

Studies on the maturity indices of hami-gua melon¹

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summary

This experiment was conducted for the purpose of obtaining information regarding growth and maturation of Hami-Gua Melon. Growth habits and changes in physical and Chemical characters of the fruit of Hami-Gua Melon at different stages of growth were investigated. The results were as follows:

After flowering, fresh fruit weight increased from 14.98 gm at 5 days to 3,435 gm at 40 days. Fruit length was 3.10 cm at 5 days and 19.03 cm at 25 days. Rapid growth in fruit length was observed during the period from the day of flowering to the 25th day. The width of the fruit, increased from 1.35 cm at 5 days to 17.90 cm at 40 days. There were significant differences among all stages of growth, At young fruit stage there were only fine hairs on the surface of the fruit, which is about 10 days after flowering. Followed by the development of flat net-stripes. Significant projection of net-stripe began to form at the 20th day. By the time of the 35th day, 60-80% of the fruit surface were covered with net-stripes and corresponded to about 70-80% of full maturity. Net-stripes were completely formed by the 40th day. Sugar content increased from 4.35°Brix at 5th day to 12.18°Brix at 40th day. Firmness of the fruit, which was measured after peeling off 2mm of skin, was 7.05, 4.38 and 3.40 kg at 30th, 35th and 40th day, respectively. The gradual decrease in the firmness of the fruit reflected that the fruit was progressing toward maturation.

In conclusion, the optimum harvesting date for Hami-Gua Melon is around 35 days after flowering. During this stage the fruit weight is 2.5-3 kg, 80% of its surface has developed netstripe, the color of the fruit skin has changed from dark green to light green, and the pulp color is orange-yellow, the firmness of the flesh is around 4-5 kg, and the sugar content of the pulp is above 11°Brix.

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