

Rootstock Chart

Rootstock	Vitis Parentage	Phylloxera Resistance	Nematode Resistance		Tolerance				Influence on scion		Soil Adaption	Ease of Propagation	Other Characteristics	Vegetative Cycle (1=shortest 4= longest)	
			Root Knot	Dagger (Xiphinema Index)	Drought	Wet Soil	Salinity	Lime	Vigor	Mineral nutrition					
Riparia Gloire	riparia	High	Low	Med	Low	Low	Med	Low	Low-med	N, P: low K, Mg: low-med	Deep, well-drained, fertile, moist soils	High	Early maturation; scions tend to overbear	1	
101-14 Mgt	riparia ^J rupestris	High	Med-high	Med	Low-med	Med	Med	Low-med	Med	N, K: med.-high P, Mg, Ca: low Zn: med.	Moist, clay soils, tolerates wet soils.	High	Avoid clay soils that crack.	1	
3309C	riparia ^J rupestris	High	Low	Low	Low-med	Low-med	Low-med	Low-med	Low-med	N: med.-high P, Ca: low K, Mg, Zn: med.	Deep soils	High	Sensitive to latent viruses; tolerant of cold injury	2	
SO4	berlandieri ^J riparia	High	Med-high	Low-med	Low-med	Med-high	Low-med	Med	Low-med	N: low-med. P: med. K: med.-high Mg: med.	Moist, clay soils, high K uptake	Med	Noted as a cool-region rootstock	2	
Schwarzmann	riparia ^J rupestris	High	Med	High	Med	Med	Med-high	Med	Med	N, P: med. K: med.-high Mg: low	Moist, deep soils	High	—	1	
Gravesac	161.49 x 3309C	High			Med	Low-med	Low		Med	P: low. K: low Mg: low Zn: high Fe:high	sandy and gravelly soils. High acid soils			2	
5BB	berlandieri ^J riparia	High	Med-high	Med	Med	Low	Med	Med-high	Med	N: med.-high P, K, Zn: med. Ca, Mg: med.-high	Moist, clay soils	High	Susceptible to phytophthora root rot; adapted to high-vigor varieties	4	
420A Mgt	berlandieri ^J riparia	High	Med	Low	Med	Low-med	Med	Med-high	Low	N, P, K: low Mg: med. Zn: low-med.	Fine-textured, fertile soils	Med	Scions tend to overbear when young. Maintains scion. Growth into late season.	2	
44-53 M	riparia ^J (cordifolia ^J rupestris	High	Low	—	High	—	—	Low-med	Med	N: low-med. P, Mg, Ca: low K: high	High Mg soils	High	Readily Mg deficient in low Mg soils	3	
St. George (Rupestris du lot)	rupestris	High	Low	Low	Low-med. in shallow soils; high in deep	Low-med	Med-high	Med	High	N: high P: low on low-P soils, high on high-P soils K: high	Deep & gravelly soils; K deficiency	High	Fruit set problems with some scions; latent virus tolerant	3	
5C	berlandieri ^J riparia	High	Med-high	Low-med	Low	Low-med	Med	Med	Low-med	N: low P, K: med. Mg: med.-high Zn: low-med.	Moist, clay soils, avoid soid clay that cracks.	High	—	3	
99R (Richter)	berlandieri ^J rupestris	High	Med-high	Low-med	Med-high	Low	Med	Med	Low-med	P: med. K: high Mg: med.	Tolerant of acid soil	Med	Young scions may develop slowly	4	
110R	berlandieri ^J rupestris	High	Low-med	Low	High	Low-med	Med	Med	Med	N: med. P: high K: low-med. Mg, Zn: med.	Hillside, gravelly and acid soils	Low-med	Develops slowly in wet soils. Slow to establish. Sensitive to Latent Virus.	4	
140Ru	berlandieri ^J rupestri	High	Low-med	Low	High	High	Med-high	Med-high	High	N: med.-high P, Mg: high K: low	Adapted to drought and acid soils	Med	Does poorly in nonirrigated, low K soils	4	
1103P	berlandieri ^J rupestris	High	Med-high	Low	Med-high	Med-high	Med	Med	High-med	N: med.-high P, Mg: high K, Zn: low-med	Adapted to drought and saline soils	High	—	4	
1616C	longii ^J riparia	High	High	Med	Low	High	Med-high	Low-med	Low	N: low K: med.-high	Best on fertile, med.- to fine textured soils. tolerates acid soils	High	Poor on low-vigor sites; tolerates wet soils (Poor on infertile, sandy soil)	3	
161-49		High	Low	Low	Low	Low	Low	Low	H		Humid, fertile soils.			2	
Fercal		High	Med	Med	Med	M-H			High		Mg deficient soils.			2	
Salt Creek (Ramsey)	champinii	High	High	Low-med	Med-high	Low-med	High	High	Med	High	N, P: high K: med.-high Zn, Mn: low	Sandy, infertile	Low	Tolerant to Phytophthora	4

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Dogridge	champinii	Med	Med-high	Low-med	Med	Low-med	Med-high	Med	Very high	N, P: high K: med. Zn: low	Very sandy, infertile	Low	Promotes excess vigor, poor fruit set	4
Harmony	1613 (solonis ^J Othello) ^J Dogridge	Low-med.2	Med-high	Med-high	Low-med	Low	Low-med	Med	Med-high	N: low P: med. K: high Zn: low-med.	Sandy loams and loamy sands	High	—	3
Freedom	1613 (solonis ^J Othello) ^J Dogridge	Low-med.2	High	High	Med	Low	Low-med	Med	High	N, P, K: high Mg: med. Zn, Mn: low	Sandy to sandy loams	Med-high	Sensitive to latent viruses	3
039-16	vinifera ^J rotundifolia	High	Low	High	Low	—	Low	Low	High	N, K: high P: low-med. Zn: low	Poor on coarse, sandy soils due to low root knot nematode tolerance	Verly low	Tolerant of fanleaf virus	3
GRN-1 (8909-05-AW)		Very high	Very high	Very high	Med	—	Low	Low	M-H				Highly resistant to ring, citrus and lesion nematodes.	3
GRN-2 (9363-16-AW)		Very high	Very high	Very high	Med	Med	Med?	Med	Low-med					3
GRN-3 (9365-43-AW)		High	Very high	Very high	Med-high	Med	Med-high?	Med-high	Med+				Resists citrus and lesion nematodes, but not ring.	3
GRN-4 (9365-85-AW)		High	Very high	Very high	High	Med	Med-high?	Med-high	Med-high				Resists citrus and lesion nematodes, low to moderate ring resistance.	3
GRN-5 (9407-14-AW)		Med-high	Very high	Very high	High	Low-med	Med-high?	Med-high	High			Med-low	Resists citrus and lesion nematodes, moderate ring resistance.	3
RS-3			High	High		Low-med	Med		Med-high				Broad nematode resistance.	3
RS-9			High	Low		Low-med	Med		Low				Suitable for close plantings.	3

- 1 = Very Short Cycle (early season development, early ripening)
- 2 = Short to Moderate Cycle
- 3 = Moderate to Long Cycle
- 4 = Long Cycle (late season development, delayed ripening)