A Book Review of "Glutinous Rice in Thailand" by Dr. T. Watabe

YASUO TAKAMURA

Researcher, Faculty of Agriculture, Kyoto University

This report is a survey on agriculture in Thailand conducted by the Center for Southeast Asian Studies of Kyoto University. The author, Dr. Tadayo Watabe, Professor of Tottori University, an agronomist well informed and experienced in the physiological study of glutinous rice, was engaged the survey in 1963 and 1965 in Thailand.

In Thailand, glutinous rice accounts for about 33% of the total rice production; more than 70% and 90% of the cultivated area are under glutinous rice cultivation in the northern and northeastern regions respectively. The importance of glutinous rice as a staple food for local inhabitants is obvious. On the basis of such background, the author clarifies the characteristics of glutinous rice varieties as well as the present state of rice cultivation in all respects in north Thailand by proposing a counterplan to increase the yield of rice in the region.

The first two chapters are devoted to figure out the main characteristics, the geographical distribution, and to clarify an outline of rice cultivation, climatic environment, irrigation and land utilization in north Thailand. According to the author, the amount of seasonal rainfall during the cultivation period is most important and the temperature is, however, of limited importance as statistical data shows that drought during the first half and floods during the second half of the growth period are usually the main causes of decreasing the rice production in the area.

In the following chapter on glutinous varieties, classifying 78 varieties of paddy rice grown in the region, the author indicates that all of them belong to the "indica" type, or most of them to the B type and fewer varieties to the C type as judged by their shape. Fourteen varieties of them, however, could not be clearly identified as either indica or japonica by phenol reaction and KOH reaction tests. Since there are fairly large numbers of definite japonica-like varieties among the upland rice varieties in the region, the author suggests that the classification of indica and japonica could not be strictly applied and that there seem to be numerous transitory varieties. Other attributes, such as photo-sensitivity, growth duration and dormancy of seeds, etc. of rice varieties in the region are also discussed by the author.

The transplanting but not the broadcasting method is almost universal in north Thailand. Its traditional methods as actually carried on in the region are summarized with many figures and discussed in details in another chapter. The author recognizes some merits of traditional methods such as close seeding in the nursery beds, the cutting of leaves at transplanting and double transplanting and so on, even though the increase of yield by relying on these methods alone is limited.

Morphological characteristics, dry matter production and yield components of the typical glutinous varieties under different nitrogen levels are given in the chapter on growth habits. Their morphological characteristics e.g. plant height, number of leaves on main culm and total length of elongated internodes show some aspects of being in a transitional stage from indica to japonica and their growth patterns indicate no existence of vegetative lag phase.

In the latter chapter, based on statistical data, available information and results of his field survey, the author discussed the possibility of increasing yield in the region. To achieve the

increase of yield, the author recommends that the number of hills per unit area in single-cropping fields and the number of panicles per hill in double-cropping fields are to be increased.

In the concluding chapter, the author proposes a counterplan to increase yield in north Thailand. Besides the general plans for this purpose which are applied to rice cultivation in tropical Asia, the author suggests the breeding of varieties suitable for cultivation in the numerous paddy fields consisting of poor soil and the systematization of cultivation—sowing in August, transplanting in September and harvesting in November—in the fertile paddy fields in north Thailand.

As the author stated in the introduction, this is probably the first agronomical study of rice in north Thailand. It would contribute to the understanding of rice in the tropics and especially to the advancement of rice cultivation in north Thailand.

Requests for this book may be made to the Center for Southeast Asian Studies of Kyoto University. No. 2 in the Reports on Research in Southeast Asia, Natural Science Series; The Center for Southeast Asian Studies, Kyoto University, 1967; 148 p. 42 plates, 7 in color.