop (and also of livestock) insurance indicate that the scheme is essentially a support measure combining the principles of insurance and relief, and are justified by the Ministry on the ground that such net transfer of funds to rural areas are “beneficial to agriculture of the country.” The scheme is said to help in the promotion of agricultural productivity and in the stabilization of the rural economy. There is of course some uneasiness about the extent of financial burden carried by the Government, and also some doubt as to whether at least a part of the expenditure could not be spent better on other activities. While a serious consideration is therefore given to possible improvement and rationalization of the scheme there can be no doubt that crop insurance continues to be a definite instrument of agricultural policy of the Government, at least for sometime to come.

**United States**

Whereas crop insurance in Japan is partly insurance and largely government relief, in the United States, where it is still in the experimental stage, it is largely insurance and only partly relief. Started in 1939 on national scale it was cut

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ledge, the supply curve and the marginal cost curve of the individual farm would coincide. The industry supply curve would then be the sum or aggregate of the marginal cost curves for all individual farms. In reality, the farm's marginal cost does not represent its "exact supply curve" because of the uncertainty, poverty (lack of credit), ignorance and household considerations. The decision of a farmer to produce an output at a particular time does not depend on the price at this moment but on an earlier decision-making process when an attempt was made to predict future prices (on the average of three-year prices) in some cases. The agricultural production in a single year is moreover, highly variable due to the changes in the weather. In spite of all these complexities "the industry supply function is necessarily the sum of the supplies of the many individual firms in agriculture."\(^{11}\) We should, therefore, expect that if it is possible to achieve better nutrition and higher income on individual agricultural farms, then it is also possible to achieve better nutrition and higher income for the agriculture industry as a whole (on the basis of the aggregation of results).