

## B. Improvements in Farming Technology

The most obvious benefit from the cultivation of Tongil was the increase in productivity for the three years after its introduction. The area planted to rice remained practically constant during these years, and the total production significantly increased by about one-third (See Table C-2, p. C-7).

Undoubtedly, the adoption of the new cultural practices was just as important, if not more so, in attaining self-sufficiency in rice as the planting of Tongil. This improved technology has been used more recently in the cultivation of the traditionally grown rice and has resulted in a very significant increase in productivity.

- Farmers became aware of the advantage of high quality seed with the introduction of Tongil. This seed was produced by ORD, which took the necessary steps to ensure that the rice was purer and higher in germination than that usually planted by farmers. In addition to accelerating the selection program of growing alternate generations at IRRI and in Korea, seed was multiplied in the Philippines and flown to Korea for distribution to selected farmers. This seed multiplication program shortened the program by one year and Korea became self-sufficient in rice one year earlier. The Philippine seed was planted on farms throughout the country as demonstration trials. The extension workers were provided opportunities to observe the adaptability of Tongil under various local conditions and at the same time were able to hold training sessions on cultural practices at the demonstration sites. These trials were also used as multiplication plots and seed was harvested for the following year for distribution to an increased number of farmers.
- Tongil requires earlier planting in the seed beds than the traditional varieties at times when the temperatures are lower. To protect it from the cold weather at sowing required the use of improved beds covered with plastic (See Tables C-3 and C-4, p. C-8).
- Virgin soil, lime and silicate fertilizers were more frequently applied by farmers planting Tongil. They also did a better job of preparing their fields by plowing more times prior to transplanting the rice seedlings (See Table C-5, p. C-8).
- An advantage of Tongil is its ability to withstand heavier rates of fertilizer application without lodging and thus be more productive. Tongil farmers' soils were tested and rates of fertilizer determined for optimum yields. The method of applying fertilizer was changed; in addition to the basal application at the time of transplanting, the number of applications of top dressing was increased from about two times with the traditional varieties to three times with Tongil. The fertilizers were applied with more systematic methods.