Important orchard predators and parasitoids

Orchard pests can often be managed by promoting natural enemies





Lacewing adults and immatures are predators of insect and mite eggs and softbodied insects.





Minute pirate bugs devour insect and spider mite eggs.

Photo: Tim Murray



Parasitoid wasps control pests by laying eggs inside the egg or larva of a pest species.



Top 5 pests in R Nebraska orchards **Codling moth** Apple maggot Photo: R. Kriner **Spider mites** Photo: USDA-ARS **Borers Plum curculio** Photo: Jim Kalish Photo: Jim Kalish



Photo: Jim Kalish





Bees can thrive when 3 basic needs are met:

- Adequate food
- Safe nesting sites
- Protection from pesticides

Important orchard pollinators

Over 80 different kinds of bees visit apple orchards!



Photos: Louise Lynch

From Flower to Fruit: The Pollination Cycle



Bees are great pollinators!

Bees visit lots of the same kind of flowers looking for pollen and nectar for food. They are strong fliers with hairy bodies making it easy to transfer pollen from flower to flower.

Eventually the tree's petals will drop and fruit will begin to develop from those that were pollinated.

An apple tree blossoms in the spring. Its flowers attract pollinators using color, scent and a sweet reward called nectar.



Without movement of pollen between flowers of different varieties, many apple trees would not produce fruit or seed.



By late summer, apples will ripen for you to pick and enjoy! So the next time you eat an apple, thank a bee!

Be the Bee!

Choose a bee'

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Think about it!

- What makes a good pollinator?
- Why does pollen stick to the body of pollinators?
- What insect body parts or structures make pollination possible?



Be the Bee!



Think about it!

What makes a good pollinator?

Why is pollen sticky?

What insect body parts make pollination possible?

According to a 2012 study from Cornell University, insect pollinators add an estimated

\$29 billion in crop value to the U.S. farm income annually.



Scan the QR code or go to http://go.unl.edu/nqzu to learn more!

Be the Bee!

Choose a bee and see how much pollen you can move from flower to flower!



Some things to think about...

- What makes a good pollinator? ullet
- Why does pollen stick to the body of bees? lacksquare
- What insect body parts or structures make pollination possible? \bullet



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