

## Overview of crop characteristics for vegetable seed production

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Family	English name	Scientific name	Pollination type (Cross / Self Pollinating & Wind / Insect Pollinated)	Propagation type (Generative/ Vegetative)	Annual or biennial	Minimum number of seed plants*	Seed longevity (in years)	Minimum distance between varieties**
Valerianaceae	Lamb's lettuce	<i>Valerianella locusta</i>	Self + cross	Generative	1 or 2	1 m2	4 to 5	30 -50m
Umbelliferae	Carrot	<i>Daucus carota</i>	Cross, insects	Generative	two	30 min, pref. 100	2 to 3	100-150
	Parsley	<i>Petroselinum crispum</i>	Cross, insects	Generative	two	20-30	2 to 3	100-150
	Celery	<i>Apium graveolens</i>	Cross, insects	Generative	two	15	2 to 5	100-150
	Parsnip	<i>Pastinaca sativa</i>	Cross, insects	Generative	two	25 - 30	<1	100-150
	fennel	<i>Foeniculum vulgare</i>	Cross, insects	Generative	two	25 - 30	2 to 5	100-150
	chervil	<i>Chaerophyllum bulbosum</i>	Cross, insects	Generative	two	25 - 30	<1	100-150
Chenopodiaceae	spinach	<i>Spinacia oleracea</i>	Cross, wind	Generative	One year	25 - 30	4 to 5	200
	Beetroot, red beet,	<i>Beta vulgaris</i>	Cross, wind	Generative	two	25 - 30	> 6	200
	garden orach	<i>Atriplex hortensis</i>	Cross, wind	Generative	one	25 - 30	2 to 3	100
	Good King Henry	<i>Chenopodium bonus-henricus</i>	Cross, wind	Generative	two	25 - 30	4 to 5	100
	quinoa	<i>Chenopodium quinoa</i>	Self	Generative	one	1.5 m2	4 to 5	100
Fabaceae	French bean	<i>Phaseolus vulgaris</i>	Self	Generative	one	10	4 to 5	5 to 10
	Runner bean	<i>Phaseolus coccineus</i>	Self, insects	Generative	one	10	4 to 5	150
	Broad bean	<i>Vicia faba</i>	Self, also insects	Generative	one	10	4 to 5	2 to 5
	pea	<i>Pisum sativum</i>	Self	Generative	one	10	4 to 5	2 to 5
Polygonaceae	buckwheat	<i>Fagopyrum esculentum</i>	Cross, insects	Generative	one	1 m2	4 to 5	150
	rhubarb	<i>Rheum spp</i>	-	Vegetative	several	3	4 to 5	150
	sorrel	<i>Rumex spp</i>	Cross, insects	Both	One or two	25-30	4 to 5	150
Compositae / Asteraceae	lettuce	<i>Lactuca sativa</i>	Self	Generative	one	5	4 to 5	2 to 5
	endive	<i>Cichorium endivia</i>	Self, insects	Generative	One or	20	4 to 5	10 to 150
	chicory	<i>Cichorium intybus var. foliosum</i>	Cross, insects	Generative	One or	20	4 to 5	150
	wild chicory	<i>Cichorium intybus</i>	Cross, insects	Generative	One or	20	4 to 5	150
	artichoke	<i>Cynara scolymus</i>	Cross, insects	Both	One or	20	4 to 5	200 -250
	salsify	<i>Scorzonera hispanica</i>	Cross, insects	Generative	one	20	< 2	150
	Sunflower	<i>Helianthus annuus</i>	Cross, insects	Generative	one	20	> 6	200 -250
	Jerusalem	<i>Helianthus tuberosus</i>	-	Vegetative	several	5	1 (tuber)	2

Crucifereae / Brassicaceae	White cabbage / red cabbage	<i>Brassica oleracea</i> convar. <i>capitata</i> var. <i>alba</i> / var <i>rubra</i>	Cross, insects	Generative	two	100	> 6	150
	kohlrabi	<i>Brassica oleracea</i> convar. <i>caulorapa</i> var.	Cross, insects	Generative	two	100	> 6	150
	cauliflower	<i>Brassica oleracea</i> convar. <i>botrytis</i> var.	Cross, insects	Generative	One or	100	> 6	150
	broccoli	<i>Brassica oleracea</i> convar. <i>botrytis</i> var.	Cross, insects	Generative	one	100	> 6	150
	Brussels sprouts	<i>Brassica oleracea</i> convar. <i>oleracea</i> var	Cross, insects	Generative	two	100	> 6	150
	kale	<i>Brassica oleracea</i> convar. <i>acephala</i> var.	Cross, insects	Generative	two	100	> 6	150
	Savoy cabbage	<i>Brassica oleracea</i> convar. <i>capitata</i> var.	Cross, insects	Generative	two	100	> 6	150
	turnip rape	<i>Brassica rapa</i> ssp. <i>oleifera</i>	Cross, insects	Generative	two	100	> 6	150
	Chinese cabbage	<i>Brassica rapa</i> ssp. <i>pekinensis</i>	Cross, insects	Generative	One or	100	> 6	150
	paksoi	<i>Brassica rapa</i> ssp. <i>chinensis</i>	Cross, insects	Generative	One or	100	> 6	150
	Swede rape, oil	<i>Brassica napus</i>	Cross, insects	Generative	one	1 m2	> 6	150
	white mustard	<i>Sinapis alba</i>	Cross, insects	Generative	one	1 m2	> 6	150
	rettich / radish	<i>Raphanus sativus</i>	Cross, insects	Generative	one or two	25-30	> 6	150
	sea cabbage	<i>Crambe maritima</i>	Cross, insects	Both	two	25-30,veg 3-5	2 to 3	150, veg 2-5
	rocket	<i>Eruca sativa</i>	Cross, insects	Generative	one	1 m2	> 6	150
	garden cress	<i>Lepidium sativum</i>	Cross, insects	Generative	one	1 m2	> 6	150
	watercress	<i>Nasturtium officinale</i>	Cross, insects	Generative	two	1 m2	?	150
Cucurbitacea	courgette, marrow	<i>Cucurbita pepo</i>	Cross, insects	Generative	one	15 to 20	4 to 5	250
	pumpkin,gourd	<i>Cucurbita maxima</i>	Cross, insects	Generative	one	15 to 20	4 to 5	250
	pumpkin, winter	<i>Cucurbita moschata</i>	Cross, insects	Generative	one	15 to 20	4 to 5	250
	pumpkin, winter	<i>Cucurbita mixta</i>	Cross, insects	Generative	one	15 to 20	4 to 5	250
	cucumber	<i>Cucumis sativus</i>	Cross, insects	Generative	one	15 to 20	> 5	150
	melon, cantaloupe	<i>Cucumis melo</i>	Cross, insects	Generative	one	15 to 20	> 5	150
	water melon, equisi	<i>Citrullus lanatus</i>	Cross, insects	Generative	one	15 to 20	> 5	150
Solanaceae	tomato	<i>Lycopersicon esculentum</i>	Self	Generative	one	5	> 6	2 to 4
	pepper	<i>Capsicum annuum</i>	Mainly self	Generative	one	5	4 to 5	10
	chilli	<i>Capsicum annuum</i> , <i>C. chinense</i> , <i>C. frutescens</i> , <i>C. baccatum</i> , <i>C. pubescens</i>	Mainly self, also insects	Generative	one	10 to 20	> 6	30
	eggplant	<i>Solanum melangena</i>	Mainly self	Generative	one	5	> 6	01/10/00
	potato	<i>Solanum tuberosum</i>	-	Vegetative	one	5	1 (tuber)	-
Portulacaceae	purslane	<i>Portulaca olerace</i>	self	Generative	one	20 to 30	4 to 5	2
	winter purslane	<i>Montia perfoliata</i>	self	Generative	one or two	20 to 30	4 to 5	2
Alliaceae	onion	<i>Allium cepa</i> var. <i>cepa</i>	cross, insects	Generative	two	Min 30, pref. 100-	2 tot 3	150
	sjalot	<i>Allium cepa</i> var. <i>ascalonicum</i>	-	Vegetative	one	20	-	1
	leeks	<i>Allium ampeloprasum</i> var. <i>porrum</i>	cross, insects	Generative	two	Min 30,	2 tot 3	150
	garlic	<i>Alium sativum</i>	-	Vegetative	several	10	-	1
	chives	<i>Allium schoenoprasum</i>	cross, insects	Both	several	Min 30, vegetative	2 to 3	Generative 150
	asparagus	<i>Asparagus officinalis</i>	cross, insects	Both	several	20-30, vegetative	4 to 5	Generative 150

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\* The numbers in this column are the number of seed plants required to prevent inbreeding. During growing and storage plants will die. To keep sufficient plants for seed production, it is advisable to double the numbers prior to growing/ storage.

\*\* These distance are sufficient for own use. For commercial seed production larger distances are required to prevent crosspollination and mixture.