

discernible following the vernalization of roots and the regrowth of foliage. The time and severity of TuMV symptoms varied among plants, but all plants were capable of producing an abundant number of siliques. Seeds of infected maternal plants are free of the virus, which is not transmitted through the seed. ELISA tests have indicated that the TuMV-R germplasm is still segregating for TuMV resistance during root development, but contains a high percentage of resistant plants. It should be noted that the resistance response of TuMV-R to TuMV infection reported herein is different from that observed

for the fodder rutabaga cultivars Sensation and Calder. Both of these possess very high resistance to the S₁ and S₂ strains of TuMV (Shattuck and Stobbs, 1987), and, after exposure to TuMV during vegetative growth, remain symptomless during silique development.

Availability

A small amount of seed is available to interested researchers. Requests for seed should be made to V.I. S. or the Crucifer Genetics Cooperative, Dept. of Plant Pa-

thology, 1630 Linden Dr., Univ. of Wisconsin, Madison, WI 53706.

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'Adafuel', an Almond × Peach Hybrid Rootstock

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'Adafuel' is an almond × peach hybrid [*Prunus amygdalo-persica* (West) Rehd.] rootstock developed at the E.E. Aula Dei as a rootstock for peach and almond and now released for commercial use.

Peach and almond scions grafted on 'Adafuel' grow vigorously. Tree size and cropping efficiency are similar to that on the INRA almond × peach hybrid GF 677. 'Adafuel' maiden trees have a vigorous and semi-upright growth, compared to the open-spread form of GF 677. About 150 hardwood cuttings or 300 softwood cuttings can be obtained per adult tree each year.

This stock is vegetatively more easily propagated by cuttings than GF 677 (Table 1) (Cambra, 1979, 1983; Opazo et al.; 1984). Shoots show a strong apical dominance with very few feathers on them, which facilitates budding in the nursery.

'Adafuel' adapts well to light and calcareous soils but requires good drainage.

Tests carried out in the nursery have shown that 'Adafuel' is resistant to *Sphaeroteca pannosa*, *Tranzschelia pruni-spinosae*, and *Corineun beijerinckii* (Cambra and Iturrioz, 1986). It is sensitive to *Agrobacterium tu-*

meffaciens and very sensitive to *Meloidogyne* spp. (Gomez et al., 1989).

Origin

'Adafuel' was selected from an open-pollinated seedling population of 'Marcona' almond trees growing in Jarafuel, Valencia (Spain), and collected in 1970. Selection work was carried out at the E.E. Aula Dei in Zaragoza. The clone was initially tested as 'Jarafuel'. It has been selected because of its superior rooting ability compared to other almond × peach hybrids.

Compatibility

'Adafuel' has shown good compatibility with 30 peach and 40 almond cultivars. It is also compatible with 'Paviot' apricot. Tests are being conducted with plum and prune cultivars.

Description

One-year-old shoots are intensely red and usually bear one flower bud per node. Internodes are long and leaves are of almond type, small, dark green, with straight serrated margins. Mean length : width ratio of the leaf blade is 14:4, slightly greater than that of GF 677 (12:4). Leaf petioles generally have more than two reniform nectaries and two short stipules. Leaf fall is late. Flowers are showy, medium to large, with petals of intense pink. They have 35 to 40 stamens

Table 1. Percentage rooting of hardwood cuttings of 'Adafuel' and INRA almond × peach hybrid GF 677 treated with 4000 ppm indolebutyric acid.

| Rootstock | Year | | | |
|-------------|---------|---------|---------|------|
| | 1978-79 | 1979-80 | 1980-81 | Mean |
| Adafuel | 92 | 80 | 91 | 88 |
| INRA GF 677 | 74 | 76 | 72 | 74 |

and one pistil that remains low beneath the anthers. Fruits are intermediate between those of peach and almond, with a mean weight of 31 g, a length of 45 mm, and width of 35 mm. The epidermis is tomentose and orange. The stone is free, and the seed is slightly bitter and dark golden brown (Cambra and Iturrioz, 1986).

Availability

Almond × peach hybrid 'Adafuel' registration is in progress at the Instituto Nacional de Semillas y Plantas de Vivero, Ministry of Agriculture. Small amounts of rooted cuttings or budwood can be obtained from the Estación Experimental de Aula Dei. 'Adafuel' is free of all known viruses.

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