HortScience **16(3):351. 1981.**

'Fuchs-20' Avocado Rootstock[1]

A. Kadman and A. Ben-Ya'acov
Institute of Horticulture, Agricultural Research Organization, The Volcani Center, Bet Dagan, Israel

Additional index words, salt tolerance, fruit breeding, *Persea americana*

Origin

'Fuchs-20' *(Persea americana* Mill.) was selected in an experiment carried out during 1959-60 to find a highly tolerant rootstock for saline conditions from West Indian seedlings of 5 different groups and hybrids, including seedlings of 'Fuchs' (West Indian x Guatemalan). Plants were grown in containers and irrigated with highly saline water (1330 ppm NaCl). Only 4 plants survived. These survivors were planted in an orchard in order to obtain material for further experiments by vegetative propagation. 'Fuchs-20', a 'Fuchs' seedling marked No. 20, was the only one of these 4 plants from which cuttings have been successfully rooted (2).

Description

'Fuchs-20' is a large vigorous tree to 10m height with large, dark green leaves. The fruit (Fig. 1) is ellipsoid, medium to large size (350-450g), with smooth, pale green skin covered with numerous lenticels which turn yellowish during ripening in October. The flavor is very good and the oil content is 12-13%. Yields are relatively low. Seedling plants of 'Fuchs-20' show high variability both in appearance and tolerance to salinity; whereas vegetatively propagated plants show high uniformity and tolerance to salinity.

Rootstock performance

The trees grafted on 'Fuchs-20' rootstocks showed the highest tolerance among 6 vegetatively propagated avocado rootstocks grafted with 'Fuerte' and 'Hass' and irrigated with saline water (350 ppm Cl) (1). Trees of various cultivars grafted on ‘Fuchs-20’ rootstocks show excellent performance without any damage due to salinity in a commercial orchard irrigated with water containing 380-400 ppm Cl (A. Ben-Ya’acov, unpublished data).

‘Fuchs-20’ was found free of sunblotch virus.

Propagation

‘Fuchs-20’ can be propagated by rooting of cuttings under mist with 48 to 50% rooting in some experiments (2). Rooting rates higher than 70% have been achieved in other

[1] Received tor publication November 21, 1980. Contribution from the Agricultural Research Organization, Volcani Center, P.O.B.6, Bet Dagan, Israel, No. 313-E, 1980 Series.
The cost of publishing this paper was defrayed in part by the payment of page charges. Under postal regulations, this paper must therefore be hereby marked *advertisement* solely to indicate this fact.

experiments in which cuttings were taken from topped and hedged plants (3).

Availability

'Fuchs-20' budwood has been sent to California for testing under saline conditions. A limited amount of budwood can be obtained from the authors.

Literature Cited

1. Kadman, A. and A. Ben-Ya'acov. 1976. Selection of avocado rootstocks for saline conditions. Acta Hort. 57:189-197.
2. Kadman, A. and C.D. Gustafson. 1971. The use of IBA in rooting of avocado cuttings. Calif. Avocado Soc. Yearb. 54:96-99.
3. Raviv, M. and O. Reuveni. 1979. The effect of source and type of avocado cuttings on their rooting rate (in Hebrew). Alon Hanotea 34:23-27.

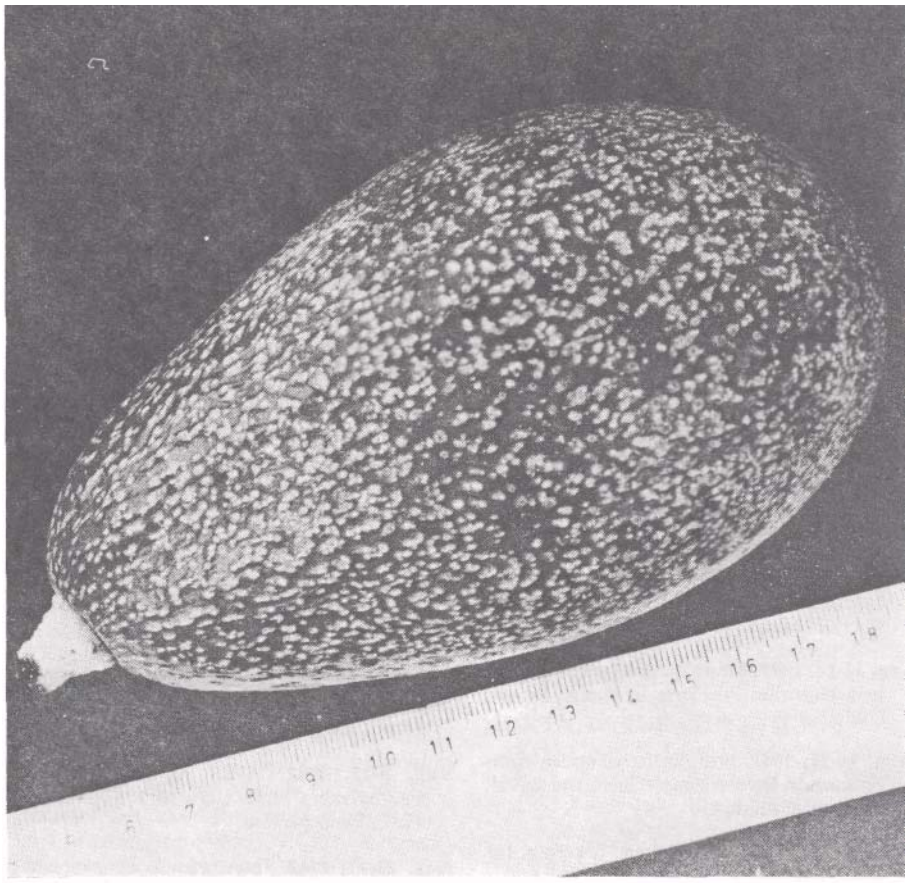

Fig. 1. Fruit of 'Fuchs-20' avocado.