



Fig. 4. Fruit of *R. rugosa* 'Alba' (left), hybrid RSM K1 (center) and complex *R. arkansana* hybrid parent (right).

### Description

Shrub to 2 m high with a few long rhizomes; canes strong, tomentulose with many straight 2-10 mm prickles below becoming scattered above; petioles and lower surface of upwardly dilated stipules tomentulose; leaflets usually 7 sublustrous and lightly rugose

above, pale tomentulose and moderately reticulate beneath, 3-5 cm long, elliptic to obovate, margin toothed; pedicels and base of receptacle glandular hirsute; flowers 3-15 in corymbs or singly from mid-summer to fall, 6-10 cm diameter with 5-9 petals, strong purplish red (Nickerson 10RP4-5/12), due to equal amounts of cyanin and peonin

pigments; calyx reflexed on flowers, spreading on fruit, glandular hirsute without, pubescent within; fruit subglobose smooth red 1.5 to 2.5 cm in diameter; achenes 3-5 mm long.

Seedlings RSM K1 and RSM K5 have been fully winter hardy at Morden since 1975, have not been seriously affected by rust and have shown resistance to mildew and black spot. Like their parents they bloom from mid-summer to fall.

RSM K1 and RSM K5 were used as pollen parents in 55 combinations and as seed parents with 22 cultivars in crosses made from 1977 to 1979. They showed a high degree of cross compatibility and produced over 8000 seeds. Seedlings from some of these crosses produced more than 2000 seeds from controlled pollinations in 1979.

RSM K1 is a fertile, compatible, hardy, long blooming tetraploid which should be valuable in developing more attractive hardy roses.

### Availability

Rose breeders may obtain limited quantities of budwood, seeds or pollen upon written request.

### Literature Cited

1. Marshall, H. H. 1977. New rose series meets demand. *Canada Agr.* 22(3):24-26.

*HortScience* 15(2):206. 1980.

## G.A.-13 Avocado Rootstock Selection<sup>1</sup>

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'G.A.-13' avocado (*Persea americana* Mill.) was selected to provide a rootstock for saline and lime conditions.

### Origin

G.A.-13 was selected in the late 1950's from a group of Mexican seedling trees grown near the Gevar Am settlement in the Western Negev region of Israel, under adverse conditions of salinity. Although the plot was later abandoned several trees survived. G.A.-13 was selected because of its salinity tolerance and ease of rooting from cuttings.

### Description

'G.A.-13' is a large vigorous tree (to 12 m) with large dark green leaves having a distinct anise odor. The fruit is pear-shaped of medium to large size, (350-500 g), with smooth skin which changes its color from green to dark violet during ripening in September. The fruit taste is somewhat sweetish and the oil content is around 8 to 10%.

Seedling plants of G.A.-13 show high variability both in appearance and tolerance to salinity and lime-induced chlorosis; whereas vegetatively propagated plants show high uniformity and tolerance to lime-induced chlorosis and salinity.

### Rootstock Performance

In a comparison of 6 different vegetatively propagated avocado rootstocks grafted with 2 cultivars 'Fuerte' and 'Hass' and irrigated with saline water (350 ppm Cl), 'G.A.-13' showed high

tolerance, close to that of the West Indian rootstocks (2).

In a comparison of 'G.A.-13' rootstocks either vegetatively propagated or of seed origin grafted with 'Fuerte' and planted in soil containing more than 40% lime and irrigated with water containing 270 ppm Cl, trees on vegetatively propagated rootstocks showed high tolerance and uniformity in comparison with variable performance of trees on seedling rootstocks (1).

### Propagation

'G.A.-13' is relatively easy to propagate (up to 70 to 90%) by cuttings under mist (3).

### Availability

'G.A.-13' 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. Ben Ya'acov, A. 1977. Adaptation of avocado rootstocks to calcareous soils. *Proc. Trop. Reg. Amer. Soc. Hort. Sci.* 21:7-9.
2. Kadman, A. and A. Ben Ya'acov. 1976. Selection of avocado rootstocks for saline conditions. *Acta Hort.* 57:189-197.
3. Kadman, A. and C. D. Gustafson. 1971. The use of IBA in rooting of avocado cuttings. *Yearb. Calif. Avocado Soc.* 54: 96-99.

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