



# Almonds: Pollination

## What is Pollination?

Pollination is the transfer of pollen from the male part of a plant to the female part of a plant.

## Why is Pollination important?

Pollination improves nut set, yields and profits. Almond trees are not “totally” self-fertile. Therefore bees carry pollen from the pollenizer trees to the major producing trees that need more pollen. All the flowers must be crossed pollinated to obtain a maximum crop.

## About Bees

Bees are commonly used to improve pollination. Bees need

- warm temperatures (above 13°C),
- sunny weather (no or little rain), and
- calm conditions (bees prefer winds less than 24 km/h)

for good movement and optimal pollination. Cold, stormy weather during the bloom stage can limit bee flight and reduce the size of the crop. Most bees operate within 90-180m of their colony.

## Bee hive specifications for Afghanistan

- Two hives per *jerib* (2,000m<sup>2</sup>) spaced 160m apart
- Each hive should have 40,000-50,000 worker bees.
- Each hive should have a ball of bees the size of a basketball, or in a typical hive with 9 vertical hanging brood frames (frames = 70cm x 50cm) - with an actively laying queen with brood - 6-8 frames heavily covered. (picture of brood at right)
- Hives should be in the orchard at the beginning of flowering (pink bud) and remain until the last variety is past 100% bloom.

## Other recommendations

- Use one pollenizer row of trees for every three rows of main variety (or 2x2)
- The effects of the use of pesticides in adjacent fields can reduce bee numbers and their movement.

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