

Guidelines for testing germination of the most common crop species. Refer to ISTA (2005) or AOSA (2005) for information on other crops.

<i>Crop</i>	<i>Species</i>	<i>Substrate*</i>	<i>Temp (°C)**</i>	<i>First, Final count (days)</i>	<i>Special treatments; Additional directions for fresh and dormant seeds</i>
Alfalfa	<i>Medicago sativa</i>	TP; BP	20	4, 7	Mechanical scarification of hard seeds
Annual rape	<i>Brassica napus</i>	BP, TP	20/30	3, 7	
Barley	<i>Hordeum vulgare</i>	BP; S	20	4, 7	Pre-chill at 5°C or 10°C for five days
Bermudagrass	<i>Cynodon dactylon</i>	TP	20/30	7, 21	Light; KNO ₃
Berseem	<i>Trifolium alexandrinum</i>	TP; BP	20	3, 7	
Black gram	<i>Vigna mungo</i>	BP	20/30; 25; 20	3, 7	
Black mustard	<i>Brassica nigra</i>	TP; BP	20/30; 20	3, 7	Light; KNO ₃ and pre-chill at 10°C for three days
Bottle gourd	<i>Lagenaria siceraria</i>	BP; S	20/30; 20	14	
Buck wheat	<i>Fagopyrum esculentum</i>	BP; TP	20/30; 20	3, 6	
Cabbage	<i>Brassica oleracea</i> var. <i>capitata</i>	TP; BP	20/30; 20	3, 10	Pre-chill at 5° or 10°C for three days; KNO ₃ and light
Carrot	<i>Daucus carota</i>	TP; BP	20/30; 20	6, 14	GA ₃ 50 ppm
Castor bean	<i>Ricinus communis</i>	BP; S	20/30	7, 14	
Cauliflower	<i>Brassica oleracea</i> var. <i>botrytis</i>	TP; BP	20/30; 20	3, 10	Pre-chill at 5° or 10°C for three days; KNO ₃ and light
Chickpea	<i>Cicer arietinum</i>	BP	20	5, 8	Mechanical scarification of hard seeds
Chicory	<i>Cichorium intybus</i>	TP	20; 20/30	5, 14	Light; KNO ₃
Coriander	<i>Coriandrum sativum</i>	TP; BP	15	6, 21	
Cotton	<i>Gossypium</i> spp.	BP; S	20/30; 25	4, 12	De-linting; Mechanical scarification of hard seeds
Cowpea	<i>Vigna unguiculata</i>	BP; S	20/30; 25	5, 8	
Cucumber	<i>Cucumis sativus</i>	TP; BP	20/30	3, 7	Keep substrate on dry side
Eggplant	<i>Solanum melongena</i>	TP; BP; S	20/30	7, 14	Light; KNO ₃
Faba bean	<i>Vicia faba</i>	BP; S	20	4, 14	Pre-chill at 10°C for three days

Field bean	<i>Phaseolus vulgaris</i>	BP; S	20/30; 25; 20	5, 8	
Finger millet	<i>Eleusine corocana</i>	TP	20/30	8	KNO ₃
Flax	<i>Linum usitatissimum</i>	BP; TP	20/30; 20	3, 7	
Foxtail millet	<i>Setaria italica</i>	TP	20/30	4, 10	
Grain Amaranth	<i>Amaranthus</i> spp.	TP	20/30; 20	7, 14	
Grass pea	<i>Lathyrus sativus</i>	BP; S	20	4, 14	Mechanical scarification of hard seeds
Hot pepper	<i>Capsicum frutescens</i>	TP; BP	20/30	6, 14	Light and KNO ₃
Indian mustard	<i>Brassica juncea</i>	TP; BP	20/30	3, 7	Light; Pre-chill at 10°C for seven days and test for five additional days
Lentil	<i>Lens culinaris</i>	BP, S	20	5, 10	Mechanical scarification of hard seeds
Lettuce	<i>Lactuca sativa</i>	TP; BP	20	7	Light; pre-chill
Lima bean	<i>Phaseolus lunatus</i>	BP; S	20/30; 25	5, 9	
Lupine	<i>Lupinus angustifolius</i> ; <i>L. albus</i>	BP; S	20	3, 10	
Maize	<i>Zea mays</i>	BP; S	20/30; 25; 20	4, 7	
Mung bean	<i>Vigna radiata</i>	BP; S	20/30; 25	3, 7	
Muskmelon	<i>Cucumis melo</i>	BP; S	20/30	4, 10	Keep substrate on dry side
Oat	<i>Avena sativa</i>	BP; S	20	5, 10	Pre-chill at 5°C or 10°C for five days and test for ten days
Okra	<i>Abelmoschus esculentus</i>	BP; TP	20/30	4, 14	
Onion	<i>Allium cepa</i>	BP; TP	20	6, 10	
Orchardgrass	<i>Dactylis glomerata</i>	TP	15/25	7, 21	Light; Pre-chill at 5°C or 10°C for seven days
Pea	<i>Pisum sativum</i>	BP; S	20	8	
Peanut	<i>Arachis hypogaea</i>	BP; S	20/30; 25	5, 10	Ethephon, 0.2%
Pearl millet	<i>Pennisetum glaucum</i>	TP; BP	20/30; 25	3, 7	
Pigeonpea	<i>Cajanus cajan</i>	BP	25	5, 10	Mechanical scarification of hard seeds
Potato	<i>Solanum tuberosum</i>	TP; BP	20/30; 20	8, 16	GA ₃ , 2000 ppm
Pumpkin	<i>Cucurbita maxima</i>	BP; S	20/30; 25	4, 7	Keep substrate on dry side

Radish	<i>Raphanus sativus</i>	TP; BP	20/30; 20	4, 6	
Red clover	<i>Trifolium pratense</i>	TP; BP	20	4, 10	Pre-chill at 5°C or 10°C for five days
Rice	<i>Oryza sativa</i>	TP; BP; S	20/30; 25	5, 14	Preheat at 40°C for five days
Rye	<i>Secale cereale</i>	TP; BP; S	20	4, 7	Pre-chill at 5°C or 10°C for five days
Rye grass	<i>Lolium perenne</i>	TP	15/25; 20	5, 14	KNO ₃ and pre-chill at 5°C or 10°C for five days
Safflower	<i>Carthamus tinctorius</i>	TP; BP	20; 25;	4, 14	Light at 15°C
Sesame	<i>Sesamum indicum</i>	TP	20/30	3, 6	
Sorghum	<i>Sorghum bicolor</i>	TP; BP	20/30; 25	3, 10	Pre-chill at 5°C or 10°C for five days
Soybean	<i>Glycine max</i>	BP; S	20/30; 25	5, 8	
Squash	<i>Curcubita pepo</i> ; <i>C. moschata</i>	BP; S	20/30	4, 7	Keep substrate on dry side
Strawberry	<i>Fragaria ananassa</i>	TP	20/30; 20	28	Light
Sugar beet	<i>Beta vulgaris</i> subsp. <i>vulgaris</i>	TP, BP, S	20/30; 20	3, 10	Pre-wash and dry at a maximum of 25°C
Sunflower	<i>Helianthus annuus</i>	BP; S	20/30; 25; 20	3, 7	
Sweet clover	<i>Melilotus albus</i>	TP; BP	20	4, 7	
Timothy grass	<i>Phlem pratensis</i>	TP	20/30	5, 10	Light; KNO ₃ and Pre-chill at 5°C or 10°C for five days
Tobacco	<i>Nicotiana tabacum</i>	TP	20/30	4, 14	Light
Tomato	<i>Lycopersicon esculentum</i>	TP; BP	20/30	5, 14	Light; KNO ₃
Triticale	<i>Triticosecale</i>	TP; BP; S	20	4, 7	Pre-chill at 5°C or 10°C for five days
Vetch	<i>Vicia sativa</i>	BP; S	20	5, 10	
Watermelon	<i>Citrullus lanatus</i>	BP; S	20/30; 25	4, 14	Keep substrate on dry side; Test at 30°C
Wheat	<i>Triticum aestivum</i>	TP; BP; S	20	4, 7	Pre-heat (30°-35°C); Pre-chill; GA ₃
White clover	<i>Trifolium repens</i>	TP; S	20	3, 10	Pre-chill at 5°C or 10°C for five days

*TP = Top of paper, BP = Between paper, S = Sand

**20/30 = alternating temperatures of 20°C applied for eight hours per day and 30°C for 16 hours.