

Hybrid 639

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NSW DPI Citrus Team



Advantages

- ✓ compatible with Eureka lemon
- ✓ potential for high yields

Disadvantages

- ✗ moderate tolerance to *Phytophthora*
- ✗ slow nursery development
- ✗ severe benching with some scions

Origin

A South African hybrid of Cleopatra mandarin and *Poncirus trifoliata*. Also referred to as 'Nelspruit 639' and 'X639'.

Tolerance to environmental and soil conditions

Reported to be reasonably tolerant of a range of environmental and soil conditions but experience under local conditions is limited. At Gosford NSW, it has shown only moderate tolerance to *Phytophthora*.

Field performance

Hybrid 639 is not widely used commercially in Australia but has been evaluated experimentally

with mandarin and lemon scions. Under mandarins, it was slow to establish after planting and produced low early yields. Despite this slow early growth, over time it develops into a large tree. It has also produced significant benching at the bud union. It has performed well as a stock for Eureka lemon and apparently does not develop the incompatibility seen with Eureka on Troyer. While the performance with both mandarins and lemons has been adequate, there appear to be better rootstock choices for most situations.

Nursery performance

Seedlings can be slow growing and take some time to reach field-planting size.

Fruit quality

Fruit quality with mandarins has been good. With Eureka lemon, fruit quality has been superior to Rough Lemon for juice and citric acid content.

Scion compatibility

Significant benching at the bud union has been seen with a range of mandarins, though this has not been associated with tree decline (10 years). This stock is apparently compatible with Eureka lemon.

Extent of plantings

Only young semi-commercial plantings so far.

Overseas experience

In some situations the performance of this rootstock has been outstanding. In experiments with pomelo-type fruit in Florida it has produced yields well in excess of all other rootstocks tested. Fruit quality was also high. It is being used successfully in South Africa as a rootstock for Eureka lemon.

Reference number: PUB22/178.

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