Development of Japonica Rice Cultivar ‘Tainung77’

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Abstract


Rice quality improvement has been recognized as one of the main goals for local rice breeders in Taiwan. In order to breed a variety which is as good as Japanese ‘Koshihikari’ and also suitable for Taiwan’s unique cultivating environment, Taiwan Agricultural Research Institute used a genetic combination of ‘Norin 22 × Norin 1’ since 1997. The modified bulk method was adopted in the early generations to fix the genetic settings followed by pedigree method for phenotypic selection in the breeding procedure. After the processes of observation, primary yield, and advanced yield trials, the line of ‘Tainung-Yu914079’ (‘TNGY914079’) was chosen for the early-maturity regional yield trails and various agronomic characteristics tests in 2004–2005. Results showed that the chosen line carry several superior traits, such as mid-early maturity, lodging resistance, high yield potential, and excellent performance in grain appearance and flavor. It was renamed as ‘Tainung77’ in 2011 and became an alternative quality rice for the market.

Key words: Japonica rice, Yield characters, Rice quality.