

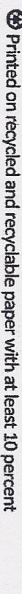
## Plants attractive to bees:

1. University of MN bee lab bulletin, Plants for Minnesota bees [www.beeelab.umn.edu/prod/groups/cfans/@pub/@cfans/@bees/documents/article/cfans\\_article\\_451478.pdf](http://www.beeelab.umn.edu/prod/groups/cfans/@pub/@cfans/@bees/documents/article/cfans_article_451478.pdf)
2. Xerces Society bulletin, Pollinator Plants Midwest Region [www.xerces.org/wdc/content/uploads/2014/09/MidwestPlantList\\_web.pdf](http://www.xerces.org/wdc/content/uploads/2014/09/MidwestPlantList_web.pdf)
3. CUEs: Pollinator Conservation website [www.entomology.umn.edu/cues/pollinators/plants.html](http://www.entomology.umn.edu/cues/pollinators/plants.html)
4. CUEs: Save the Bees Plant Flowers and Trees [www.entomology.umn.edu/cues/pollinators/plantsposter.r.pdf](http://www.entomology.umn.edu/cues/pollinators/plantsposter.r.pdf)

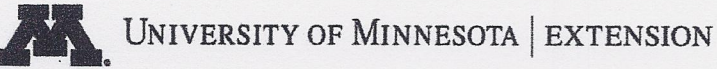
## Integrated Pest Management (IPM)

The conservation of beneficial insects, that includes bees, insect predators, parasitic wasps, and butterflies, is an essential part of Integrated Pest management (IPM) programs. IPM promotes multiple tactics to manage pests and to suppress the population size below levels that will damage the plant. Flowers that open after spraying with contact insecticides do not contain insecticide residue. Use contact insecticides, such as bifenthrin, cyfluthrin, flonicamid, and spinosad (less toxicity 3 hrs post spray when dried). Toxicity lasts 1-3 weeks. ~~Never spray flowers and foraging bees.~~

However, flowers that open after systemic insecticides are sprayed or applied to the soil contain the insecticide in pollen and nectar for months. EPA labeling does not permit the use of neonicotinyl insecticides on flowering plants.

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## New EPA and Minnesota

## Labeling laws for protecting bees and other pollinators

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**Bumblebees** (*Bombus* species, Family Apidae) native



Bumble bees are fat, hairy, bees about 10-23 mm in length that nest in the ground. Bumble bees are annual species. *Bombus impatiens* are used to pollinate greenhouse crops. Pictured: *Bombus terrarius* Rob Routledge, Sault College, Bugwood.org

**Honey Bees** (*Apis mellifera*, Family Apidae) introduced



The European honey bee is 10-15 mm in length and is used for pollination and honey production. Bees have perennial colonies and survive winter on stored honey. Pictured: *Apis mellifera* David Cappaert, Michigan State University, Bugwood.org

## New EPA labeling laws for protecting bees



In March 2014, the EPA released bee protection guidelines on neonicotinoid insecticide products (imidacloprid, dinotefuran, thiamethoxam, and clothianidin) to protect bees. The icon signals that the insecticide has potential to harm bees.

## Help the bees, plant flowers and trees!!

### Native plants



*Rosa rugosa*

### Garden plants

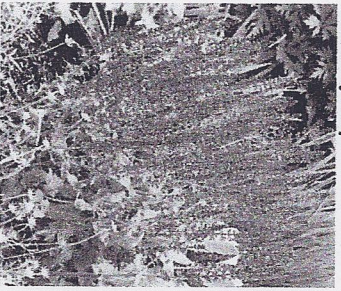


*Agastache foeniculum*

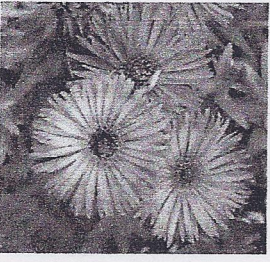
anise hyssop



*Asclepias incarnata*  
swamp milkweed



*Nepeta x faassenii*  
catmint



*Aster noveangliae*  
New England aster  
tall form



*Angelica gigas*  
angelica

Manage insect pests with the principles of IPM. Do not use systemic insecticides on flowers that bees visit.

Retrofit your garden to provide seasonal flowering of plants that provide nectar and pollen for bees. Do not kill foraging bees.

## New MN labeling laws for protecting bees

As of July 1, 2014, a new plant labeling law is now in effect in Minnesota to protect pollinators from exposure to toxic levels of insecticides. The new law requires that plants advertised as "beneficial pollinators" must be free of detectable levels of certain systemic insecticides.

Systemic insecticides are compounds that move within the tissues of a plant which means they can potentially reach the plant flowers where pollinators may be feeding or collecting pollen.

The MDA has developed ~~some~~ <sup>the following</sup> fact sheets:

1. New MDA bee-friendly labeling laws  
[www.mda.state.mn.us/label/factsheet](http://www.mda.state.mn.us/label/factsheet) and  
<http://www.mda.state.mn.us/en/news/releases/2014/nr20140715-bees.aspx>
2. MDA Agricultural Landscapes  
[www.mda.state.mn.us/protecting/bmps/~/\\_/media/a/files/protecting/bmps/pollinators/pollinators\\_agland.pdf](http://www.mda.state.mn.us/protecting/bmps/~/_/media/a/files/protecting/bmps/pollinators/pollinators_agland.pdf)
3. MDA Yards and Gardens  
[www.mda.state.mn.us/protecting/bmps/~/\\_/media/a/files/protecting/bmps/pollinators/pollinatory\\_arcbmps.pdf](http://www.mda.state.mn.us/protecting/bmps/~/_/media/a/files/protecting/bmps/pollinators/pollinatory_arcbmps.pdf).

### Not all plants provide food for bees.

#### Which flowers do not attract bees?

Keep in mind that many garden plants do not provide pollen and nectar for bees. Bees usually do not visit wind pollinated plants. Bees usually do not use double flowers, as male parts are bred to make additional petals, and the flower does not produce pollen and nectar.

Many annual bedding plants are not attractive to bees, such as Begonia, Callbrachoa, Coleus, Fuchsia, Gerbera, Geranium,

Wendelbine or Itzsize

Use all Latin Names or all Common names.

It might be better to leave out the common name as all do not have the common name listed

impatiens (new guinea and common), petunia, pansy, marigold, and Tea roses with closed buds, and ~~many other seasonal plants, such as cyclamen, chrysanthemum, and poinsettia~~

Growers could use systemic insecticides on plants, as long as they are not advertised or labelled as bee-friendly. It is difficult to grow plants in greenhouses without the use of insecticides. The greenhouse is heated and bathed in supplemental lighting which causes insect pest populations to increase. Systemic insecticides used in greenhouse and nursery can be applied to the soil and are not sprayed in the air. Not spraying insecticides reduces risk to workers. Also, neonicotinyl insecticides have low toxicity to people. For these reasons, systemic neonicotinyl insecticides can be used on plants that are not attractive to bees.

### Which flowers attract bees?

Some perennial plants attractive to bees are: all flowering crabapple, apple, pear, hawthorn, and serviceberry, Potentilla, pussy willows, Asclepias (milkweed), butterfly, common, and swamp), Angelica gigas (Korean Angelica), Campanula, Delphinium, Digitalis (foxglove), Echinacea (cone flower), Echinops (globe thistle), honeysuckle, Liatis (blazing star), Nepeta (catnip), and catmint, Penstemon, Salvia nemorosa (Maynight), Salvia verticillata (Purple Rain), Sedum, Solidago (goldenrod), New England aster, Rosa rugosa, Scabious, Verbascum, Viburnum, and Verbena bonariensis.

Some annual plants attractive to bees are fennel, basil, dill, rosemary, thyme, lavender, heather, Salvia, Tithonia (Mexican sunflower), Asclepias (Mexican milkweed), Alyssum, Ageratum, Buddleia, Gaillardia, Ganzonia, Lantana, Lobelia, Portulaca, snapdragons, and Verbena.

Variety names need single quotes