Evaluation on Growing Hami-melon (*Cucumis melo* var. *saccharinus*) cv. ‘Aurora’ in Open Field in Yilan District [1]

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Abstract

The Hami-melon cultivation in Yilan is one of the local distinctive industries. In recent years, due to the intensified climate change, the cultivar ‘New Century’, which was conventionally grown by farmers, performed poorly. Therefore, the trial to introduce new cultivars is required. In this study, open field cultivation of the new cultivar ‘Aurora’ and ‘New Century’ was compared to evaluate the feasibility for improving Hami-melon industry in local environment. The results showed that ‘Aurora’ had a higher survival rate of 98.8% than ‘New Century’ (94.3%) at the initial stage of planting. ‘Aurora’ also performed significantly better than ‘New Century’ in terms of main stem, leaf fresh and dry weight and total leaf area, indicating that ‘Aurora’ grows better for open field cultivation. The proportion of lateral stem in ‘Aurora’ was significantly lower than that of ‘New Century’. As a result, ‘Aurora’ was more beneficial for cultural management. In terms of fruit quality, the fruit weight and the fruit length of ‘Aurora’ were significantly lower than those of ‘New Century’. The estimated yield per unit area of ‘Aurora’, 19,401.9 kg/ha, was also lower than that of ‘New Century’, 24,249.7 kg/ha. However, the soluble solids content in ‘Aurora’, 13.3°Brix was higher than that in ‘New Century’, 11.9°Brix. The acceptance of hedonic sensory evaluation for ‘Aurora’ was also higher, too. Therefore, ‘Aurora’ had the potential for open field production of Hami-melon in Yilan as a substitute to the conventional cultivar ‘New Century’. However, the fruit weight of ‘Aurora’ was not sufficient. How to increase its yield is needed for further study.

Keywords: melon, ‘Aurora’ Hami-melon, ‘New century’ Hami-melon

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