

I. PROJECT SETTING

The year 1980 was disastrous for Korean rice agriculture. An abnormally cold summer prevented the maturing of rice, the main staple grown ubiquitously on every available plot of even marginally irrigated land. The Korean economy went into shock as rural production and incomes suffered when rice production declined by one-third. Already beset with political turmoil after the assassination of President Park Chung-hee in 1979 and the Kwangju riots of May 1980, hit by a major slump in exports because of a worldwide recession, and suffering from heightened import requirements and inflation caused by oil price increases, there was a crisis of political legitimacy--for legitimacy for the past two decades in Korea was a product of continuous economic growth.

The economy as a whole declined in 1980. Real GNP was down by 5.7 percent, thus temporarily reversing the nation's spectacular advances that had pushed growth over 10 percent annually. Agriculture, however, was even more severely affected; rural income dropped by 24 percent. Much of the rural progress that had been a product of a deliberate change in national development strategy beginning in the early 1970s was in question. It was based on an incentive price support policy that provided Korean farmers with over two times the world market price for rice. Particularly adversely affected were the high-yielding rice varieties.

These rice varieties, known as Tongil ("unification"), were developed from a series of crosses between the indica varieties from Southeast Asia and the local and more traditional, but improved, japonica strains. From their introduction in the early 1970s and the release of the first variety to the farmers in 1972, they were known to be more susceptible to cold weather and temporarily more resistant to blast, a fungal disease. They promised, and delivered, substantially higher yields under greatly improved methods of cultivation, water control, increased fertilizer, pesticides, and herbicides.

As a result of the release of these new varieties and as a consequence of the vigorous encouragement by government of their cultivation, which in the early period of their expansion even included air freighting of seed from the Philippines, Korea became self-sufficient in rice in 1975. It was the first time since the Second World War that this long-sought objective had been reached. Rice self-sufficiency was an objective that was central to the Korean administration: it was strategic, for it furthered Korean autonomy and demonstrated to North Korea that South Korea was progressing; it was economic, for it saved almost \$200 million annually in foreign exchange; and it was political, for it was dramatic evidence indicating that President Park, who had almost lost the 1971 election because of significant deterioration of his support in rural areas due to a