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Effects of Cultural Practices on the Grain Yield and Quality of Ratoon Rice. I. Effects of Cutting Height of the Ratoon Seedlings[1]

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summary

Field experiments were conducted in 1993 and 1994 at Hualien District Agricultural Experiment Station to study the effects of recutting height of ratoon seedlings on the yield and quality of rice. The japonica rice cultivar Taikeng 6 was grown in the first crop by transplanting culture followed by ratoon culture in the 2nd crop. After the 1st crop rice was harvested, the ratoon seedlings of 15-20 cm in height were cut with a mechanized device at the following heights: 5, 10, and 15cm aboveground; the fouth treatment was non-cutting while the conventional transplanting culture was used as the check. Experimental design were arranged in a nested randomized complete block with four replications, and the plot sizes wase 27 m2. The performance of agronomic characteristics, and grain yield and quality of the ratoon rice were evaluated.

Experimental results indicated that cutting treatment, especially at 5 cm above-ground, improved heading uniformity of the ratoon rice by shortening the duration needed for complete extrusion of panicles of the whole plot. Grain yield of the ratoon rice, irrespective of cutting height treatment, was lower than that of the transplanted rice (4,376 and 4,496 kg/ha for 1993 and 1994, respectively). However, cutting at 5 (3,208 and 3,771 kg/ha) and 10 cm (3,203 and 3,958 kg/ha) aboveground were superior to non- cutting treatment (2,664 and 3,296 kg/ha) in grain yield. Although the appearance and milling quality of the ratoon rice were poorer in comparison to those of the transplanted rice, the positive effects of cutting treatments were significant. Eating quality of the ratoon rice was also lower than that of the transplanted rice. In conclusion, ratoon rice is not comparable to transplanted rice in terms of both grain yield and quality, nevetheless, cutting the ratoon seedlins at 5 cm is worth to be recommended for this labor-saving practices as it improves significantly the performance of ratoon rice.

(Key words：Rice, Oryza sativa. L., Ratoon rice culture, Rice quality.)

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