

Water Recommendations for Bees Pollinating Almonds

Bees require access to water in order to regulate hive temperatures in the heat. Standing water on orchard floors may be contaminated with pesticides which are harmful to bees. Bees accessing other water sources like neighboring pools/fountains may create a nuisance. Providing water is an important, and easy step to safely and effectively manage bees pollinating almonds, and avoid complaints from neighbors. Here are some guidelines.

- Place water near hives as soon as they arrive.
- Use new containers or ones that have been thoroughly cleaned out
- A proper “landing” area is essential for successful water collection, so bees don’t drown.
 - This can be achieved with cork, marbles, leaves, grass, or straw. These materials are common in shallow pans and dishes that can be easily changed out frequently.
 - For buckets or drums most commercial beekeepers use burlap
 - Burlap, fastened by clothespins, is draped over the sides allowing water to wick up the sides.
- Change out water if it has been contaminated with pesticides
- We recommend about a half-gallon for each hive for the duration of pollination. Which is roughly equal to:
 - One 55 gallon drum for every 100 hives or,
 - One 5 gallon bucket for every 10 hives
- In permanent apiary locations, beekeepers sometimes set up 275 gallon water totes (also called Intermediate Bulk Containers) and attach spouts that automatically fill a small bowl. If contamination is suspected, the bowl is simply dumped out and the water contained inside of the sealed tote remains usable.
- Not all “clean/clear” water is equal. Clear water may be unsafe, while murky looking water may be safe and even preferred.
 - Just because water looks clear does not mean it is pesticide free and safe for bees.
 - Conversely, water that is visually unappealing to humans for consumption may be safe and even beneficial to bees.
 - There is some evidence that bees benefit from nutrients in water
 - Dead and decaying organic matter leaches nutrients into the water that bees need
 - Depending on the needs of the hives and time of year bees prefer water with sodium, calcium, potassium, and magnesium.
 - Read more→ [Bonoan et al. Ecol. Entomol., 2017, \(42\):195-201](#)

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