

INTRODUCTION.

Rice, being a crop grown predominately by peasant agriculturalists, faces most^{of} the problems of cultivation associated with small scale peasant farming. Being the staple food of many of the peasants who grow it, rice in many ways directly effects the prosperity of these people. Whereas a good crop can give relative prosperity, a poor crop can bring near famine and a very low standard of living. Consequently anything which can lower the present hazards of rice production, will in turn increase the prosperity of the peasants themselves.

One of the main causes of crop failure in peasant farming practice, is the shortage of labour at critical periods of cultivation. This is due to the fact that most peasant farmers, where possible, take employment outside their holdings in neighbouring estates etc. Their holdings are then run in the evenings and at weekends. This means that only a small proportion of the day can be spent on their own crops. Also peak periods of labour requirements on the holdings often clash with similar peak periods on the estates and the peasants employed there may be expected to work extra hours at these times. Consequently the peasants' crops tend to be neglected, planting is done late, weeding is carried out insufficiently and the yields fall below average.

An improvement in the actual cultivation of the rice crops on these holdings could, therefore, quite feasibly be attained by mechanisation, if that mechanisation could lower the number of man hours per acre required in cultivating the crop. Also, of course, the costs of the mechanical cultivations must be comparable with the costs of present hand cultivations. The cost of hand cultivation is also hard to assess in terms of

direct costs to the peasant farmer due to the fact that most work is done by unpaid family workers. However, on holdings where most of the family labour is employed full time on the farm, mechanisation might free some of the labour and allow some members of the family to take up outside employment. Which ever may be the case, the main deterrent to mechanism is the lack of capital characteristic of peasant farmers. Their holdings are based on short term crops of low capital investment, which quickly yield a return. Also many peasant holdings are farmed at subsistence level only and yield no cash income to the farmer. In most cases, therefore, mechanisation would have to be government sponsored.

If the problem of supplying capital can be overcome, the next problem arises in the selection of suitable machinery. The holdings, small in themselves, usually provide further difficulties due to extreme fragmentation. Hence one holding may be made up of several widely scattered plots each only a fraction of an acre in size. Implements and machinery employed must therefore be suited to these special circumstances which immediately cuts out large tractors and the usual cultivating implements which are popularly used in temperate regions. The need is more for small, portable implements characteristic of farming on a market garden scale, that is, small hand controlled tractors with a range of easily detached implements and fittings which will allow the single power unit to do all necessary cultivations.