

## GiSela®<sub>5</sub> Gi 1482

the most important dwarfing cherry rootstock, standard in Central Europe

### The dwarfing cherry rootstock GiSela®<sub>5</sub> Gi 1482

Lineage	<i>P. cerasus</i> „Schattenmorelle“ x <i>P. canescens</i>
Selection	Breeding program at the University of Giessen
Variety Name	Gi 1482
Variety Rights Holder	Consortium Deutscher Baumschulen GmbH

GiSela®<sub>5</sub> Gi 1482 has proven itself worldwide in temperate climates under different soil and climatic conditions, with many varieties, different training forms and planting densities, and is now considered a semi-dwarfing standard in Central Europe, about 50% weaker than *P. avium*.

In Germany, almost all commercial intensive new cherry plantings are currently established on GiSela®<sub>5</sub> Gi 1482. GiSela®<sub>5</sub> Gi 1482 is successfully used as a rootstock for sweet and sour cherries. Mechanical cherry harvesting on GiSela®<sub>5</sub> Gi 1482 is also possible.

GiSela®<sub>5</sub> Gi 1482 is characterized by flat branches with a broad growth habit, no tendency to succering, excellent winter hardiness, tolerance to pollen-borne viruses, and very good varietal compatibility, with healthy, tested scion wood provided.

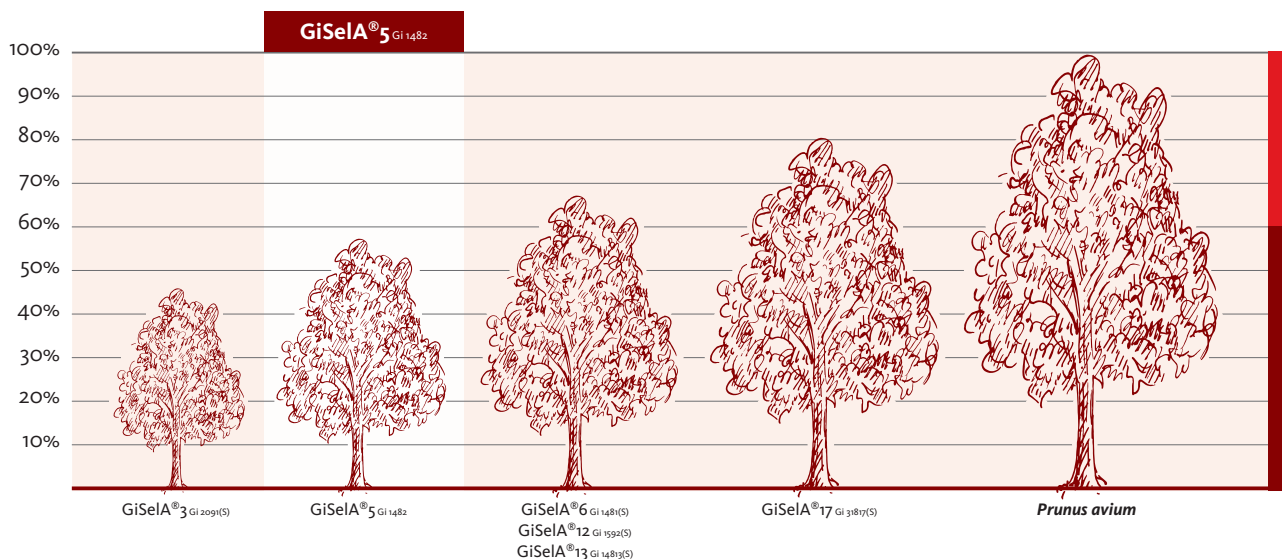
Cultivation on good soils is recommended, GiSela®<sub>5</sub> Gi 1482 is very suitable for covered cultivation.

A decisive advantage of GiSela®s is the early start of cropping. Initial yields from the 2nd year of cultivation and full yields from the 4th year of cultivation ensure a rapid return on investment. The high productivity is maintained for many years.

### Overview of GiSela® varieties

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

### Overview of vigor induction vs. *Prunus avium*



(S) = plant variety protection

### Production & Distribution

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### Special characteristics

Growth rate induction	Vs. <i>Prunus avium</i> 50% of „F12/1“ and/or „Mazzard“; semi-dwarfing standard rootstock in Central Europe 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	Normally stable, support advantageous / ratio of fine roots between GiSela® <sup>3</sup> Gi 2091(S) and GiSela® <sup>6</sup> Gi 1481(S)
Succering tendency	no succering
Grafting point/unit	Tolerable overwhelm

### Yield

Yielding potential	Very high
Precocity	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. <b>Important:</b> leaf-to-fruit ratio 3 to 1
Combination with very fertile / self-fertile varieties	Not recommended

### Site - Climate

Soil quality requirements	High; does not tolerate waterlogging; salt tolerance relatively good (better than „Colt“, „Maxma 14“); tolerates different soils up to pH 8 possible, adjust pH via fertilization and/or fertigation
Geographical region	Central Europe / USA; temperate climate zones
Climate requirements	Temperate climates; not suitable for hot climates, irrigation is absolutely beneficial
Winterhardiness	Good to very good

### Cultural management

Demands on culture management	High; various training systems and planting densities possible; regular pruning is a must to produce sufficient shoot length and leaf mass for fruit good size each year; ideal leaf-to-fruit ratio 3 to 1
Varietal suitability	Sweet cherries; also suitable for sour cherries and ornamental cherries; no intolerances
Suitability / Cultivation intensity	Different cultivation intensities, up to covered cultivation; when grown as spindle, spacing of 2.0 m to 3.0 m in the row, row spacing 3,5 m to 4.0 m (depending on variety) is common, but also high-density planting with 3,0 x 0,5 m => 6,660 trees/ha is possible
Planting density	High to very high, high density planting
Irrigation demand (In relation to temperate Central European climate 600-700mm annual precipitation)	Irrigation is absolutely 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	Appropriate
Replanting	Tolerable growth and yield reduction on good to very good soils

### Disease response / Tolerances

PDV / PNRSV	Very tolerant
Cherry Leaf Roll	Tolerant
RRV (Rainier Ring Mottle Virus)	Medium susceptible
CRV (Cherry rasp leaf virus)	Susceptible
X-Disease	Similarly susceptible as „Mazzard“
ESFY (European Stone Fruit Yellows)	Susceptible
<i>Phytophthora</i>	Less susceptible than „Mazzard“ and „Mahaleb“
<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