

**Table C.1**  
Plants that are Suitable for Large-Scale Bee Ranching

CROP	SCIENTIFIC NAME	NATIVE	TYPE	BLOOM PERIOD	HEIGHT <sup>1</sup>	SOWING SEASON	SOW PER <sup>1</sup> 1000 SQ. FT.	SOW PER <sup>1</sup> ACRE	SOIL INOCULANT REQUIRED?	COMMENTS
Pussy willow	<i>Salix</i> spp.	Yes	Tree	Early spring	5–15 ft.	Anytime	5–10 ft. spacing	5–10 ft. spacing	No	Excellent early pollen source for emerging spring bees. European species may be better than native.
Siberian squill	<i>Scilla siberica</i>	No	Perennial	Early spring	6 in.	Fall	Bulbs spaced 10 in.	Bulbs spaced 10 in.	No	Very early blooming shade plant. Good forage source for mason bees.
Cherry	<i>Prunus</i> spp.	Both	Tree	Early spring	5–100 ft.	Anytime	Depends on species	Depends on species	No	Avoid sterile ornamental varieties.
Meadow-foam	<i>Limnanthes alba</i>	Yes	Annual	Spring	10–18 in.	Fall	2 lb.	25 lb.	No	A less common oilseed crop. Excellent for mason bees.
Rapeseed	<i>Brassica napus</i>	No	Annual	Spring	3–5 ft.	Spring or Fall	4 oz.	4–10 lb.	No	Prolific bloom. Good nectar source.
Oilseed radish	<i>Raphanus sativus</i>	No	Annual	Spring–summer	2–3 ft.	Spring	1 lb.	25 lb.	No	Avoid planting in rotation with cole crops due to shared pests and diseases.
Blueberry	<i>Vaccinium</i> spp.	Yes	Shrub	Spring–summer	1–15 ft.	Anytime	5–10 ft. spacing	5–10 ft. spacing	No	Good forage source for many bee species.
Crimson clover	<i>Trifolium incarnatum</i>	No	Annual	Spring–summer	18 in.	Fall or Spring	1–2 lb.	20–30 lb.	Yes	Excellent cover crop. Cold-hardy winter annual.
Smooth penstemon	<i>Penstemon digitalis</i>	Yes	Perennial	Spring–summer	1–3 ft.	Fall	5 oz.	2 lb.	No	Commonly associated with various mason bees in the upper Mississippi River valley.
Early figwort	<i>Scrophularia lanceolata</i>	Yes	Perennial	Spring–summer	3–7 ft.	Fall	1 oz.	4 lb.	No	Short bloom period, extremely prolific nectar producer.
Phacelia	<i>Phacelia tanacetifolia</i>	Yes	Annual	Spring–summer	2–3 ft.	Spring	4–8 oz.	5–10 lb.	No	One of the best bee pasture plants.
Borage	<i>Borago officinalis</i>	No	Annual	Spring–summer	1–4 ft.	Fall	4–8 oz.	5–10 lb.	No	Very prolific bloom. Good pollen, and excellent nectar source.
Kura clover	<i>Trifolium ambiguum</i>	No	Perennial	Spring–summer	10 in.	Fall	0.5 lb.	6–10 lb.	Yes	Good choice for apple orchards. Provides minor apple scab suppression.
Hairy vetch	<i>Vicia villosa</i>	No	Annual	Spring–summer	2–3 ft.	Fall	1–2 lb.	20–30 lb.	Yes	Good for cold climates.

Strawberry clover	<i>Trifolium fragiferum</i>	No	Perennial	Spring-summer	10 in.	Fall	0.5–1 lb.	12–15 lb.	Yes	Limited flood tolerance.
New Zealand white clover	<i>Trifolium repens</i>	No	Perennial	Spring-summer	10 in.	Fall	0.5–1 lb.	12–15 lb.	Yes	Tolerates poorly drained soils.
Common vetch	<i>Vicia sativa</i>	No	Annual	Spring-summer	3 ft.	Fall	1–3 lb.	20–30 lb.	Yes	More nectar than other vetches. Seed also less expensive.
Purple vetch	<i>Vicia atropurpurea</i>	No	Annual	April – May spring-summer	2–3 ft.	Fall	1–3 lb.	20–30 lb.	Yes	Not cold tolerant. Best vetch for mild climates.
Alfalfa	<i>Medicago sativa</i>	No	Annual and perennial varieties	Summer	2 ft.	Depends on variety	0.5–2 lb.	15–25 lb.	Yes	Dormant varieties required for cold climates.
Red clover	<i>Trifolium pratense</i>	No	Perennial	Spring-summer	2–3 ft.	Anytime	0.5 lb.	15–20 lb.	Yes	More tolerant of acid soils than other clovers. Short lived
Alsike clover	<i>Trifolium hybridum</i>	No	Perennial	Spring-summer	18 in.	Fall	0.5–2 lb.	15–20 lb.	Yes	Very cold hardy. Performs poorly in warm and dry climates. Short lived.
Purple prairie clover	<i>Dalea purpurea</i>	Yes	Perennial	Mid-summer	1–2 ft.	Fall	0.5–2 lb.	5–10 lb.	Yes	Very adaptable and cold and drought tolerant. Short but prolific blooms. Blooms slightly later than white prairie clover.
White prairie clover	<i>Dalea candida</i>	Yes	Perennial	Mid-summer	1–2 ft.	Fall	0.5–2 lb.	5–10 lb.	Yes	Very adaptable and cold and drought tolerant. Short but prolific blooms. Blooms slightly earlier than purple prairie clover.
Buckwheat	<i>Fagopyrum esculentum</i>	No	Annual	Summer	1–3 ft.	Spring - Summer	2 lb.	30 lb.	No	Good nurse crop for Phacelia. Excellent source of nest materials for leafcutter bees.
Catmint	<i>Nepeta sp.</i>	No	Perennial	Summer	1–3 ft.	Fall	0.5 lb	10 lb	No	Many varieties, all good nectar plants. Drought tolerant but hard to establish from seed.
Sweet clover	<i>Melilotus officinalis</i>	No	Biennial	Spring-summer	2–6 ft.	Spring - Summer	0.5–1 lb.	12–20 lb.	Yes	Very adaptable.
Showy goldenrod	<i>Solidago speciosa</i>	Yes	Perennial	Fall	4 ft.	Fall	1 oz.	4 lb	No	Good late season forage for cold climates.
New England aster	<i>Aster novae-angliae</i>	Yes	Perennial	Fall	2–4 ft.	Fall	1 oz.	4 lb	No	Good late season forage for cold climates.

1. To convert to metric units, see conversion table, page 156.