



Encouraging Pollinators in Vegetable Gardens

Who are the Pollinators?

- Native bees (4,000 species) are very efficient pollinators at work in cold and rain, early spring to fall.
- Imported honey bees are trucked all over the country, affected by parasites, pesticides, and colony collapse.
- Butterflies, flies and beetles also contribute too. They all need nectar, nesting, and overwintering habitat.

Pollinators Food Facts

- One third of food crops require insect pollination.
- Self-pollinated & wind-pollinated crops are more productive with “Buzz pollination” by bumble bees including zucchini, cucumber, tomato, peppers, eggplant.
- Fruit crops’ need for pollinators may be brief, but pollinators’ needs last from spring to fall.

Tips for Successful Pollinator Habitat

- Provide nectar forage. Varied size pollinators need varied sized and varied shaped flowers, open, cup shaped and tubular. Bumble bees need bigger landing pads – Aster family.
- Plant a wide variety for blossoms early spring to fall – ground cover, interplanted, and hedgerows.
- Pollinators preferred nesting and overwintering habitat include hollow stemmed plants like elderberry, joe-pye weed, brambles, & bee balm.
- Delay garden clean-up to spring (Temp > 50 degrees).
- One third of native bees live in the ground, so leave some bare ground and rock piles, dead trees + brush piles.
- Do not till the garden - avoid pesticides.

Managing Pests in the Vegetable Patch

- Inspect your plants regularly.
- When you find plant damage, decide if it is significant or tolerable. Determine the cause. Is it weather related or is it caused by an insect or animal pest?
- First Do No Harm. Can the pest be discouraged by a fence, netting or by companion planting? Can they be picked off by hand?
- Avoid using pesticides and herbicides. Even natural and organic treatments may harm the good as well as the bad. (Mycorrhiza may be killed by herbicides.)

Attracting Native Beneficials

- Predators capture & consume prey.
- Parasitoids use other insects to house & feed their young, killing the host.
- Most need pollen & nectar at some point in their life cycle.
- Carrot, mint, and aster family plants as well as sweet alyssum and lacy phacelia attract lots of predators - parasitic wasps, lady bugs, lacewings, spiders, soldier beetles, syrphid flies, minute pirate bugs, damsel bugs.
- Beetle bumps: 1 1/2" high, 4" diameter, > 3 varieties of native bunchgrasses provides home for ground beetles to prey on slugs, snails, and various larvae
- Masking vegetable scents: alliums for aphids on peppers, nasturtiums for squash bugs on summer squash, basil for hornworms, thrips, and yellow striped armyworm on tomatoes, calendula for aphids on collards, tansy or catmint for Colorado potato beetles on potatoes, sage, dill, chamomile, thyme or hyssop for cabbage worms on brassicas and marigolds for onion root maggot fly and cabbage root fly on onions.

Trap Crops

- Trap crops attract insects to their favored food.
- Plant a few weeks earlier than vegetables.
- Plant the trap plants around the edge of the garden if the pest is mobile; interplant if pest is less mobile.
- Trap crops should be 10 - 20% of the area of the vegetable.
- Wet/dry vac traps pests, no need for targeted pesticide.
- Examples: Vine borers and squash bugs prefer Hubbard to other squash, pepper maggots prefer hot cherry pepper to bell peppers, flea beetles prefer radish, pak choi + Chinese mustard green to brassicas and night shades, mustard greens lure harlequin bugs from various vegetables.
- Hiding in plain sight. Pests may make a series of landings, "tasting" with receptors in their feet at each stop before laying eggs.
- With interplanting, the insect makes several inappropriate landings and may not lay eggs.
- Diversify, diversify, diversify.

Resources:

Plant Partners: Science-based Companion Planting Strategies for the Vegetable Garden, Jessica Walliser

Attracting Beneficial Bugs to Your Garden: A Natural Approach to Pest Control, Jessica Walliser

Prepared by UVM Extension Master Gardener Karen Burke, May 2021. For more information on the UVM Extension Master Gardener Program visit the UVM Extension Community Horticulture [website](#).

