

A Comparison of Organic and Conventional Farmings on Grape Production

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ABSTRACT

This study was conducted from 1994 to 1997 to investigate the effect of three farmings such as chemical, intermediate, and organic farming on the yield and quality of grape. Chemical farming means only applying chemical fertilizers and spraying synthetic chemicals for main nutrient supplement and for pest or weed control, respectively. Intermediate farming means partly applying chemical fertilizers and organic fertilizers for plant nutrient supplement, and only spraying synthetic chemicals for pest or weed control. Organic farming means only applying organic fertilizers and spraying natural reagents or physical method for plant protection. The results showed that there is no significant difference in producing summer season grape berry at the 1st year among the three farmings. However, in 2nd and 3rd year, the organic farming got the lowest yield of summer season grape among all three farmings. In 2nd year, the yield of organic farming was lower than that of chemical farming by 25%, while by 46% in 3rd year. The decreasing yield of organic farming was mainly due to the increasing invasion of pests and diseases that seriously harmful to cluster number, cluster weight and berry weight. In summer season berry quality aspects, the organic farming had the highest sugar content even that the difference was not significant. In 2nd and 3rd year, there were no significant differences in acidity and sugar content /acidity among three farmings, while the organic farming got the higher sugar content in the three years, higher acidity in 1st year and significantly lower sugar content/ acidity than that of chemical farming. As to the yield and berry quality of the winter season berry, there are no significant differences among them, thus, the organic farming is relatively proper to the production of winter season grape.

Key words : grape, organic farming, production.

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