

玫瑰香葡萄Y型架与篱架叶幕层光照强度及果实品质的差异

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Differences of Leaf Canopy of Y Frame and Vertical Trellises on Light Intensity and Qualities of Muscat Hamburg Grape

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摘要 以6年生玫瑰香葡萄为试材,研究了Y型架和篱架不同叶幕层的光照强度和产量分布,测定了果实品质和芳香化合物。结果表明:两种架型的光照强度与叶幕层高度、宽度分布有显著的相关性,Y型架在高0.2~0.6 m和1.8 m处的光照强度优于篱架;但在1.0~1.4 m则低于篱架。Y型架61.61%的产量集中在定植行两侧0.3 m,高度1.0~1.4 m的范围内;篱架55.90%的产量集中在定植行两侧0.15 m,高度0.6~1.0 m的范围内。Y型架果实总糖和抗坏血酸含量分别为16.13%和8.72 mg·kg⁻¹,显著高于篱架(14.54%和7.21 mg·kg⁻¹);Y型架果皮原花色素含量为4.72 mg·g⁻¹,显著低于篱架(6.30 mg·g⁻¹)。Y型架和篱架果实中检测到芳香化合物种类为32种和30种;萜醇化合物的相对含量分别为32.91%和6.33%;其中,Y型架果实中里那醇的相对含量是篱架的5.7倍,可见,Y型架葡萄果实风味优于篱架。

关键词: 葡萄 架型 光照强度 品质 芳香化合物

Abstract: Six-year-old 'Muscat Hamburg' grape was used as the material to study the difference in relative light intensity, yield distribution of leaf canopy, fruit quality and aromatic compounds between 2 types of grape trellis Y frame and vertical trellises. The results showed that there was significant correlation between light intensity, height and width of leaf canopy. The areas with 0.2-0.6 m and 1.8 m in Y frame showed higher photosynthetic than vertical trellises, but the areas with 1.0-1.4 m were lower than vertical trellises. Total sugar and ascorbic acid content was 16.13% and 8.72 mg·kg⁻¹ in the fruit of Y frame, which were significantly higher than 14.54%, 0.40%, 16.12% of vertical trellises. However, the procyanidins in the fruit of Y frame was 4.72 mg·g⁻¹ that was significantly lower than 6.30 mg·g⁻¹ of vertical trellises. Thirty-two kinds of aromatic compounds were detected in Muscat Hamburg grape of Y frame, which was significantly higher than thirty kinds of vertical trellises, and there was significant difference in the aromatic compounds contents as well. The relative content of terpenols in the fruit of Y frame was 32.91% that was higher than 6.33% of vertical trellises, and the linalool content in the fruit of Y frame was 5.7 times as much as vertical trellises. These results show that the flavor of grape fruit of Y frame was better than vertical trellises.

Keywords: grape, frame type, light intensity, quality, aromatic compounds

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