

PiKU[®]

cherry rootstocks for sandy soils

In general	
Parentage	PIKU®1 ⁽⁵⁾ – Prunus avium x (Prunus canescens x Prunus tomentosa) PIKU®3 ⁽⁵⁾ – Prunus pseudocerasus x (Prunus canescens x Prunus incisa) PIKU®4 ⁽⁵⁾ – Prunus cerasus "Schattenmorelle" x Prunus "Kursar" (=Prunus kurilensis x Prunus sargentii)
Selection	Breeding Program Dresden-Pillnitz/Germany
Variety denomination	PiKU [®] 1 ⁽⁵⁾ / PiKU [®] 3 ⁽⁵⁾ / PiKU [®] 4 ⁽⁵⁾
Variety right holder	Julius Kuehn Institut
Exclusive licensee worldwide	Consortium Deutscher Baumschulen GmbH

The PiKU[®] rootstocks for sweet cherries originate from a breeding program in Dresden-Pillnitz/Germany. The three protected clones PiKU[®]1^(S), 3^(S) and 4^(S) are the result of crosses between different Prunus species.

The PiKU[®] rootstocks are characterized by a reduction in growth to varying degrees, from almost the same vigor as *Pr. avium* to a reduction of 40 %.

The PiKU[®] rootstocks cause an earlier yield than *Pr. avium* rootstocks, but this is not as pronounced as with the GiSelA[®] rootstocks.

All three PiKU[®] rootstocks are well compatible with sweet cherry varieties, have smooth grafting units and do not tend to form suckers. The PiKU[®] rootstocks have proven themselves particularly well on dry and sandy sites in terms of yield and fruit size. Pruning, fertilization and irrigation should be carried out depending on the location and on the grafted variety.

PiKU[®]1^(S) - mediumstrong-growing rootstock with high yield potential.

years, is around 30-45 % compared to *Pr. avium* seedling. On light soils, PiKU[®]1^(S) can be assessed positively in terms of fruit size without additional irrigation.

Pruning, fertilization and irrigation should be carried out depending on the location and variety in order to certain high yield and good fruit size.

PiKU[®]3^(S) - strong-growing rootstock for extensive cultivation.

The growth reduction of PiKU[®]3^(S) compared to *Pr. avium* seedling is low. Additional irrigation is not necessary. The advantages include the high average yield over several years. The pruning effort of the varieties is lower than that on weaker growing rootstocks.

PiKU[®]4⁽⁵⁾ - rootstock for hot sites.

PiKU[®]4^(S) is weak to medium-growing (35-40 % growth reduction compared to *Pr. avium* seedling) and induces high yields. This rootstock has proven particularly successful on hot sites in terms of yield and fruit size.

The reduction in growth, which often only occurs in later



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Special characteristics Growth rate induction vs. Pr. avium 30-45 % of "F12/1"; mediumstrong rootstock vs. Pr. avium 10-20 % of "F12/1"; strong rootstock for extensive use vs. Pr. avium 40-50 % of "F12/1"; mediumstrong rootstock for hot conditions Anchorage / Root system good anchorage, can be cultivated without support/trellis Suckering tendency some some in juvenile stage, less later and especially on sandy soils! Grafting compatibility all sweet cherries; also suitable for sour cherries Yield vs. Pr. avium rootstock, but not as significant as with the GiSelA® rootstocks Site - Climate use all PiKU® only on light sandy soils; absolutely no ,water logging'		PiKU [®] 1 ^(S)	PiKU [®] 3 ^(S)	PiKU [®] 4 ^(s)	
Growth rate induction vs. Pr. avium 30-45 % of "F12/1"; mediumstrong rootstock vs. Pr. avium 10-20 % of "F12/1"; strong rootstock for extensive use vs. Pr. avium 40-50 % of "F12/1"; mediumstrong rootstock for hot conditions Anchorage / Root system good anchorage, can be cultivated without support/trellis Suckering tendency some some in juvenile stage, less later and especially on sandy soils! Grafting compatibility all sweet cherries; also suitable for sour cherries Yield years induces high yields Precocity and yield generation earlier yield compared to <i>Pr. avium</i> rootstock, but not as significant as with the GiSelA® rootstocks Site - Climate solution use all PiKU® only on light sandy soils; absolutely no ,water logging' Soil quality requirements use all PiKU® only on light sandy soils; absolutely no ,water logging'	Special characteristics				
Anchorage / Root system good anchorage, can be cultivated without support/trellis Suckering tendency some some in juvenile stage, less later and especially on sandy soils! Grafting compatibility all sweet cherries; also suitable for sour cherries Yield Yielding potential induces high yields high average yield over several years Precocity and yield generation earlier yield compared to <i>Pr. avium</i> rootstock, but not as significant as with the GiSelA® rootstocks Site - Climate Soil quality requirements use all PiKU® only on light sandy soils; absolutely no,water logging'	Growth rate induction	vs. Pr. avium 30-45 % of "F12/1"; mediumstrong rootstock	vs. Pr. avium 10-20 % of "F12/1"; strong rootstock for extensive use	vs. Pr. avium 40-50 % of "F12/1"; mediumstrong rootstock for hot conditions	
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Grafting compatibility all sweet cherries; also suitable for sour cherries Yield Yielding potential induces high yields high average yield over several years induces high yields Precocity and yield generation earlier yield compared to <i>Pr. avium</i> rootstock, but not as significant as with the GiSelA® rootstocks Site - Climate Soil quality requirements use all PiKU® only on light sandy soils; absolutely no, water logging'	Suckering tendency		some	some in juvenile stage, less later and especially on sandy soils!	
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Site - Climate Soil quality requirements use all PiKU® only on light sandy soils; absolutely no ,water logging' Commission Europe (avitable for temperate alignets appear)	Precocity and yield generation	earlier yield compared to Pr. avium rootstock, but not as significant as with the GiSelA® rootstocks			
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Soil quality requirements use all PiKU [®] only on light sandy soils; absolutely no ,water logging'	Site - Climate				
Construction Europe (autoble for terror state alignets and	Soil quality requirements	use all $PiKU^{\circledast}$ only on light sandy soils; absolutely no ,water logging'			
Geographical region Europe / suitable for temperate climate zones	Geographical region	Europe / suitable for temperate climate zones			
Climate requirements tolerant to high tolerant to very high temperatures temperatures temperatures	Climate requirements	tolerant to high temperatures		tolerant to very high temperatures	
Winterhardinessgood, frost damage in the continental Hungarian climate has been reportedgoodgood	Winterhardiness	good, frost damage in the continental Hungarian climate has been reported	good	good	
Production managemen	Production managemen				
Demands on production managementcan be rated positively in terms of fruit size on light soils without irrigation. Pruning measures, fertilization and irrigation must be carried out depending on the site and variety in order to certain high yield and good fruit sizeproven in dry and sandy locations without additional irrigation in terms of yield and fruit size fruit sizecan be rated positively in terms of fruit size on light soils without irrigation. Pruning measures, fertilization and irrigation must be carried out depending on the site and variety in order to certain high yield and good fruit sizeproven in dry and sandy locations without additional irrigation in terms of yield and fruit sizecan be rated positively in terms of fruit size on light soils without irrigation. Pruning measures, fertilization and irrigation must be carried out depending on the site and variety in order to certain high yield and good fruit sizeproven in dry and sandy locations without additional irrigation. Pruning measures, fertilization and irrigation must be carried out depending on the site and variety in order to certain high yield and good fruit size	Demands on production management	can be rated positively in terms of fruit size on light soils without irrigation. Pruning measures, fertilization and irrigation must be carried out depending on the site and variety in order to certain high yield and good fruit size	proven in dry and sandy locations without additional irrigation in terms of yield and fruit size	can be rated positively in terms of fruit size on light soils without irrigation. Pruning measures, fertilization and irrigation must be carried out depending on the site and variety in order to certain high yield and good fruit size	
Varietal suitability as suitable for sweet cherry varieties as for sour cherries	Varietal suitability	as suitable for sweet cherry varieties as for sour cherries			
Suitability / Cultivation intensity trees should be educated as crowns with limbs	Suitability / Cultivation intensity	trees should be educated as crowns with limbs			
Planting densitymedium, row spacing 3.5 m to 4.5 m in row 2.0 m to 3.5 m distance depending on varietymedium to extensive, row spacing 4.0 m to 5.0 m in row 2.5 m to 3.5 m distance depen- ding on varietymedium, row spacing 3.5 m to 4.5 m in row 2.0 m to 3.5 m distance depending on variety	Planting density	medium, row spacing 3.5 m to 4.5 m in row 2.0 m to 3.5 m distance depending on variety	medium to extensive, row spacing 4.0 m to 5.0 m in row 2.5 m to 3.5 m distance depen- ding on variety	medium, row spacing 3.5 m to 4.5 m in row 2.0 m to 3.5 m distance depending on variety	
Irrigation demand (in relation to temperate Central European climate 600-700mm annual precipitation)low, irrigation beneficialnot necessary, but beneficiallow, irrigation beneficial	Irrigation demand (in relation to temperate Central European climate 600-700mm annual precipitation)	low, irrigation beneficial	not necessary, but beneficial	low, irrigation beneficial	
Fertilization / Fertigation more water = more growth = higher nutrient requirements; fertigation is ideal	Fertilization / Fertigation	more water = more growth = higher nutrient requirements; fertigation is ideal			

Disease response / Tolerances			
PDV / PNRSV	tolerant		
Pseudomonas	Depending on variety and weather conditions		
Agrobacterium	due to In-Vitro propagation all CDB-rootstocks are EU-certified and disease free; Agrobacterium infection comes from contaminated soils / sites		