

MONEGRO PEACH X ALMOND

Performance summary

Spanish bred Monegro (GN-9) was among the top seven highest performing rootstocks in terms of cumulative yield. Results are specific to the soil characteristics and management practices applied to this trial site. Monegro rootstock produced strong early growth with a higher canopy growing into the available space. Yields were higher than Nemaguard up to their 6th leaf. Some variability in seasonal yield was observed in their 7th leaf. Monegro has medium to high susceptibility to one or more species of root-knot nematodes and should be avoided where high nematode populations are expected. Monegro had low levels of leaf sodium suggesting it has good salt tolerance.

Key observations

Tree Habit

Using trunk circumference as an indicator of tree growth, Nonpareil trees grown on Monegro had significantly higher average growth (608.75mm) compared with Nemaguard (550mm) in 2020 (Figure 10).

Monegro trees had strong early growth producing taller trees (4.54m) with the second widest canopy in 2017 (4.94m) and a slightly more spreading canopy. By 2021 the rootstock filled the available canopy space with tree height (4.88m) significantly higher than Nemaguard (4.65m) but similar to the spare Nemaguard height 4.83m (Figure 13).

Production

Monegro produced consistently strong early yields (Table 4) across the four replicates with yields over 4 t/ha up to the 6th leaf in 2019 (Figure 11). In 2020 the average yield dropped due to lower yields in replicates 2 (2,423kg/ha) and 3 (1,897kg/ha).

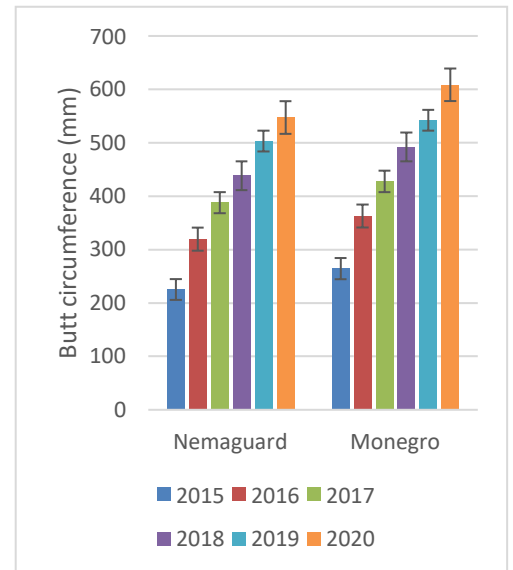


Figure 10. Average trunk circumference.

Table 4. Average annual yields (kg/ha).

Rootstock	2016	2017	2018	2019	2020	2021	Cumulative
Monegro	468	1,308	2,010	4,446	3,265	3,872	15,369
Nemaguard	508	731	1,831	2,919	3,377	2,373	11,738

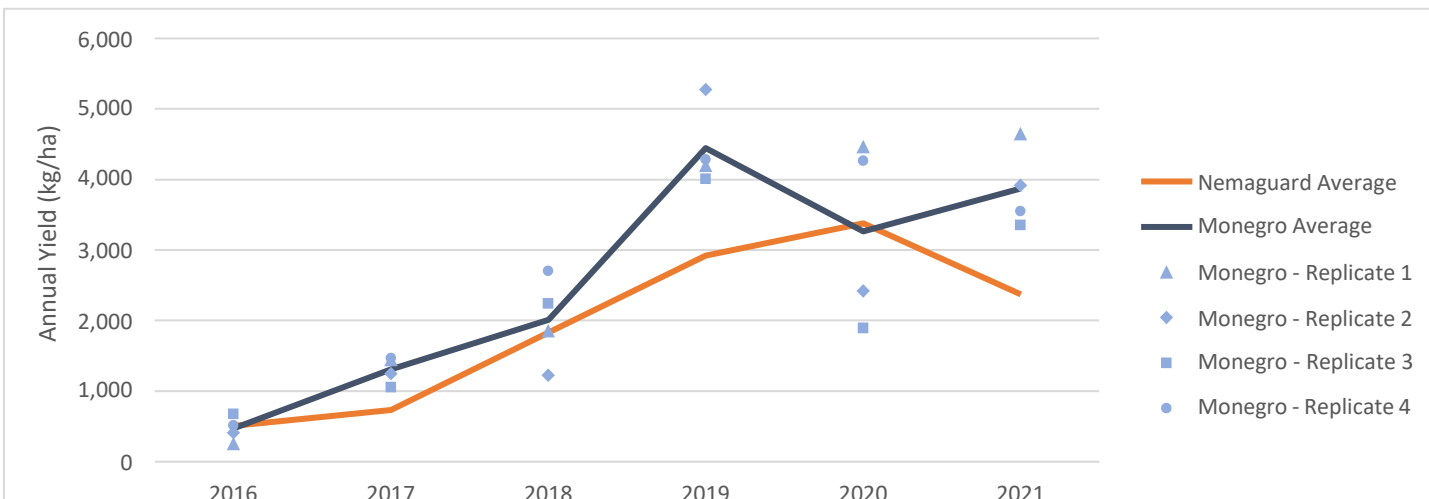


Figure 11. Average annual yields 2016 to 2021 (3rd to 8th leaf).

Rootstock characteristics

Literature states that Monegro has strong drought tolerance which will be an important feature for industry to cope with predicted drier growing climates. Investigations into root-knot susceptibility for rootstocks in Australia showed Monegro had a medium to high susceptibility to root-knot nematode *M. incongnita* and *M. javanica* and root lesion nematode *Pratylenchus vulnus* and should be avoided where high nematode pressures are expected. Monegro had low levels of leaf sodium suggesting it has good salt tolerance, able to exclude sodium and chloride from the soil.

Table 5. Rootstock characteristics.

Root knot Nematode	Lesion Nematode	Ring Nematode	Crown Gall	Armillaria	Phytophthora	Salt exclusion	Chlorosis	Vigour	Propagation bycuttings
Susceptible	Susceptible		Susceptible			Tolerant	Tolerant		Good



Figure 12. Juvenile tree - 2017.



Figure 13. Mature tree - 2021.



Figure 14. Graft union - 2021.