

Evaluation of the Hass-like avocado cultivars Harvest, Gem and Grace

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ABSTRACT

The evaluation of the avocado cultivars Gem and Harvest was extended to the Kiepersol and Levubu production regions in 2004. At Danroc Farm (Kiepersol), 15 trees each of 'Hass', 'Harvest' and 'Gem' were topworked in 2004. The trees flowered in 2005 and the first crop will be harvested in 2006. In Levubu at Springfield Farm, 15 trees each of 'Hass', 'Harvest' and 'Gem' were planted in early 2005. The evaluation of 'Grace' continued at Westfalia Estate near Modjadjiskloof, with 'Grace' and 'Hass' yielding a first small crop of 1.9 t/ha and 1.7 t/ha respectively in 2005.

INTRODUCTION

Avocado cultivar research at Westfalia Technological Services (WTS) has focused on finding a high yielding, better sized, good quality Hass-like cultivar. The cultivars Gem and Harvest, from the Californian breeding program, have been evaluated by WTS since 1996. Both cultivars performed well at Westfalia Estate and SAAGA negotiated a test agreement with the University of California for the evaluation of these cultivars in three other South African production regions (Kremer-Köhne & Mokgalabone, 2004). Further, the evaluation of a local selection 'Grace' from the Kiepersol area in Mpumalanga was initiated in 2003. This report is an update on the progress made with the evaluation of the cultivars in the other production regions and first results obtained with 'Grace'.

MATERIALS AND METHODS

'Grace' and 'Hass' trees were topworked at Westfalia Estate in 2003. Yield data were recorded as kg/tree and extrapolated to ton/ha for 200 trees/ha. A representative sample of each cultivar was used to determine the fruit size distribution, by weighing fruit individually. A sample of each cultivar underwent simulated shipment of 28 days at 5.5°C to determine post-harvest fruit quality (Bruwer & Mokgalabone, 2005). In the Levubu area (Springfield Farm) of Limpopo Province, 15 trees each of 'Gem', 'Harvest' and 'Hass' were planted in early 2005. In the Kiepersol area (Danroc Farm) of Mpumalanga Province and in the Howick area (Everdon Estate) of KwaZulu-Natal, 15 trees each of 'Gem', 'Hass' and 'Harvest' were topworked in 2004 and 2006 respectively.

RESULTS

A first small crop was harvested in 2005 from the 'Hass' (1.7

t/ha) and 'Grace' (1.9 t/ha) trees at Westfalia Estate. The fruit size distribution of 'Grace' peaked at count 10 to 14 ($\pm 70\%$ of fruit) whereas 'Hass' fruit were smaller with a peak at count 16 to 20 ($\pm 75\%$ of fruit). Fruit quality after simulated shipment was good for both cultivars.

The 'Gem', 'Harvest' and 'Hass' trees in Kiepersol produced a very good flower during the 2005 flowering season and the resultant fruit set was very good.

CONCLUSIONS

Initial indications are that 'Grace' fruit are bigger than 'Hass'. The evaluation of 'Gem' and 'Harvest' in Levubu, Kiepersol and KwaZulu-Natal is well underway with a first crop to be harvested in Kiepersol in 2006.

ACKNOWLEDGEMENTS

The financial support of SAAGA and Hans Merensky Holdings is greatly appreciated. Springfield Farm (Levubu), Danroc Farm (Kiepersol) and Everdon Estate (KwaZulu-Natal) are thanked for their co-operation with the evaluation of the cultivars in the other production regions. E Mailula is thanked for technical assistance.

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