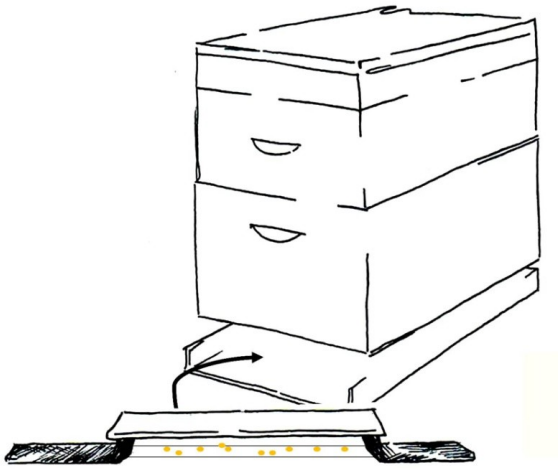
Using Pollinators

Pollen dispensers and Inserts

Pollen dispensers are devices that fit on the front of a honey bee hive or bumble bee domicile that contain supplemental crop pollen. Foraging bees must walk through the pollen as they exit the hive or domicile, picking up pollen and thus delivering additional pollen to the crop while foraging. Pollen dispensers can be especially useful in weather that unfavourable to honey bees, as they reduce the total time that the bees must work the crop. This is an important consideration in early blooming crops, particularly orchard fruits. In some cases significant yield improvements have been observed; in other cases the practice was largely ineffective (i.e. self-incompatible apricot). In the latter case, the bees were observed collecting the pollen from the dispensers and packing it into their pollen basket and most of it was never carried to the crop.



Example of a pollen dispenser that can be added to entrance of a hive (illustration by C. Dawson)

The biggest problem with pollen dispensers can be the acquisition and care of the pollen itself. No substitute for real pollen has been invented, so the only option is the expensive collection of pollen from flowers by either bees (using pollen traps on the hives) or human labourers. Pollen gathered from hives must be treated to make it useable again washing it in a series of solutions, followed by drying with cold air. Pollen collected directly from the flowers does not require such processing, although it may clump if not used promptly.

Pollen can be frozen and stored for up to two years. However, it retains its germinability for a period of only a few hours once thawed and placed in the dispenser. For this reason, its use must be carefully planned to coincide with optimal flying weather and when the crop bloom is well underway. If few flowers on the crop are open when the pollen inserts are deployed, the bees may not stay on the crop and forage elsewhere, and the supplied pollen will be wasted.

Bee pollen can be collected from hives, but must be washed and dried before it can be reused for crop pollination

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