

Although statistically significant beneficial effects of treatment with GA were observed in this experiment, the effects were small. Moreover, our method of application of GA by dipping bunches is not practical. Nevertheless, our results indicate that further research to determine the effects of GA upon seeded varieties under commercial conditions is justified.

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## The Kaller Atemoya

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Two years ago Fruit Varieties and Horticultural Digest carried my article about the "African Pride" atemoya in Florida. In that article, it was described as having originated in South Africa, and then being introduced into Australia by Langbecker's Nurseries. Langbecker's has since gone out of business.

Correspondence with Mr. Gordon McNeil of Northern Transvaal has turned up additional information about this variety. Mr. McNeil has

contacted Mr. Harrington of Deepdale, Natal, who sent the budwood to Australia. Mr. Harrington wrote him that Langbecker's apparently got names confused and renamed all of the material which was sent them. He further stated that he was not sure which names had been put on which varieties, but that if the African Pride was an atemoya, it must be the "Kaller," which originated in Israel, since this is what he sent. He also said that the "Kaller" has been a heavy

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bearing variety for him.

I have also written to Professor Oppenheimer at the Volcani Institute in Rehovot, Israel. He writes that the "Kaller" atemoya tree exists in a Garden in Rehovot, and that it was first propagated about 15 years ago. He further states that the type exists in the collection at the Volcani Institute, but has not been grown commercially

because other varieties are at least as good.

It now seems fairly certain that the "African Pride" variety should be called the "Kaller."

The "Kaller" is increasing in popularity in South Florida but does not seem to have the potential of becoming a commercial fruit. However, it can still be highly recommended for the backyard garden.

## The Effect of Seedling vs. Semidwarfing Rootstock on the Frost Hardiness of 'Stayman' Apple Blossoms

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Seasonal frosts frequently result in the loss of a significant percentage of the apple crop. Some Pennsylvania orchardists have observed on occasion that the bloom of compact fruit trees appeared more resistant to frost injury than blossoms of the same scion rootstock on vigorous stocks. A study was conducted, therefore, to determine whether rootstock vigor could effect a differential response of the bloom and immature fruit to frost.

Ten-year-old trees of the apple cultivar 'Stayman' on EM VII and standard seedling rootstocks were used in this investigation.

The comparative cold tolerance of blossoms was measured following the exposure of samples to subfreezing temperatures in the laboratory. One hundred flower clusters were excised from each of the two stock-scion combinations at three stages of develop-

ment: (1) the tight cluster stage; (2) two days prior to full bloom; and (3) at petal fall. A cold chamber equipped with an automatic temperature controller was used, and a temperature sequence designed to stimulate a frosty night was programmed.

After the freeze blossoms and fruit were sliced longitudinally through their medians and observed under a dissecting microscope for the discoloration characteristics of cold-injured tissues (1).

Differences in cold tolerance between the two groups of material were statistically non-significant. A dramatic rise occurred in the cold vulnerability of the young fruit as compared with the blossoms harvested previously. This pattern was apparently characteristic of the cultivar, and a differential rootstock effect was not observed.

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