

- tolerance for cold temperatures, especially in the seedling stage and during the ripening period, and shorter maturing; and
- resistance to blast disease, bacterial leaf blight, virus stripe disease, brown leaf hopper, green leaf hopper, rice stem borer and other insects and diseases.

Probably one of the most important dates in Korea's agricultural history was 1965, when the first cross was made leading to the release of the japonica-indica hybrid to farmers in 1972 to produce seed. The primary purpose for making this cross was to introduce genes resistant to rice blast from the indica rice and to retain the other desirable characteristics of the commonly grown japonicas. It was realized by rice breeders, however, that this wide cross could result in poor grain quality (taste), low seed set (fertility) and also low grain yield. Indica rice grew very tall, so it was susceptible to lodging, and it did not mature under natural conditions in Korea. During the selection process in the early generations, lines were selected for the earlier maturing and shorter plant height characteristics similar to the japonica type grown in Korea. After careful observations and selections for 12 generations, the variety Tongil was widely disseminated to farmers in 1974. Close cooperation and collaboration between the Office of Rural Development (ORD) and the International Rice Research Institute (IRRI) made it possible to grow two generations of rice each calendar year in the tropical IRRI climate.

The cultivation of the Tongil^{1/} variety and subsequently released varieties proved that Korea could attain rice self-sufficiency for three or four years (see Table C-1, p. C-7). Due to unforeseen circumstances, these japonica-indica hybrids have been somewhat disappointing during the 1978-1980 seasons, as colder conditions than normal prevailed and the rice blast disease became much more severe.

Korea has been virtually unique in its rice program in that few, if any, countries have developed such a complete technical, informational and economic package to instruct and encourage farmers to change many of their traditional practices. The Korean experience is so different and so comprehensive that it is worthy of description. No facet was left uncovered in this comprehensive program.

The complete package associated with the introduction of Tongil rice changed the traditional farming technology. The expansion of Tongil rice intensified and speeded a comprehensive well-organized and effective agricultural extension service. Along with the concentrated expansion of the new rice strain, joint planning and encouragement of the farmers were attained through concentrated administrative support by the government. The resulting increased production of Tongil brought about several changes in the consumption patterns of farm households. Changes in farming technology and socioeconomic conditions were brought about with the relatively rapid increase in the areas cultivated with Tongil.

^{1/}For the sake of brevity, Tongil is used throughout this paper to include it and all subsequently released japonica-indica varieties.