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Landscaping for pollinators

SURVEY: *How pollinator friendly is my landscape?* z.umn.edu/flowers4pollinators

- **People need healthy landscapes**
- **Pollinators need healthy landscapes**
- **Say no to “bee sterile” landscapes**
- **Think healthy landscapes**
 1. Employ good gardening practices
 2. Choose to grow pollinator friendly plants
 3. Create habitat
 4. Consider alternative lawns, ground covers

1. GOOD GARDENING PRACTICES MEAN HEALTHIER PLANTS

- Good soil health – drainage, organic matter
- Water root zone - reduces splashing soil
- Space plants - improved air circulation, More light
- Healthy, stress-free plants - select plants properly, growing requirements match site conditions; buy healthy plants - resistant cultivars, varieties, fewer pest issues

Considerations before reaching for a pesticide

- Identification: Is the damage or insect actually a pest?
- Type of damage - injurious or just cosmetic?
- Will the problem spread?
- How important is the plant?
- Will treatment prevent more damage?

Try non-chemical ways to manage pests

- Physical removal - hard water spray, hand-picking
- Barriers - netting, fencing, row covers, kaolin clay
- Traps - Monitoring: Japanese beetles, SWD; Management: Slugs, apple maggots

Still need more? Try low impact pesticides

- Insecticidal soaps - Potassium salt of fatty acids generally effective against small, soft-bodied insects. Thought to disrupt cell membranes

- Horticultural oils - Petroleum or vegetable oil products generally effective against soft-bodied insects. Suffocates insects.
- *Bacillus thuringiensis* (B.t.) - naturally occurring soil microbe, safe for people, birds, mammals. Different strains effective against caterpillars, leaf beetle larvae, and fly larvae. Makes proteins that are toxic to larvae,
- Spinosad - Fermentation of naturally occurring bacteria. Effective against caterpillars, sawflies, thrips etc. Affects nervous system. **Highly toxic to bees when wet.**

Always follow all pesticide label directions

- Watch for bee advisory boxes
- Use PPE (Personal Protection Equipment) as directed
- Secondary exposure is the most common way pesticides get into our system.
- Treat all pesticides – even low-impact products – as if they have a high toxicity level.
- National Pesticide Information Center <http://npic.orst.edu>
- Use all pesticides responsibly! Treat late evening when bees are less active. Don't spray when windy to avoid pesticide drift onto non-target plants.

2. CHOOSE TO GROW POLLINATOR FRIENDLY PLANTS

- Nectar and pollen-rich plants
- Plant masses of flowers
- Wide plant diversity - Fragrance, shape, sizes, colors
- Continuous bloom from April – October

Replacing plants? Think pollinator friendly

- Increase diversity
- Retain look with similar form, texture, size, color
- Non-native + native plants
- Rusty patched bumble bees - Bee balm, turtlehead, blueberry
- Other rare, specialist bees - Native fringed loosestrife, sunflowers, bellflowers

Pollinator plant resources

- [UMN Extension Flowers for Pollinators](#)
 - Plants for Minnesota Bees
 - The Xerxes Society - Great Lakes Region plant list
 - MN Department of Natural Resources - Native plant list
- [UMN Extension / Landscape design - Plant Elements of Design plant selection database](#)
- [Native plants](#)

3. CREATE POLLINATOR HABITAT

- Less tidy is better for bees
- Mulch selectively - Leave open soil for ground nesting bees, creates overwintering habitat
- Leave habitat

- Bees may nest in out of the way places - rock piles, grasses, dead trees, logs and stick piles
- Leave hollow and pithy stems from flowers, grasses for stem nesting bees
 - Spring: cut stems of varying diameters and heights 8 – 24”
 - Leave through next summer
 - Don’t clump or bundle stems (parasites)
- Avoid using pesticides / drift
- Resource: [Wild bee nests, building wild bee houses, nesting habitat](#)

4. CONSIDER USING ALTERNATIVE LAWNS AND PLANTINGS - BENEFIT BEES

Improve landscape aesthetics, care, color, texture, form. Reduce maintenance, inputs. Create pollinator habitat, nutrition.

- Bee lawns
 - Sunny / part shade
 - Reduces mowing, fertilizer, watering
 - Near edibles to encourage pollination
- Bee lawn flowering plants: Seed mix
 - Important food source especially for native bees
 - 90-93% fescues (fine, tall 80-90%) and Kentucky blue grass (10-20%)
 - 7-10% flowers
 - Self-heal – June – August; native bees
 - Dutch white clover – May – October, native and honey bees
 - Creeping thyme – July – August; bees with short-tongues
 - Ground plum – April – May; bees with long-tongues
- Bee lawn considerations
 - Different look
 - Establishment - Renovation (start new); overseeding; dormant seeding
- Weed management - Important during establishment; hand-weeding recommended; occasional targeted spot treatment may be needed
- Plant slopes and hillsides for pollinators
 - Trees, shrubs, flowers, grasses for food, nesting habitat
 - Eliminates mowing - difficult, dangerous
 - Reduces erosion and minimize run-off

TAKE-AWAY MESSAGES

Plant flowers for pollinators! Look for, recognize and identify insect pollinators. Spread the word! Talk with others about the importance of pollinators and challenges to their existence. Incorporate pollinator friendly plants and to create habitat and encourage others to as well.

Questions / comments are welcome. Julie Weisenhorn, M.A., M.Ag. Extension Horticulture Educator and Associate Extension Professor. University of Minnesota Department of Horticultural Science.

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