

are above the market value. Considerable barley is still grown because the winter opportunity costs for farm labor in some areas are minimal.

White potatoes and soybeans, however, were marginally profitable in 1977, but demand has declined as they compete on the same land with vegetable crops such as red peppers, onions, green onions, and cucumbers, for which prices are higher.

The effects of improved agricultural technology on the farm have been important. The Tongil strains require 20 to 30 percent more labor. Thus there is an increased demand for labor at a time when there have been massive population flows, especially of the most productive men and women, to urban areas. Labor costs have increased for both sexes, although disparities between them exist, and in some areas farm labor is the least attractive alternative. For example, in a fishing and farming village, male workers could earn daily only 6,000 won for farm work, but 10,000 won on the fishing boats.

In sum, there has been a substitution of mechanization for labor. The mechanization hierarchy change is first to tillers (there were 289,000 in Korea in 1980) since the most expensive farm cost involves cattle and male workers (female tiller operators are being trained by ORD, a welcome change). The second change is to the mechanical transplanter, a less cost-effective measure as transplanting mainly involves females at lower wages. The shortage of transplanting labor was apparent during the evaluation, as even the military was mobilized to assist in this process. The last change is to binders and small combines. As the farm population moves to urban areas, there will be an increasing demand for mechanization, which will become ever more important and will require increasing attention.

Agricultural research has contributed positively to rural equity. It has provided far greater benefits for the farmers than for the urban population, and thus, in a sense, represents a subsidy of the rural population by the nation as a whole.<sup>8/</sup> It has helped both smaller and larger landholders. The government's interest in rural equity, both a political and an economic need, is expressed in rice purchase price subsidies that have improved the rural-urban terms of trade. In some regions, due to poor yields of the high-yielding varieties, price support alone was not adequate to raise rural income. Thus in Kwangwon Province, for example, rural incomes rose in the past three years in current terms. In real terms, however, accounting for inflation, they declined. The government has helped the small holders (those with less than one-half hectare of paddy) by giving them priority in rice purchases, especially in 1980. In 1981, because of a current drought, the central government allocated \$20 million to subsidize farmers. It also provided mobile water pumps and planted additional, later seed beds of rice, the seedlings from which will be distributed free to small farmers if their current ones cannot be transplanted because of water shortages. The government's concern with equity as an economic good and a political necessity seems real and continuing.

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<sup>8/</sup> See Appendix E, "Profitability, Costs and Revenue of Five Crops," by Kwan S. Kim.