

GiSela®12 Gi 1592(S)

the alternative to GiSela®6 Gi 1481(S)

The dwarfing cherry rootstock GiSela®12 Gi 1592(S)

Lineage	<i>P. canescens</i> x <i>P. cerasus</i> „Leitzkauer“
Selection	Breeding program at the University of Giessen
Variety Name	Gi 1592 ^(S)
Variety Rights Holder	Consortium Deutscher Baumschulen GmbH

GiSela®12 Gi 1592(S) is similar in growth vigour to GiSela®6 Gi 1481(S), but is slightly stronger under most conditions. In Europe, GiSela®12 Gi 1592(S) is gaining importance especially on sites where GiSela®6 Gi 1481(S) causes problems, such as windy locations.

GiSela®12 Gi 1592(S) is characterized by flat branches and broad growth habit, no tendency to suckering, excellent winter hardiness, tolerance to pollen-borne viruses, and very good cultivar compatibility with healthy, tested scion wood provided.

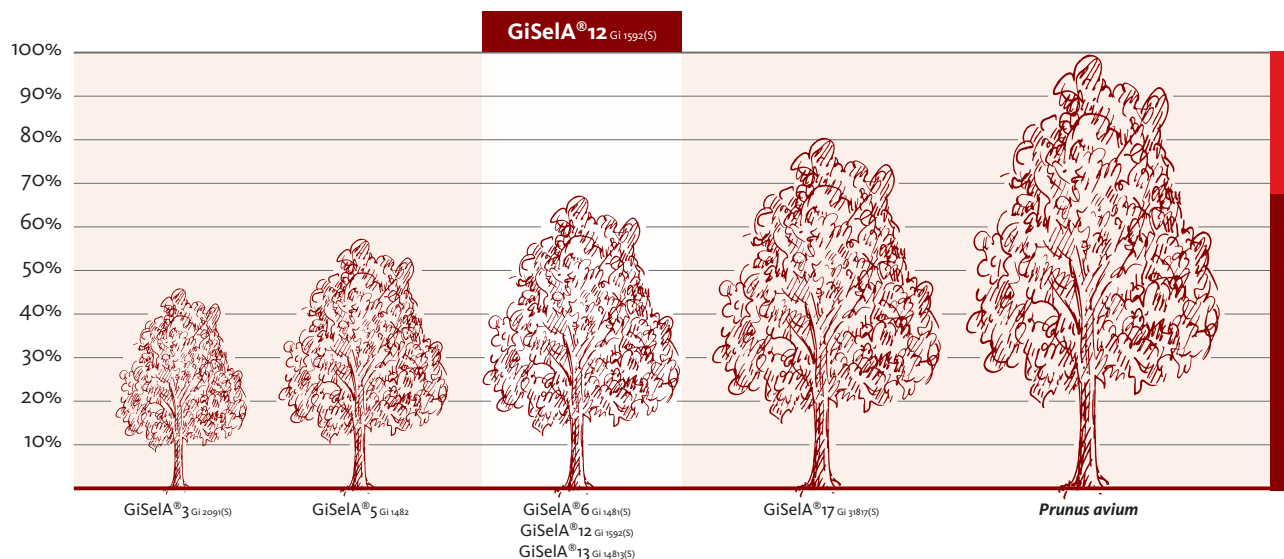
The lower fertility compared to GiSela®5 Gi 1482 and 6 Gi 1481(S) is often rated as very positive. Especially the combination with self-fertile varieties does not lead to overcropping. Yields start early and fruit size is promoted with adapted pruning measures.

In addition to good winter hardiness, GiSela®12 Gi 1592(S) also copes well in hot climates. GiSela®12 Gi 1592(S) has proven tolerant to PDV and PNRSV viruses.

Overview of GiSela® varieties

- **GiSela®3** Gi 2091(S) the rootstock for the specialist in very intensive sweet cherry cultivation
- **GiSela®5** Gi 1482 the most important dwarfing cherry rootstock, standard in Central Europe
- **GiSela®6** Gi 1481(S) the high-yielding, growth-reducing alternative to GiSela®5 Gi 1482
- **GiSela®12** Gi 1592(S) the alternative to GiSela®6 Gi 1481(S)
- **GiSela®13** Gi 14813(S) the undemanding sister
- **GiSela®17** Gi 31817(S) the most vigorous, with suitability for replanting

Overview of vigor induction vs. *Prunus avium*



(S) = plant variety protection

Special characteristics

Growth rate induction	Vs. <i>Prunus avium</i> 60-70% of „F12/1“ and/or „Mazzard“; medium-dwarfing rootstock between GiSela®5 <small>Gi 1482</small> and GiSela®17 <small>Gi 31817(S)</small> ; variable; similar to GiSela®6 <small>Gi 1481(S)</small> Strong growth in the juvenile phase, induced by in vitro propagation, weakens to the level typical of the variety with the onset of production.
Anchorage / Root system	Well anchored cultivable without support
Succering tendency	No succering
Grafting point/unit	Strong overwhelm in later years

Yield

Yielding potential	High, with early-set yields, but lower than GiSela®5 <small>Gi 1482</small> and GiSela®6 <small>Gi 1481(S)</small> ; therefore good fruit sizes
Precossity	Trees come into yield much earlier than trees on <i>Prunus avium</i> rootstocks
Yield generation	Produces early yields; first yields from the 2nd leaf / full yields from the 4th leaf onwards
Fruitsize	Good to very good; no negative influence by the rootstock; the decisive factor is crop management, in particular early, regular pruning, as well as sufficient fertilization and irrigation/fertigation. Fruits remain small if too little pruning is done and new growth on weak rootstocks is then too low. Important: leaf-to-fruit ratio 3 to 1
Combination with very fertile / self-fertile varieties	Recommended with good size

Site - Climate

Soil quality requirements	Broad adaptation; prefers light sandy soils in drier, warm hot conditions. Avoid heavy, cold, moist soils and especially very (80-100cm) high groundwater levels
Geographical region	Southern and South-Eastern Europe / USA South America
Climate requirements	Also suitable for hotter climates; has significantly less drought stress and recovers from it faster than GiSela®5 <small>Gi 1482</small> ; clearly better for windy sites than GiSela®6 <small>Gi 1481(S)</small>
Winterhardiness	Good to very good

Cultural management

Demands on culture management	Medium; formation of new shoots is easily achieved; fruit size is promoted with adapted pruning measures; ideal leaf-to-fruit ratio 3 to 1
Varietal suitability	Lower fertility; advantage: the combination with self-fertile varieties does not lead to overcropping, therefore good fruit sizes; also suitable for sour cherries
Suitability / Cultivation intensity	Trees should be educated as crowns with limbs
Planting density	Medium, row spacing 3,5 m to 4,5 m in row 2,5 m to 3,5 m distance depending on variety
Irrigation demand (In relation to temperate Central European climate 600-700mm annual precipitation)	Low, irrigation beneficial
Fertilization / Fertigation	Depending on the soil sample, 40-60 kg total N/ha/year required for established trees from the 5-6 standing year; depending on the soil sample, 30-50 kg N/ha divided as early basic fertilization already before flowering and 10-20 kg N/ha as follow-up fertilization ideally as fertigation until harvest; generally higher fertilizer applications than for <i>Prunus avium</i>
Covered cultivation	Not appropriate
Replanting	Tolerable growth and yield reduction; suitable especially on lighter sandy warm/hot sites

Disease response / Tolerances

PDV / PNRSV	Tolerant
<i>Pseudomonas</i>	Depending on variety and weather conditions
Agrobacterium	Due to in vitro propagation, all rootstocks are EU certified and disease free; Agrobacterium infection comes from contaminated soils
Tranzschelia	Susceptible