C.M. Rick TGRC Tomato Genetics Resource Center

RECOMMENDATIONS FOR FLOWERING AND REPRODUCING WILD TOMATO SPECIES

Solanum Species (new taxonomy)	Lycopersicon Species (old taxonomy)	Sowing[a]	Flowering	Mating System	Seed Produced by[b]	Pop Size for Seed	# Plants per pot	Seed Germination[c]	Notes
S. cheesmaniae *S. galapagense*	*L. cheesmanii* *L. cheesmanii* f. *minor*	Nov	Spring	autogamous (SC)	selfing	10	2 per 1 gal pot	Bleach seed for 1 hour	Seed produced under low light conditions is of poor quality.
S. chilense	*L. chilense*	July	Fall-Spring	allogamous (SI)	mass sib	50	5 per 1 gal pot	Bleach seed for 30 minutes	
S. chmielewskii	*L. chmielewskii*	May	year round	facultative (SC)	mass sib	50	5 per 1 gal pot	Bleach seed for 30 minutes	
S. lycopersicum	*L. esculentum* var. *cerasiforme*	April	year round	autogamous (SC)	selfing	6	2 per 2 gal pot (or field)	Bleach seed for 30 minutes	
S. habrochaites	*L. hirsutum*	July	Fall-Spring	facultative (SC) --- allogamous (SI)	mass sib --- mass sib	15 --- 50	5 per 2 gal pot	Bleach seed for 30 minutes	Forms edema on leaves under high humidity.
S. neorickii	*L. parviflorum*	May	year round	autogamous (SC)	selfing	15	3 per 1 gal pot	Bleach seed for 30 minutes	
S. pennellii	*L. pennellii*	June	year round	allogamous (SI) or facultative (SC)	mass sib	50	5 per 1 gal pot	Bleach seed for 30 minutes	Use well-drained soil and water sparingly.
S. arcanum *S. corneliomulleri* *S. huaylasense* *S. peruvianum*	*L. peruvianum*	June	mostly year round	allogamous (SI) or facultative (SC)	mass sib	50	5 per 1 gal pot	Bleach seed for 30 minutes	Mountain races are short day.
S. pimpinellifolium	*L. pimpinellifolium*	April --- Feb	year round --- year round	autogamous (SC) --- facultative (SC)	selfing --- mass sib	6 --- 50	(field) --- 5 per 1 gal pot	Bleach seed for 30 minutes	--- Regenerate in greenhouse to limit outcrossing.
S. juglandifolium	*S. juglandifolium*	Oct	Spring	allogamous (SI)	mass sib	50	3 per 2 gal pot	Bleach seed for 1 hour, knick seed coat	Water heavily; 6 mo. seed maturation. See also (d) below.
S. lycopersicoides	*S. lycopersicoides*	Aug	Fall-Spring	allogamous (SI)	mass sib	50	5 per 2 gal pot	Bleach seed for 1 hour, knick seed coat	6 mo. seed maturation.
S. ochranthum	*S. ochranthum*	Oct	Spring	allogamous (SI)	mass sib	50	3 per 2 gal pot	Bleach seed for 1 hour, knick seed coat	Water heavily; 6 mo. seed maturation. See also (d) below.
S. sitiens	*S. sitiens*	Aug	year round	allogamous (SI)	mass sib	50	3 per	Bleach seed	Graft onto

							2 gal pot	for 1 hour, knick seed coat	LA4135; 6 mo. seed maturation.

[a] Planting dates that are optimal for Davis, CA; certain groups (*L. esculentum, chmielewskii, parviflorum* and selfing *pimpinellifolium*) can thrive at almost any time of year.

[b] Mass sib refers to the collection and combining of pollen from each plant (sibling) in the group being generated. The mixed pollen is then applied to all flowers in the group.

[c] Bleach refers to soaking seed in half-strength household bleach (2.7% sodium hypochlorite). After bleaching, seeds should be rinsed for 15 minutes. For some species, knicking the seed

[d] coat near the radicle end using a sharp scalpel is recommended after the rinsing step. Besides improving germinaton response, bleaching also helps eliminate pathogens. Germinate at 25°C on blotter paper in plastic boxes.

d Sow in early October, transplant to Speedling trays when large enough, hold in trays until Jan, then transplant to pots. Grow on low benches, shady, sheltered area of greenhouse.

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