

TRAINING AND PRUNING OF SWEET CHERRY ON GISELA 6 ROOTSTOCK

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To establish an optimal technological system in the Central zone of the Republic of Moldova by evaluating the interaction between cultivar, training systems, and pruning methods to maximize productivity and fruit quality.

Methods: The study was conducted during 2025–2026 at "Prodcar" LLC, Telenești, on two experimental sectors: Sector I (16 years old): *Ferovia* and *Skeena* cultivars (4x2 m), testing 4 training systems and 4 pruning variants (manual vs. mechanized).

Sector II (8 years old): *Folfer*, *Ferdouce*, *Royal Helen*, *Grace Star*, and *Samba* cultivars (4x1 m), comparing the *Slender Spindle* and *Marchand Flag* systems.

Automated weather stations, drip irrigation, and *Watermark* sensors were used for soil moisture monitoring.

Results: At 16 years of age, average tree height ranged from 321.9 cm (*Unstacked Palmette*) to 359.9 cm (*Slender Spindle*). The *Skeena* cultivar showed higher vigor (342.2 cm) compared to *Ferovia*. In the 4x2 m system, the *Unstacked Palmette* favored the greatest lateral expansion (265 cm), forming a continuous fruiting wall. In the super-intensive system (4x1 m), the *Marchand Flag* provided superior width control (219.7 cm) compared to the *Slender Spindle* (246.4 cm). Strictly mechanized pruning (V2) induced dense growth at the periphery. The optimal variant identified is V3 (bilateral mechanized pruning supplemented by manual thinning), which ensures width control (233.4 cm) and light penetration.

Conclusions:

1. The **Gisela 6** rootstock ensures a compact habit and excellent adaptability for modern systems.
2. For high densities (4x1 m), the **Marchand Flag** system is recommended due to its efficient use of lateral space.
3. The **Samba** cultivar stands out for its physiological balance, being the most suitable for super-intensive densities.
4. At an H/W ratio = 1 (4 m height at 4 m row distance), contour pruning is imperative to prevent the loss of fruiting wood at the base of the canopy.

Keywords: Sweet cherry, Gisela 6, pruning system, canopy parameters.