



Crown Vetch

Coronilla varia



Mating & Breeding System

Crown vetch is a non-native legume that is used extensively in North America. It is ideal for erosion control and land rehabilitation, with its mat-forming growth habit and ability to grow well in very poor soil. It also produces high quality pollen and nectar for foraging pollinators. Crown vetch is self-incompatible, and depends on insect pollinators to produce seed. Many bees (including honey bees, bumble bees, and solitary bees) are common visitors, although achieving adequate pollination at a commercial scale is difficult.

Pollination, Quality & Yield

Bees can forage for nectar without tripping the flowers because nectaries are located outside of the blooms. Not all flowers, however, produce nectar. Only large, strong bees can trip the flowers to access the pollen. Adding honey bees to crown vetch will deliver an acceptable seed yield. In suitable habitat, bumble bees and other wild bees may also do a passable job of pollinating.

Pollination Recommendations

Honey bee colonies can be used on crown vetch. As many as 10 colonies per hectare are recommended for seed production. Since it takes a long time (50 days) for seeds to mature, pollination should be initiated as early in the season as the bloom will allow. Large numbers of honey bees are needed because experiments have shown that it is not a preferred crop and the bees will often leave to seek out other forage. They also appear to have a difficult time learning how to manipulate the flowers, which is more difficult in crown vetch than in other legumes. In comparison, bumble bees can visit more flowers and are capable of tripping the flowers more easily to collect pollen, but are rarely abundant foragers on this crop. The alfalfa leafcutter bee (*Megachile rotundata*) has an affinity for crown vetch pollen and warrants investigation as a potential managed pollinator for this crop.



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References

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