

Key Pollination Messages for Blueberries

Did you know?

- Blueberries require insect-mediated pollination (bees) to produce decent yields.
- The combined visits by both honeybees and wild bee species (particularly bumblebees) during blueberry bloom leads to better seed set, larger fruit, and higher yields. Adequate fruit size can make the difference between making fresh grade versus process grade.
- Blueberries that develop without bee pollination tend to be small and usually don't reach marketable size.
- Research shows that without pollinators, highbush blueberry yields in B.C. decrease by 30 to 50% from typical levels. This decrease can be more substantial with some difficult-to-pollinate varieties.
- Mature, healthy blueberry fields in B.C. typically produce 12,000 to 16,000 pounds per acre, and in some cases, yields can exceed 20,000 pounds per acre. Yield losses are substantial without adequate pollination.
- Honeybee visitation to blueberries is influenced by the number of hives stocked within a 1000 m radius. When all blueberry growers in a region place honeybee hives, everyone benefits.
- Wild bumblebees are highly efficient pollinators. In the Lower Mainland, wild bumble bees make up over 20% of the total blueberry flower visits. Wild bee abundance increases with proportionally more semi-natural habitat. However, in most cases wild bee populations are not adequate to support full pollination.

Recommendations:

- Place 2-4 hives of honeybees per acre starting at 5-10% bloom.
- Encourage wild bumblebees by providing flowering plants along field edges or in pollinator gardens. Bumblebees benefit from flowering plants that bloom before or after blueberries.
- Avoid all insecticide sprays during bloom.



Honeybee

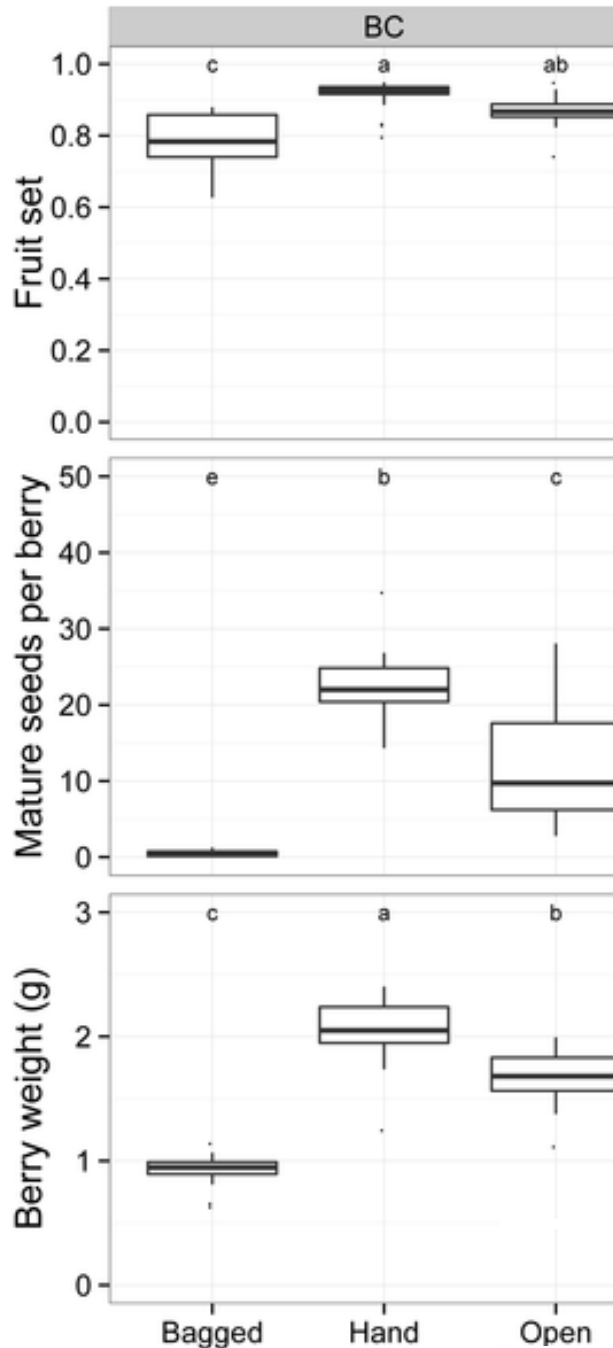


Bumblebee

Deeper Dive:

Fruit set, seed set and blueberry weights across pollination treatments

From Gibbs et al. 2016: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0158937>



Comparison of average proportion of set fruit, average number of mature seeds set and average berry weights in sampled clusters for pollinator-excluded (bagged), hand-supplemented pollination (hand) and open to pollinator (open) treatments in British Columbia (BC). Tukey HSD indicated with letters. Hand-supplemented pollination treatments show significant effects on fruit weight (M-W, $U = 37$, $p < 0.003$) and seed set (M-W, $U = 38$, $p < 0.004$) in British Columbia.

For More Information:

B.C. Ministry of Agriculture and Food. Food for Bees. www.gov.bc.ca/foodforbees

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