
EDITORIAL

Rice-Transplanters

THERE is little doubt about the virtues of transplanting rice. Transplanting allows extra time for field preparation, ensures adequate spacing between plants, induces tillering, and facilitates effective control of weeds, pests and diseases, all of which contribute to substantial yield increases. The Japanese who developed the technique popularly known as the "Japanese Method" of rice culture place particular emphasis on the value of transplanting seedlings in regular rows. In this method, seedlings raised in well-fertilized nurseries are transplanted in regular rows and heavily fertilized in split applications. Planting in rows permits the use of a rotary weeder to control weeds in the growing crop, and it also facilitates other operations such as fertilizer application and pest control.

In spite of its proven virtues, row-planting of rice seedlings has not made satisfactory headway in Ceylon. Transplanting rice is a traditional practice in the Matale, Kandy and Kegalla Districts of Ceylon, but the seedlings are seldom planted in regular rows. In these areas, transplanting is done mainly by women, and the work is carried out on a system of mutual assistance. In other parts of the country, however, transplanting is practised only to a very limited extent.

The comparatively quick acceptance of the practice of row-seeding rice, with the aid of mechanical devices, is perhaps a fairly accurate indication that the farmers' reluctance to adopting transplanting is chiefly due to its laborious back-breaking nature. Transplanting by hand consumes about 12 units of labour to complete an acre in a day. With unskilled labour the cost can be prohibitive, even if the labour is available. However, quite often there is a paucity of agricultural labour during the peak cultivation seasons in the major rice-growing areas.

With the rapid spread of rice varieties that show a marked response to transplanting and heavy fertilization, the need to popularise transplanting is becoming increasingly important. The H-4 variety of rice which has by its wide regional adaptability, resistance to disease, and high fertilizer response, become popular in Ceylon, has been found to give very high yields when transplanted at sufficiently wide spacing and fertilized heavily. H-4 is a "panicle number" type with a yield potential of 160 bushels per acre, and it apparently responds to transplanting by the production of an increased number of ear heads.

Transplanting of rice has been an established practice for centuries both in China and in Japan, where it is a manual operation done by peasants. Although the need for mechanising this operation has been felt in recent times, particularly in China where there is an acute need for deploying the labour to industrial projects, it had remained only a hope till Lin Tichiang, a Chinese research worker of peasant origin perfected the transplanter now known as Nan 105 B Type. This transplanter which can be drawn in the puddled field by a single bullock or by a small tractor, plants eight neat rows of seedlings in each trip. In China this transplanter is said to cost the equivalent of about Rs. 800. It requires two units of labour to operate and is capable of transplanting about 5 acres in a day.

Since 1956, over 90 different types of mechanical transplanters have been tested out in China and two other types, both hand operated, have shown great promise. Liling No. 2 and Kwangsi 59-3, as these two types are named, can be operated by one person and they are capable of planting about $\frac{1}{2}$ acre and one acre respectively, in a day. In China they cost the equivalent of about Rs. 20 and Rs. 80 respectively.

All these three models were shipped from China as a magnificent gift from the government of the People's Republic of China to the people of Ceylon and were demonstrated with success recently at the Hingurakgoda Farm by a Chinese technician specially flown out for the purpose. The successful development of mechanical devices for transplanting rice seedlings in regular rows under puddled conditions is a significant advancement in the mechanization of rice culture. Rice-transplanters are labour and time saving devices which bid fair to revolutionise rice cultivation in Ceylon and substantially help in achieving self-sufficiency in the not too distant future.