



Birdsfoot Trefoil

Lotus corniculatus

Mating & Breeding System

Birdsfoot-trefoil (also known as broadleaf trefoil) is a legume, with a typical legume flower structure. It is largely self-incompatible, and depends on insects to produce seed. However, some varieties will set a small number of self-pollinated seeds, particularly if the flower has been flattened (e.g., by rain) and can't be tripped. While self-pollination is possible, in practice insects are required to move pollen. Cross-pollen may be more likely to set seed than self-pollen or pollen from a closely related plant. Only large, strong bees can trip the flowers and successfully pollinate this plant. The flowers are designed to deliver pollen over multiple visits. The plant produces abundant, concentrated nectar, and is considered a valuable honey plant in North America.

Pollination, Quality & Yield

Without visits from bees, only a few flowers will set fruit and seed production is very low. Pollinators are thus required for commercial seed production. Bees collect both nectar and pollen from the flowers, and there has been some research into high-nectar cultivars in an effort to increase bee visits. The seed pods of the crop are dehiscent (i.e., they shatter at maturity), which makes harvest difficult.

Pollination Recommendations

A flower can be pollinated after a single bee visit, although as many as 25 visits to each flower is necessary to get full pollination and maximum seed set. Recommendations for honey bee stocking rates vary. One early study found that no more than 2.5 colonies per hectare were needed. However, other studies have recommended as many as 8 colonies per hectare for growers in Ontario.



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References

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