

Performance summary

Spanish bred Felinem (GN-22) 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. Felinem produced a tree with higher growth characteristics including trunk circumference and canopy size than Nemaguard. Further monitoring will be needed to determine the effect of canopy growth on light interception and tree yield. Felinem delayed all stages of flowering start, full bloom and end of flowering compared with Nemaguard.

Key observations

Tree Habit

Using trunk circumference as an indicator of tree growth, Nonpareil trees grown on Felinem had one of the larger trunk circumferences (605mm) and was significantly higher than Nemaguard and spare Nemaguard (Figure 15).

In 2020 Nonpareil trees grown on Felinem were among the largest trees in the trial for width (6.42m) and height (4.93m) readily occupying the available growing space (Figure 18).

Production

Some variability within replicates was observed for seasonal yields and some decline in yield noted in the 8th leaf. Ongoing monitoring of seasonal yields will help establish any tendency towards biennial bearing.

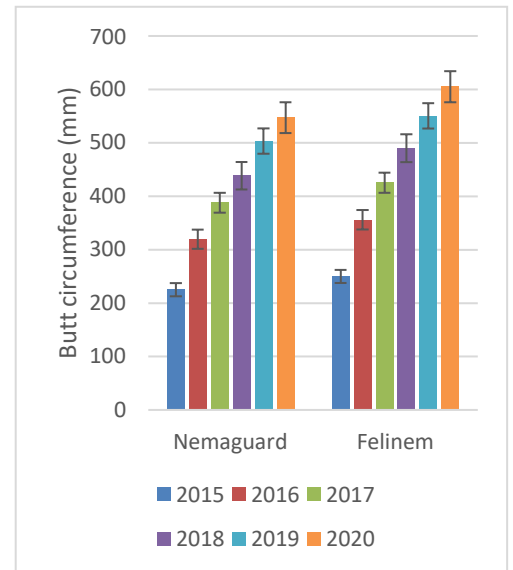


Figure 15. Average trunk circumference.

Table 6. Average annual yields (kg/ha).

Rootstock	2016	2017	2018	2019	2020	2021	Cumulative
Felinem	415	1,127	1,962	4,009	4,445	3,211	15,169
Nemaguard	508	731	1,831	2,919	3,377	2,373	11,738

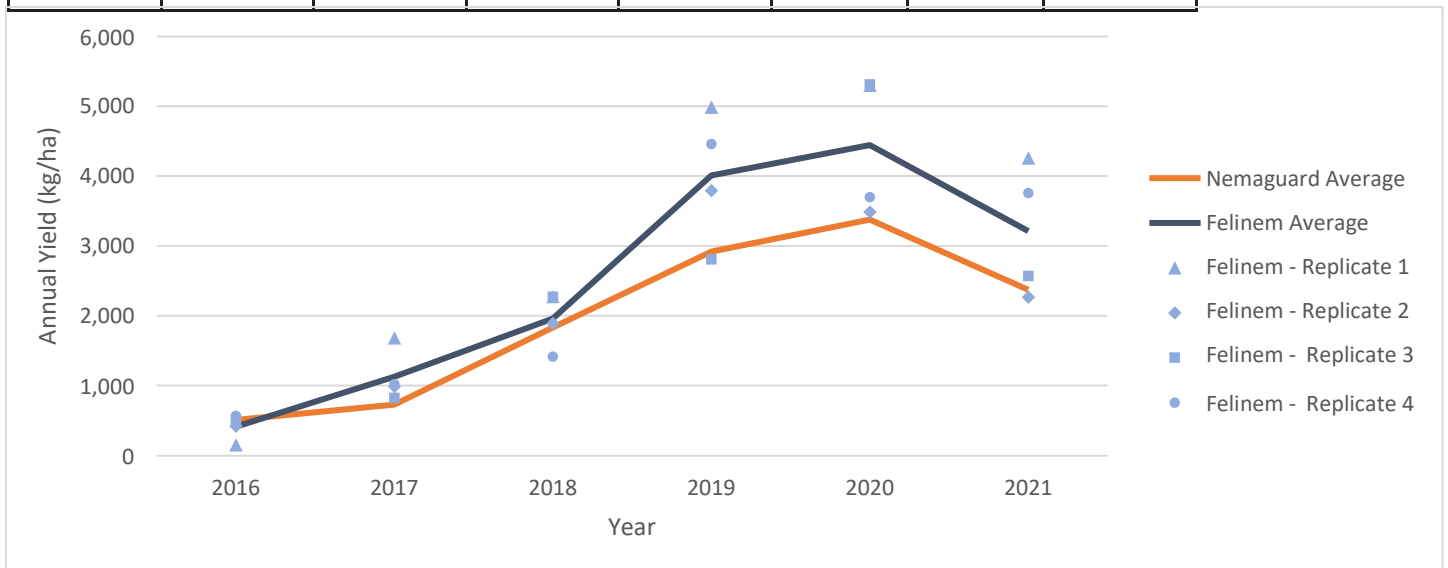


Figure 16. Average annual yields 2016 to 2021 (3rd to 8th leaf).

Rootstock characteristics

On average Felinem delayed the start of flowering by 1.5 days and full bloom and end of flowering were also later than Nemaguard (Figure 2).

Table 7. Rootstock characteristics.

Root knot Nematode	Lesion Nematode	Ring Nematode	Crown Gall	Armillaria	Phytophthora	Salt exclusion	Chlorosis	Vigour	Propagation by cuttings
Moderate resistance	Moderate resistance		Susceptible			Unknown	Tolerant		Good



Figure 17. Juvenile tree - 2017.



Figure 18. Mature tree - 2021.



Figure 19. Graft union - 2021.