



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* (2,000m²) 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.

Prepared by Louise Ferguson, Joseph H Connell, Mark A Bell, Corky Lovin, John Driver, Zach Lea and Paul Marcotte March 2011

This publication has been produced with the support of the European Union, Perennial Horticulture Development Program, Almond Industry Development Project, Contract: ASIE/2007/135-504, Roots of Peace, Kabul, +93 (0) 794-677-212, zach@rootsofpeace.org. The contents of this publication are the sole responsibility of UCD and can in no way be taken to reflect the views of the European Union. Copyright © UC Regents Davis campus, 2011. All Rights Reserved.



For more information visit: www.ip.ucdavis.edu, http://ec.europa.eu/europeaid/index_en.htm, www.rootsofpeace.org.

