

*Contemporary Issues in Philippine Rice Farming* edited by Akimi Fujimoto, Corazon B. Lamug, and Toshiro Matsuda, Tokyo, World Planning Co.,\* 1993, 303 pp.

The Philippines is one of the South and Southeast Asian countries which has the highest diffusion rate of modern rice varieties (MV) against total rice area, having recorded approximately 90 per cent in the late 1980s. Along with MV diffusion, rice yield per hectare has dramatically increased from 1.31 tons in 1965 to 2.72 tons in 1990 as shown in International Rice Research Institute, *World Rice Statistics 1990*. Yet, the current level of rice yield in the Philippines is still way behind the level of top yield countries, which means that the yield potential of modern varieties has not yet been fully harnessed despite widespread adoption of new varieties. In addition, there remains the problem of rural poverty. In spite of the tremendous increase in production after MV diffusion, poverty in rural areas has actually worsened. According to a government publication,<sup>1</sup> poverty incidence in rural Philippines has increased from 56 per cent of the total households in 1971 to 64 per cent in 1985.

In full awareness of this situation, a three-year joint research project was organized by Japanese and Filipino scholars. The project began from the common view that current productivity improvement was stagnant; that there were serious problems in income distribution among farmers; and the process of infrastructural development, and technological as well as institutional innovation should be followed up by management innovation in order to further increase productivity as well as solve the poverty problem for the majority of peasant farmers.

In view of the necessity to explore basic hindrances that have blocked further productivity improvement after nationwide extension of modern varieties and farm practices, the project focused its attention on clarification of farm-level problems of new rice technology and income distribution. To this end, two villages in Nueva Ecija (villages 1 and 2) and one in Laguna Province (village 3) were chosen for study sites. Field studies were conducted in the Philippines from 1988 to 1990, and the final outcome of the project is this volume.

The book consists of fifteen chapters organized into five parts, namely, (1) government policy and macro issues, (2) land and water issues, (3) labor issues, (4) technology issues, and (5) production and marketing issues. General background of study sites and respondents are given by Alviar's two papers. The three villages appear to be very fortunate in the Philippine context since they were all located in irrigated areas, enabling farmers to practice rice double-cropping. Farmers in these villages were technologically very progressive as implied by the high-average yield of rice from 79 to 107 *cavans* per hectare. Average farm size of the villages varied between 1.6 and 2.0 hectares. In terms of land tenure, villages 1 and 3 were dominated by CLT (certificate of land transfer) holders and tenants, respectively, while village 2 featured a mixture of three types, owner farmers, CLT holders, and tenants.

As for the farm-level problems of new rice technology, varied but valuable observations and suggestions are presented in different papers.

Shimizu has confirmed, through production-function analysis, basic assumptions on the stagnation of productivity improvement, stating that the technology of rice pro-

\* The publisher's address: 2-18-2-403, Akasaka, Minato-ku, Tokyo 107, Japan.

<sup>1</sup> Republic of the Philippines, *Medium-Term Philippine Development Plan 1987-1992* (Manila, 1986), p. 33.

duction was not firmly established and there was some inefficiency in input use.

Hirose looked into the relationship between farming technologies and environmental factors in order to determine the appropriateness of technology adoption. Based on the careful analysis of different farm practices among the three villages in relation to climate, soil, and hydrologic conditions, he suggested that the key factor for establishing suitable technology was to find how the improved varieties can be incorporated into other cultivation practices.

There were yield-level differences among the three villages. The highest average yield was observed at village 1, recording 107 *cavans* per hectare while the second was 96 *cavans* for village 3 and the lowest was 79 *cavans* for village 2. The vital role of irrigation in increasing rice yield has been widely accepted. Masuda especially emphasized the importance of artificial control of water depth according to growth stage, and therefore analyzed the frequency of water inspection. The fact that the time spent for water inspection was the most in village 2, he attributed to the existing differences in installation of a better irrigation system and completion of land consolidation in village 1.

Dela Cruz, who carried out a cost and return analysis, put emphasis on better cultural practices (combination of transplanting at wet season and direct seeding at dry season) and intensity of input utilization as yield differential factors.

After reviewing government irrigation policies and their role in promoting irrigation system development, Kanazawa argued certain limitations in the role of government for development of irrigation water management, and instead, urged appreciation of indigenous systems of water management in rural communities. He particularly emphasized the importance of promotion and development of farmers organizations. This implies the necessity for promotion of research on indigenous organizations for irrigation water management since the Zanjera irrigation association in northern Luzon is the only case that has so far been documented.<sup>2</sup>

Based on a detailed examination of land use in the study villages, Matsuda and Igata argued that Philippine farmers appear to have been in a stage where farm management improvement could only be made through further intensification of rice farming and the promotion of diversification. They urge the necessity of farm land development for more intensive and diversified farming, in particular multiple cropping.

With respect to the income distribution problem of farmers and landless rural workers, attention was given to aspects such as cost and return of rice farming, relationship between rice production and land tenure, marketing of rice, changes in labor contract, and so on.

From her cost and return analysis, Dela Cruz revealed several basic facts of rice farming in the study villages such as returns to labor (3.90 in village 1, 1.93 in village 2, and 3.28 in village 3), returns to current material inputs (6.06, 6.96, and 4.20 in the same order of villages), and operator's share from gross harvest (61, 32, and 49 per cent in the same order). Average returns above all costs were P36,434 per farm in village 1, P21,680 in village 2, and P17,880 in village 3 as is estimated from Table 4 on p. 285, while the poverty threshold in 1988 was P34,572 in Central Luzon, and P33,984 in Southern Tagalog according to the 1990 *Philippine Statistical Yearbook*. It is very difficult to say from these data whether rice farming is profitable or not. But it is at least noteworthy that only the farmers in village 1 can get sufficient net income from rice farming despite the fact that the study villages were among the best in the Philippines.

<sup>2</sup> Robert Y. Siy, Jr., *Community Resource Management: Lessons from the Zanjera* (Quezon City: Ateneo de Manila University Press, 1982).

In his article entitled "Agrarian Reform and Persistent Problems in the Philippine Rice Villages," Fujimoto tried to evaluate the relationship between rice production and land tenure. He pointed out the emergence of new tenancy relations among villagers such as a new borrowing practice in which a farmer badly in need of a substantial amount of cash approaches a well-to-do family and acquires a loan in exchange for providing usufruct of his land. As for the relationship between land tenure relations and technology introduction, he concluded that there was none.

Based on his own income estimation, Fujimoto stated that average farm households were above the poverty line while small farm and tenant farm households were in severe poverty. In order to cope with rural poverty, he suggested the further increase of rice productivity and intensification of land utilization.

Based on her study of paddy marketing in three villages, Piadozo picked up three factors retarding the augmentation of farm income; i.e., limited choice of market outlet due to smallness of sales volume, the lack of drying and storage facilities which prevents the farmers from obtaining higher prices, the lack of reliable marketing information and credit availability. She argued that the only possible solution was formation of farmers' cooperatives or associations as well as the establishment of efficient marketing information system.

The worst-off group in the rice sector which has been bypassed by government development programs are landless rural workers. Aragon successfully demonstrated the decline of agricultural wage income in the past decade. Inevitably these households have been most severely affected by technological innovation. They were indeed among the most impoverished groups in these rice growing villages. She suggested three policy initiatives; provision of extension services in vocational or nonformal training, training on formation and management of organizations, and price policy to increase demand for rural labor.

The foregoing are the major issues discussed by this book, which is not only informative but also comprehensive, and full of important policy implications. This is because researchers involved in the study are from such varied disciplines as economics, farm management, sociology, agronomy, ecology, and consequently the approach to the common problem of technology and income distribution was multi-dimensional. That is a further good result of this kind of collaborative study by scholars from two nations.

One important omission which leaves this reviewer not fully satisfied is the fact that no paper presented a holistic view of the village communities from which data and information have been gathered. From the standpoint of empirical study, scholars frequently rely on the data from field studies at village level. The greatest merit of such studies is their presentation of data and information in the context of the socio-economic as well as cultural relations of the village community. In that sense, the merits of this empirical study have not fully been exploited. However, that does not detract from the tremendous value of this book. (Hiromitsu Umehara)