D. The Korean Farm

Effective land reforms after the Japanese occupation and in the early period of the Korean Republic were a salient factor in improving rural equity in Korea. Korean farmer households, decreasing as a percentage of the total population from 51.6 percent in 1968 to 28.9 percent in 1979, may not legally own more than three hectares of farm land (excluding upland orchards). Some 29.8 percent of farm families cultivate land under 0.5 ha, and 35.3 percent between one-half and one hectare, 25.7 percent between one and two hectares; and only 5.4 percent over two hectares. The consequences of relatively equitable land distribution are that agricultural research and rural development programs, if they reach the farm as they do in Korea, are important factors in rural equity.

The growth of electrification of rural areas greatly contributed both to improved production and increases in the standard of living. Except perhaps for small, isolated islands and a few scattered farmhouses, farm families have access to electricity (some 83 percent have television sets). Even in villages that were traditionally composed of swidden farmers, some could afford the 3,000 won monthly electric charges.

The pervasive use of plastic to retain moisture and retard weeds on upland crops such as peppers, to protect against cold on rice seedlings, and to grow winter vegetables in the extensive plastic greenhouses have destroyed the traditional aesthetic scene of the Korean landscape (creating a problem for those who paint in the traditional oriental style), but without question it has improved farm income and helped transform the rural economy.

The rural economic structure, however, is dependent on rice. It provides more than half of the farm household income. Although the area of irrigated paddy has generally remained constant, the area devoted to the higher yielding varieties of Tongil has risen nationally from 15.9 percent of the rice area in 1972 to a high of 76.2 percent in 1978. With this increase came a steady rise in production per hectare from 3.86 MT to a high of 5.53 MT in 1977.

An increasing national market orientation by the farmer coupled with an intensive campaign by guidance workers prompted this shift. It was accompanied by improvements in cultivation techniques and technological innovations that also spurred the increased yields of the traditional varieties of rice. This remarkable shift was predicated on two factors beyond the farmers' control but at least in part within the purview of agricultural research: the Tongil varieties in their earlier years were resistant to blast disease and the normally warm weather prevented cold from undercutting production increases.

It is common that new varieties of rice are resistant to blast for a number of years, but it is equally apparent that new races of blast develop, especially when vast contiguous areas are planted to the same strain. This occurred in 1979, causing a drop both in