

JCRR



**CHINESE—AMERICAN JOINT COMMISSION ON RURAL RECONSTRUCTION
(JCRR): ITS ORGANIZATION, POLICIES AND OBJECTIVES,
AND CONTRIBUTIONS TO THE AGRICULTURAL
DEVELOPMENT OF TAIWAN**

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Chinese-American Joint Commission on Rural Reconstruction (JCRR): Its Organization, Policies and Objectives, and Contributions to the Agricultural Development of Taiwan

1. Organization

The Chinese-American Joint Commission on Rural Reconstruction (JCRR) was created in 1948 as a non-permanent bilateral agency for the rural reconstruction of China in the immediate postwar years. After 25 years JCRR is still going strong, having proved itself to be such an effective organization for agricultural development.

Originally, there were five Commissioners, three Chinese and two American, with one of the Chinese Commissioners serving as Chairman. As the governing body of JCRR, they made all the policy decisions and exercised general supervision over the implementation of JCRR-supported projects with the assistance of a technical and an administrative staff. In 1964, by mutual agreement between the Chinese and American governments, the number of Commissioners, all Presidential appointees, was reduced to three, two Chinese and one American.

In the last quarter of a century, JCRR has changed with the changing

times which necessitated readjustments and modifications in its organizational structure, programs and activities. Today, there are nine technical divisions in charge of plant industry, forestry, irrigation and engineering, fisheries, animal industry, agricultural credit, rural economics, farmers service, and rural health, respectively.

Being a bilateral organization, JCRR used to have a small number of American specialists on its technical staff. In the first few years of JCRR's existence, the number of American personnel averaged from eight to ten. It reached a maximum of thirteen during the 1954-1963 period, after which it was gradually reduced until there is none working in JCRR on a regular basis. However, short-term American consultants are invited from time to time as the need for their services arises.

An overwhelming majority of the Chinese technical staff as well as all the successive Chinese Commissioners have studied in American colleges and universities. Every one of them is a specialist in his chosen



A regular meeting of the Joint Commission presided over by Dr. Robert C. T. Lee, Chairman (second from left) with Dr. Chester W. Clark sitting at his left and Dr. Y. S. Tsiang at his right. Dr. Y. T. Wang, Secretary-General, also attends the Commission meetings with Miss Cecilia Hoh, Secretary to the Joint Commission, assisting.

field. A spirit of jointness and mutual respect has always prevailed among the Chinese and American personnel, working side by side for the attainment of a common objective—rural prosperity through agricultural development in Taiwan.

There are now 135 specialists manning the technical divisions. An administrative staff of 110 provides supporting services to the technical staff. It is composed of a Commission Secretariat headed by a Secretary-General, who is the chief executive officer of the Joint Commission, an Office of Administration, an Office of the Controller, and an Office of Planning and Programming. An International Technical Cooperation Committee, formerly headed by one of the Chinese Commissioners and now by the Secretary-General, is in charge of matters relating to agricultural technical cooperation with other countries.

2. Policies and Objectives

From the very beginning, JCRR has been inspired by the basic idea of helping the rural people to help themselves. Acting on this principle, it has rendered technical and financial assistance to the farmers to enable them to stand on their own feet.

Five principal objectives worked out in the early days have guided JCRR. They are:

- (1) To improve the living conditions of the rural people.
- (2) To increase the production of food and other important crops.
- (3) To develop the potential power of the rural people to reconstruct their own communities and society at large.
- (4) To help build up and strengthen related services of government agencies at all levels that are established to carry out measures pertaining to rural reconstruction.
- (5) To offer liberals, educated youths and other constructive elements opportunities to participate in a program of service.

Altogether JCRR had approved and implemented over 6,000 projects at a total expenditure of NT\$ 4,025,113,000 and US\$ 7,106,400 up to June 30, 1965 when U.S. economic aid to this country was phased out. Since then it has been operating with funds made available to it on an annual basis from a Sino-American Fund for Economic and Social Development in the Republic of China, with its program emphasis placed on innovative types of projects.

Before any project is approved, it is first of all carefully screened by the technical division concerned with respect to (1) its conformance with JCRR program objectives and government agricultural policy, (2)

its technical feasibility, (3) reliability of cost estimates, (4) availability of funds from this project category, and (5) availability of technical and administrative services required.

In addition, all projects must be so designed as to satisfy the felt needs of the farmers who are their direct beneficiaries; must lead to a fair distribution of the benefits derived from the project operation; and must have a qualified sponsoring agency to undertake them and to utilize JCRR assistance effectively.

The requirement of a sponsoring agency for all projects is one of the unique features of JCRR operations. The sponsoring agency is usually chosen from among local organizations with an intimate knowledge of local conditions and a good reputation for efficiency and integrity besides enjoying the respect and confidence of the local people. Public and private organizations that have served as sponsoring agencies of JCRR projects include agricultural experiment stations, district agricultural improvement stations, farmers' associations, farm irrigation associations, fishermen's associations, research institutes, agricultural colleges, county and city governments, township and village offices, and other institutions involved in agricultural development.

JCRR financial assistance has

taken the form of either outright grants-in-aid or interest-bearing loans. In granting a subsidy for any project, JCRR requires the sponsoring agency to contribute matching funds commensurate with its financial ability, because it is felt that such contributions would be an indication of the determination on the part of the sponsor to make the project a success. In the period from 1950 to 1972, the sponsoring agencies contributed on the average 48 percent of the funds for JCRR-supported projects.

The role played by JCRR in agricultural development has been that of a catalyst. By providing technical and some financial assistance, JCRR has been able to give direction to agricultural policies, encourage better methods of project implementation, motivate projects difficult to initiate, and generate a spirit of self-help among the local agencies.

In making either grants or loans to a sponsoring agency, JCRR has always exercised close supervision over the stage-by-stage implementation of the project. As sponsoring agencies are mostly low-level organizations, they can be held directly responsible for project implementation and accounting of the funds expended. In this way bureaucratic control is bypassed, red tape reduced

to a minimum, and assistance extended to the end-users at the grass roots.

It has always been JCRR policy to remit approved project funds directly to the end-user agency by installments. The disbursement of each installment must be justified by a "progress report" submitted by the agency and approved by the JCRR technical division concerned.

This close supervision, both technical and financial, exercised by JCRR over project implementation has been an important factor contributing to the high degree of success of JCRR projects.

3. Major Achievements

Aside from individual projects, which are the main concern of JCRR specialists, its technical staff has also participated actively in the planning and implementation of the agricultural program of a series of Four-Year Economic Development Plans from 1953 to date. The average annual growth rate of agriculture in Taiwan, to which JCRR projects have contributed a fair share, was 5 percent from 1953 to 1956, 4.2 percent from 1957 to 1960, 5.0 percent from 1961 to 1964, 6.2 percent from 1965 to 1968, and 2.2 percent from 1969 to 1972, with an annual average of 4.62 percent for the entire 20-year span.

As a result of the successive Four-Year Plans, the aggregate agricultural output of crops, livestock, fisheries, and forest products has more than doubled that of the 1950-1952 average. This increase in agricultural productivity has made it possible for Taiwan not only to provide the domestic food requirements of the population, which grew from eight million in 1952 to over 15 million in 1972, but also to leave a substantial surplus for export. The production of rice, the staple food of the people in Taiwan, increased from 1.6 million metric tons of brown rice in 1952 to 2.44 million metric tons in 1972. The increase in total rice production was primarily the result of the increase of the per hectare yield from about 2,000 kg of brown rice in 1952 to about 3,300 kg in 1972, due largely to improved varieties, more and better irrigation facilities, the application of more chemical fertilizers and pesticides, and better cultural techniques.

The production increase of crops other than rice was also achieved largely through technological improvements and innovations introduced by JCRR. As a result of increased food production, the per capita daily food availability rose from 2,078 calories to 2,737 calories and the per capita daily protein intake from 49 grams to 75 grams in the 1952-1972



Modern precision instruments are used in pesticide residue research.



Portable electric tea-cutters are gradually replacing manual labor in tea plucking.

period.

An overall forestry development program calling for improved logging methods and transportation facilities boosted timber production in Taiwan from 449,000 cubic meters in 1952 to over 1,750,000 cubic meters in 1972.

Also, following the mechanization of fishing craft and improvement of fishing methods and gear with JCRR support, fisheries production registered a more than fourfold increase from 122,000 metric tons in 1952 to over 690,000 metric tons in 1972.

As a source of animal protein supply, the animal industry has contributed significantly to agricultural development in Taiwan. Improved breeding, more efficient feeding and management, and effective control of major livestock diseases mainly through JCRR efforts have laid a firm foundation for the future development of livestock farming on the island. The number of cattle and hogs slaughtered rose from 16,000 and 1,258,000 head in 1952 to 26,300 and 4,537,000 head in 1972, respectively.

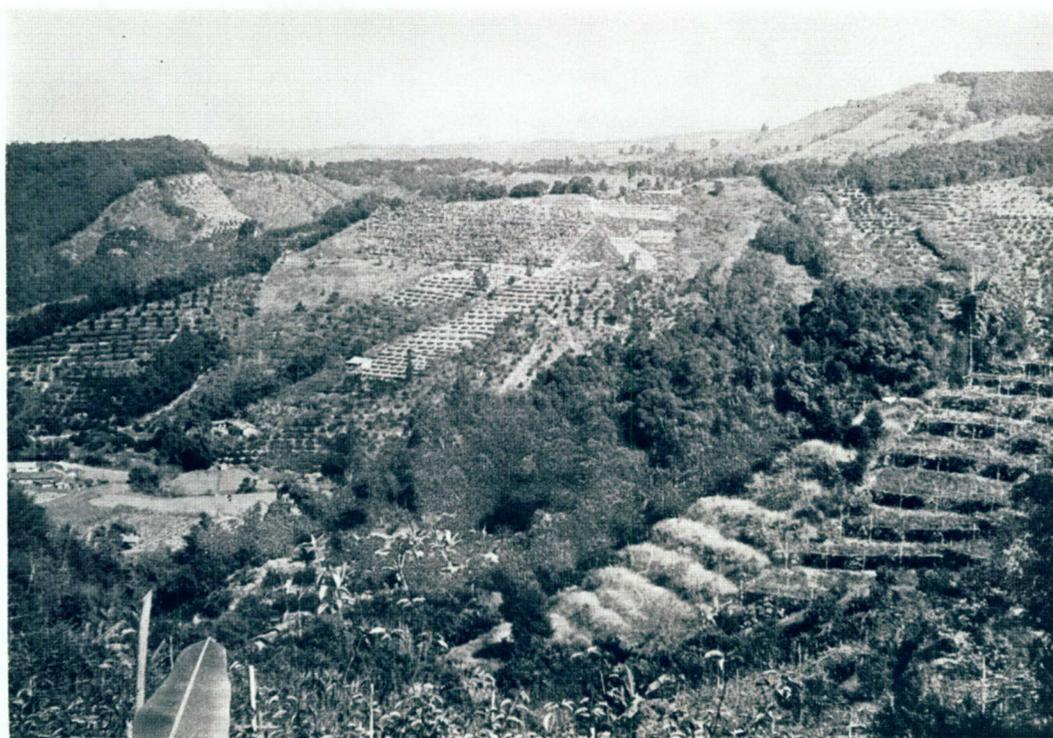
Agricultural production increases also raised the net foreign exchange earnings from US\$114 million in 1952 to US\$560 million in 1972 chiefly through the export of sugar, rice, bananas, pineapples, tea, mushrooms,

asparagus, fruits, vegetables, and other primary and processed agricultural products.

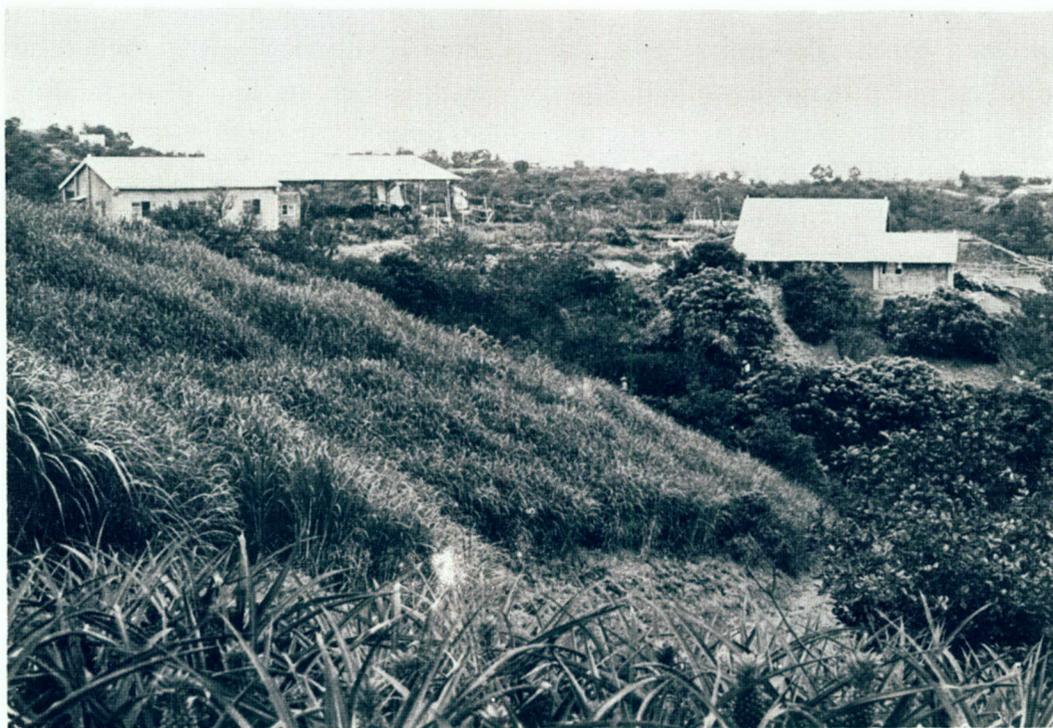
The value of agricultural exports from Taiwan quadrupled from 1954 to 1972. However, the share of agricultural exports in Taiwan's total export declined from 93 percent in 1953 to 17.3 percent in 1972, while that of non-agricultural exports increased from 7 percent to 82.7 percent in the same period. From these facts it is clear that Taiwan's economy has evolved from a predominantly agricultural to a mixed agricultural and industrial one.

Owing to the mounting population pressure, however, the average farm size in Taiwan has been decreasing continually and it is now only about 1.0 hectare, one of the smallest units in the world. This handicap has been overcome to a certain extent by the farmers through multiple cropping and crop diversification. The system of multiple cropping has helped offset the effects of farm size decline by expanding the harvested area per unit of land area. In 1972 the multiple cropping index stood at 176 with a total crop area of 1,578,000 hectares and a total cultivated area of 898,600 hectares.

In the irrigated areas of the island four crops a year, including two rice and two other crops, are grown by rotation in the same field,



To provide more food for the expanding population, slope land is being extensively developed and utilized in Taiwan.



A slope land dairy farm in central Taiwan.

where only two rice crops were grown about twenty years ago. At the same time, intensive farming by more capital investment, larger labor input and extension of improved cultural methods introduced by JCRR have also helped to increase the per hectare yields of crops. Diversified farming urged upon the farmers by extension workers trained by JCRR has made it possible to utilize available labor more fully and reduced the unfavorable impact of crop price fluctuations and yield variations due to weather and other unforeseen causes.

According to an economic analysis made by Dr. Wang You-tsao, formerly Chief of the Rural Economics Division and now Secretary-General of JCRR, the cultivated area in Taiwan expanded by seven percent from 1946 to 1965, while the total labor working days on farms increased by 107 percent and the capital input by 197 percent in the same period. Farm output, including crops and livestock and poultry products, showed a 4.5-fold increase from 1946 to 1965. Consequently, land productivity rose by 300 percent, man-day productivity by 110 percent, and capital productivity by 52 percent between 1946 and 1965. The average annual productivity or returns were around NT\$2.00 to NT\$3.00 per one dollar capital investment. As estimated by Dr. Wang, about two

thirds of the growth rate of farm output from 1946 to 1965 could be attributed to technical improvements made through the recommendation of JCRR specialists.

The technological improvements and innovations in agriculture have come about as a result of research, experiments, and field demonstrations conducted under JCRR technical and financial support. They include improved varieties, better cultural techniques and cropping patterns, better methods of irrigation and fertilizer and pesticide application, and proper utilization of slope lands through soil conservation measures in plant industry; breed improvement of cattle, hogs and poultry, wide extension of artificial insemination, more effective animal disease control, improvement of feeding efficiency through the use of balanced feed, development of grassland for animal farming, and demonstration of integrated crop-livestock farming systems in animal industry; improvement of large-scale nursery management and reforestation practices, development of integrated wood processing and utilization, aerial survey of forest resources and land use condition through the application of modern aerial photo interpretation and mapping methods in forestry; and improvement of fishing gear and methods, motorization and construction of more



At harvest time, farmers use paved country roads as drying ground for their paddy.

fishing craft for deep-sea and inshore fisheries, and improvement of fish culture techniques in fisheries.

JCRR has extended these technological improvements and innovations to the Taiwan farmers through the farmers' associations, farm irrigation associations, fishermen's associations, extension agents, 4-H clubs, and the news media, including regular radio broadcasts, a special farm magazine "The Harvest", and mobile units showing educational slides to the villagers.

Through a series of land reform measures successfully carried out in Taiwan with JCRR providing technical and financial assistance, the number of tenant farmers declined from 39 percent of the farming population in 1949 to 10 percent in 1972 and the number of full owner-operators increased from 36 percent to 78 percent, while that of part-owner farmers dropped from 25 to 12 percent in the same period. Simultaneously, with the acquisition of landownership by 243,000 farm families under the sale of public land program and by 195,000 farm families under the Land-to-the-Tiller Program, the newly created owner-operators now have the incentive to work harder and invest more capital and labor on their farms. Similarly, the tenant farmers are also encouraged to make greater exertions to

increase farm production following the implementation of the farm rent reduction program, which limited the rental rate to a maximum of 37.5 percent of the annual main crop yield and guaranteed farm tenancy rights through the signing of written lease contracts for at least six years and other measures, including the formation of farm tenancy committees, on which landlords, tenants and owner-operators are all duly represented, for the amicable settlement and mediation of disputes between landlord and tenant.

The land reform program carried out in Taiwan with JCRR playing a leading role has been widely acclaimed not only for its success, but also for the peaceful and just manner in which it was executed. It is for this reason that the program has been hailed as a bloodless revolution.

Following the successful implementation of the land reform program, the farmers' associations were also reorganized so as to put them under the control of *bona fide* farmers. There are over 360 farmers' associations at the township and county levels with one provincial association at the top. These associations perform such services and offer such facilities as credit and savings deposits, agricultural extension, cooperative marketing of farm products, rural health, transportation,

and sale of farm tools, food, clothing, etc. In addition, they also render services for the government, provide facilities for rice milling and warehousing of rice and fertilizers, and assistance in crop and livestock improvement. They collect and process hundreds of thousands of metric tons of rice and distribute as many metric tons of fertilizers and feeds to the farmers every year.

The Unified Agricultural Credit Program sponsored by JCRR since 1961 has been carried out in cooperation with the farmers' associations which provide low-interest loans to their members with funds made available to them from an Agricultural Credit Fund. At the end of 1972 the cumulative total of the unified credit loans reached NT\$ 9,947 million, with NT\$ 1,498 million outstanding. About nine tenths of all the township farmers' associations which have credit facilities are participants in the program and about 90 percent of all the farm families in Taiwan have access to the improved credit service under the program.

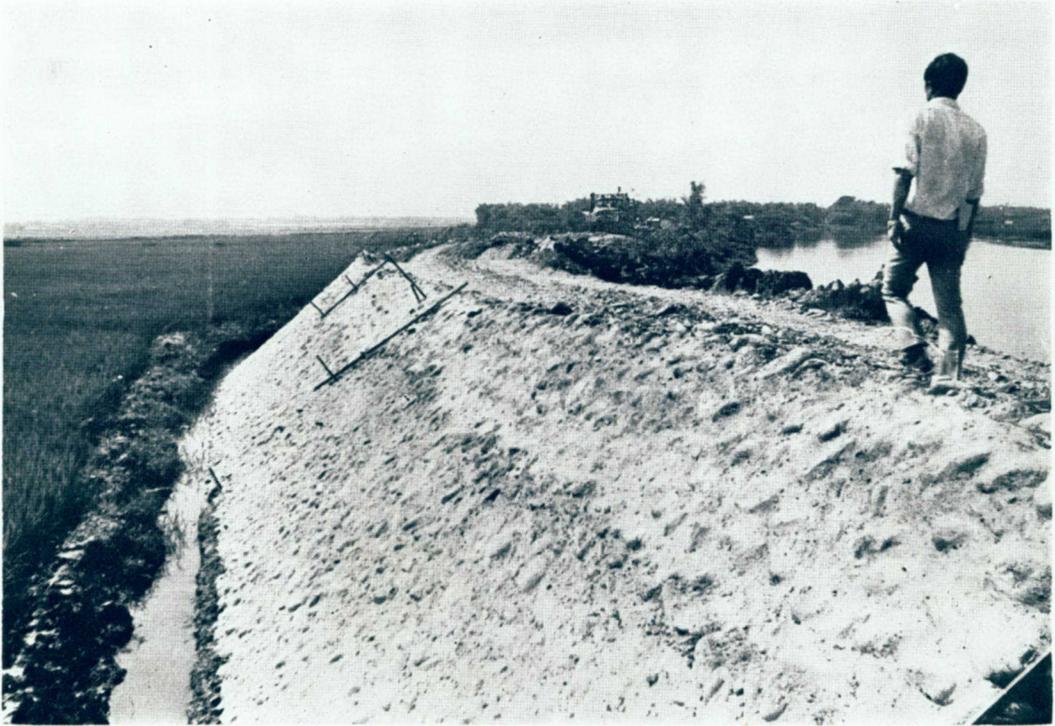
A province-wide network of rural health units, including 22 health centers in counties and cities and hundreds of health stations and health rooms, provides medical and health services for the rural people. Environmental sanitation and rural community development are also

part of JCRR's rural health program. In recent years the promotion of family planning in Taiwan with financial and technical assistance from the Population Council of New York has succeeded in lowering the 35.7 per mil annual growth rate in the early sixties to 19.4 per mil in 1972.

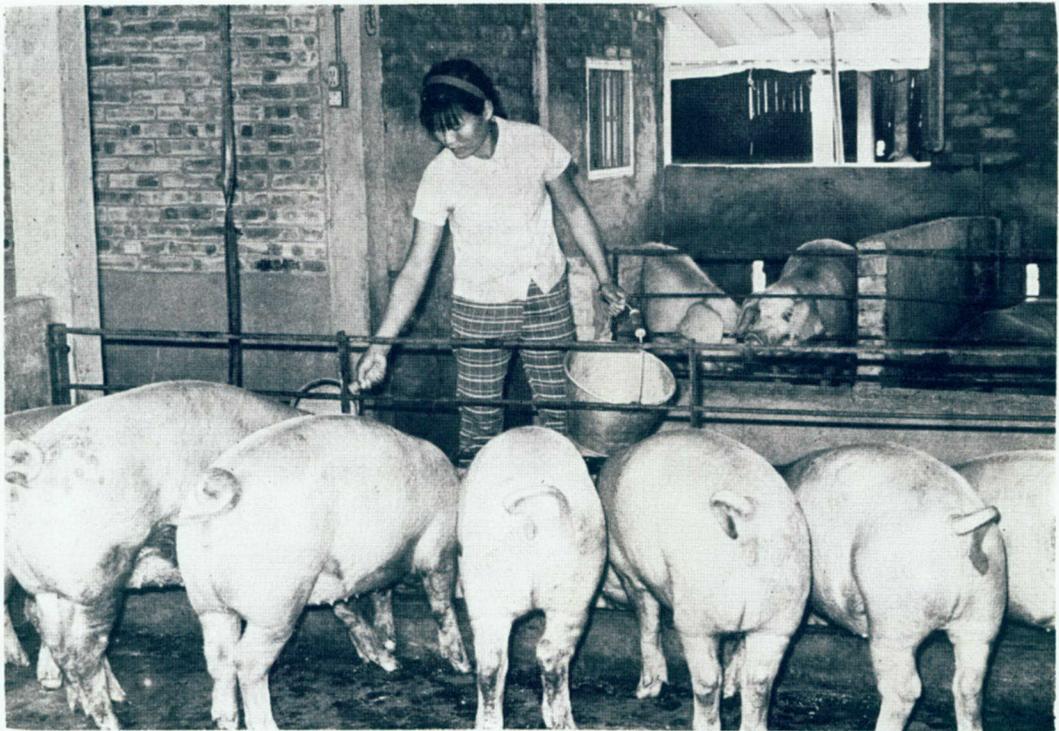
In international technical cooperation JCRR had helped train, as of June 30, 1973, a total of 5,186 foreign agricultural technicians and sent a total of 1,087 Chinese agricultural technicians to receive training abroad. With JCRR assistance in training and recruitment, the Chinese government has sent more than one thousand agriculturists to work in 36 foreign countries under bilateral agreements.

JCRR's contributions to the development of agriculture in Taiwan have been favorably commented on by Dr. Donald F. Hornig, Special Assistant for Science and Technology to U.S. President Lyndon B. Johnson, and his team of experts who visited the Republic of China in September 1967, to survey the scientific and technological facilities and needs in Taiwan. Their report after their return to the United States contained the following passages:

"The JCRR furnishes a variety of supporting forces in upgrading agriculture in Taiwan. It supplies



This newly constructed dike protects hundreds of hectares of farmland from floods during typhoons. Here it can be seen that the water level is much higher than the fields inside the dike.



Improved feeding and management practices have helped increase the production of hogs.



"Solo" papayas introduced from Hawaii are now widely grown in southern Taiwan because of their high yield and excellent quality.



JCRR Chairman Dr. Robert C. T. Lee addresses a meeting of plant protection specialists.

conceptual leadership in identifying problem areas and in planning remedial measures. It provides support for facilities, equipment and personnel. It furnishes support and coordination for nation-wide research projects and also coordination for the research, education and extension activities. In total, the JCRR provides for a planned and highly integrated agricultural development effort with a high measure of participation by individual farmers through the Farmers' Associations and other organizations.

"Other countries have established organizations to foster rural development, but few have achieved the impact of the JCRR. In most cases, the 'Ministries for Community Development' have been merely realignments of existing bureaucracies, so have lacked the flexibility that has characterized the JCRR operation. The special features of JCRR should be analyzed carefully to determine operating principles that might be applied in other developing nations. Certainly one of the most important features of JCRR is the quality of the people associated with it; one of the reasons it has been possible to attract and hold these people is that special salary arrangements were made, substantially above those prevailing in the universities and government service generally."

These words might be taken as a commentary on the achievements of JCRR to date.

4. The Role of JCRR Redefined

In the exchange of notes between the Chinese and American Governments in April 1965 for the establishment of the Sino-American Fund for Economic and Social Development, the role of JCRR was defined as an advisor to the Chinese government in matters pertaining to rural development aspects of overall economic development; as an agricultural development programming agency; as an agency of external assistance; and as an advisory body on agricultural development problems.

In fulfilling its functions so defined, JCRR will continue to exert its best efforts to promote the further growth and modernization of agriculture in Taiwan.

The existing major problems in agricultural development in Taiwan are: (1) the accelerated outflow of agricultural resources, including labor and land, as a result of industrial and trade expansion and rapid urbanization; (2) the relatively low productivity of agricultural labor due to the small size of the average farm, which makes it difficult to expand the scale of farm operations necessary to raise labor use efficiency; and

(3) the relative decline of farm income due to unstable and comparatively low agricultural prices as well as the high prices of farming materials and supplies, etc. To ameliorate this situation, the Chinese government promulgated in November 1969 a new agricultural policy consisting of the following essential measures:

—To reduce the cost of production by lowering the prices of fertilizers, pesticides, and farm machinery to maintain relatively stable agricultural prices and yet leave an equitable margin of profit for the farmer.

—To expand the scale of farm operations and encourage farm mechanization.

—To avoid overemphasis on rice production and shift the available resources to the production of protein-rich food crops and crops with greater export potential.

—To strengthen farmers' organizations and their services.

—To develop food processing industries and expand international trade.

—To improve agricultural marketing efficiency and reduce the cost of marketing services.

—To improve the agricultural financing system and provide an adequate supply of long-term, low-interest loans.

—To continue to develop live-

stock and poultry farming to increase the supply of meat, eggs, and milk.

—To continue fisheries development and expand fish export.

—To implement measures for a balanced development of forestry with equal attention to reforestation, logging, and forest products utilization.

—To step up slope land development with equal attention to land utilization and soil conservation.

—To strengthen research and raise the level of technology.

—To improve agricultural education in coordination with economic development needs.

—To revise and enact relevant laws and regulations to facilitate the realization of these objectives.

A number of action programs for implementing the new agricultural policy have since been worked out and put into operation with active JCRR technical and financial support.

Another significant program in which JCRR has been deeply involved is the Accelerated Rural Development Program, which was launched in January 1973 by the Chinese government to deal with the immediate problems faced by Taiwan farmers such as rising production cost, a critical farm labor shortage, and the widening gap between the income of farmers and that of non-farm workers. Scheduled to be completed

in two years, this crash program is aimed at speeding up the process of modernization of the rural sector by removing most of the major institutional and technical bottlenecks in agricultural development. The nine measures included in the program are: (1) abolition of the rice-fertilizer barter system, (2) abolition of the education surtax on farm land, (3) easing of the terms of agricultural loans, (4) improvement of agricultural marketing, (5) strengthening of rural infrastructure, (6) acceleration of the extension of improved cultural techniques, (7) establishment of specialized agricultural production areas, (8) strengthening of agricultural research and extension, and (9) encouragement of the establishment of industrial plants in rural areas.

JCRR played a major part in initiating the program and making plans for its implementation. Upon government instructions, JCRR has also been made responsible for alloca-

ting the grant funds totaling NT\$ 2 billion (or approximately US\$ 52 million) appropriated specially for the program from the National Treasury.

In its role as an agency of external assistance, JCRR has been and will continue to be involved in matters pertaining to international cooperation, including technical assistance in regional research and training projects such as the Land Reform Training Institute and the Asian Vegetable Research and Development Center; training in Taiwan of foreign agricultural technicians under the U.S. AID Third Country Training Program and other programs financed by international agencies; technical assistance and advice to Chinese agricultural missions working in foreign countries of which the Chinese Agricultural Technical Mission to Vietnam is one; and despatch of Chinese agricultural technicians to receive advanced training abroad.

ORGANIZATION CHART

of the

JOINT COMMISSION ON RURAL RECONSTRUCTION

