

Plant and Insect Safety in AAPS School Gardens

Recommendations from the AAPS Farm to School Collaborative

FTS Collaborative Members

AAPS – Rec & Ed

AAPS – School Nurse

AAPS – Food Service (Chartwells)

School garden coordinators and volunteers

Ann Arbor Farmers' Market

U of M Project Healthy Schools

Washtenaw County Public Health

Project Grow

Agrarian Adventure

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Safely Working with Plants

Most plants and plant parts are harmless to humans. At the same time, we need to be mindful of plants that may be harmful in order to keep students safe. Any type of plant may be harmful: house plants, garden plants, woody plants or trees. A plant is “hazardous” if it contains a substance that causes chemical injury to a human or animal that ingests or touches the plant.



Information and Action

Prevention:

- Avoid planting hazardous plants in school gardens when possible (see list below).
- Students should ALWAYS ask before picking or tasting anything in the garden.
- Wear gloves, especially when working with plants associated with skin rashes (e.g. asparagus, carrots, pumpkins, squash, and parsnips).
- Know which plants may be hazardous if ingested (e.g. rhubarb leaves, potato vines).
- Label all plants and seeds.

Potential Hazardous Plants in a School Garden:

(These may be common to school gardens in Michigan – a more complete list of toxic plants can be found on line. See Resources section below.)

**Always teach children to ask an adult first before tasting something from a garden.

Some common plants that can cause Dermatitis and Skin Rashes		
Asparagus	Aster	Carrots
Chamomile	Dill	Fennel
Iris	Parsnips	Pumpkin/squash

Some common plants that harm when eaten		
*Plants that can cause major illness or death when ingested.		
Allium (wild onion)	Azalea	Begonia
Bleeding heart	Boxwood	Buttercup
*Castor Bean	*Crocus (autumn)	*Cherry (seeds)
*Jerusalem cherry	*Wild black cherry (seeds)	Daffodil
*Delphinium	*Digitalis (Foxglove)	English Ivy
Euonymus	Holly	Hyacinth
*Hydrangea	Iris	*Lily of the valley
*Lupine	*Morning Glory (seeds)	*Myrtle Vinca
*Periwinkle Vinca	*Potato vines, sprouts from tubers, green tubers	Privet
*Rhododendron	Rhubarb leaves	*Taxus (hemlock, yew)
Tomato (non fruit parts)	Wisteria	Yarrow

Frequently Asked Questions

1. What do I do in the rare case that a student is exposed to a hazardous plant?

If the victim is choking and cannot breathe, call 9-1-1.

Treatment for Exposure:

- **Mouth:** Remove any parts of the plant from the patient's mouth and clean out the mouth.
- **Skin:** Wash the area exposed to the plant with soap and cool water as soon as possible.
- **Eyes:** Flush eyes with lukewarm water for 10 to 15 minutes. Be very gentle, as vigorous or prolonged rinsing can hurt the eyes.

Meanwhile, call the Poison Control Center: (800) 222-1222.

If you are advised to go to an emergency room, take the plant or a part of it with you (take more than a single leaf or berry). Take the label, too, if you have it. The correct name can result in the proper treatment if the plant is poisonous. If the plant is not dangerous, knowing the name can prevent needless treatment and worry.

2. Are there different types of plant toxicity?

There are three general categories that describe how poisonous plants affect humans and other animals. The time required for development of symptoms varies with the individual toxin.

- **Lethal plants:** Some plants are lethal if you eat, lick or swallow the toxic part of the plant.
- **Plants that cause digestive problems or pain:** Some plants will not kill you, but eating them can make you very ill.
- **Skin irritants:** Some plants can cause itching, irritation, swelling, or rashes.

3. Why do plants have toxic substances?

Plants contain toxic substances for their own protection — to repel insects and animals that graze on plants.

4. Are human adults and children affected the same way by hazardous plants?

Some plants are toxic to children, but are not lethal or irritating to adults. Because of their physical immaturity, children are more sensitive to many chemicals that do not necessarily cause the same reactions in adults. Similarly, plant toxins may affect different people differently.

5. How can I garden responsibly with poisonous plants?

- Inform yourself about the toxic plants and plant parts on your garden plants.
- Choose to plant only edible or harmless plants.
- Educate your children. Teach them to avoid eating or sucking on any plant parts until they have been positively identified as safe.

RESOURCES

Many plants have the same or similar common names. This can be confusing and misleading when trying to identify poisonous plants. Latin names are the best way to insure that the information you are seeking applies to the plant you are concerned about. Many poisonous plant databases have plants identified by Latin names and common names, to help you find the plants of interest. There are several online databases that are easy to use with either the common or Latin name. Remember that just because a plant is not listed, it is not necessarily safe.

Websites:

- Photos of toxic plants can be found on the UC Berkeley “CalPhotos: Plants” website: <http://calphotos.berkeley.edu/flora/>
- Brochure on Safe and Poisonous garden plants: http://ucanr.edu/sites/poisonous_safe_plants/files/154528.pdf
- Poisonous plants website at North Carolina State University; with full plant descriptions and pictures: <http://plants.ces.ncsu.edu/plants/category/poisonous-plants/>
- Poisonous plants information page of Cornell University. Great resource for identifying plants that may not be appropriate for a school garden: <http://www.ansci.cornell.edu/plants/comlist.html>

Safety around Insects and Spiders

Most insects are harmless to humans, but can be destructive to plants in the garden (for more information on pest management, see this document <link>. Some insects are annoying to humans and others bite and can cause serious illness. The primary insects of concern to humans in a school garden are bees/wasps and spiders. Most bee stings are merely annoyingly painful to most people. However, some people can have a severe allergic reaction. Similarly, most spiders are harmless, though others do have painful bites.

Action:

- Be aware of any children who have severe allergies to bee stings and be aware of symptoms of an allergic reaction (see below).
- Do not touch any insects or spiders without asking. Observe the insects at work.
- Use gloves and/or trowel when digging or planting in the garden.
- Avoid bees/wasps and spiders. These insects are beneficial to the garden and we do not want to disturb the good work they are doing.
- If an insect or spider runs away, let it run away (spiders typically will run away if disturbed in the soil and spiders will normally not bite unless handled or provoked).
- Wear appropriate footwear, especially close-toed shoes.

Frequently Asked Questions

1. What do I do in case of a bee sting?

- Remove the stinger from the sting by gently scraping horizontally across the stinger with a credit card or fingernail. Do not try to squeeze the stinger with tweezers and pull out as this will release more venom.
- Soak a cloth in cold water and press over the area to reduce swelling.
- CALL FOR MEDICAL HELP if the person has any of the following symptoms:
 - Sudden difficulty in breathing
 - Weakness, collapse, or unconsciousness
 - Hives or itching all over the body
 - Extreme itching near the eyes, lips or genitals that makes it difficult for the person to see, eat, or urinate

2. What do I do in case of a spider bite?

- Do you know the type of spider?
Most spider bites are merely painful and annoying.
However, the **bites should still be treated:**
 - Wash the bite area with cool, soapy water
 - Apply ice
 - Monitor the area for 24 hours to make sure symptoms do not worsen. If symptoms do not improve within 36 hours, call the poison control center or your doctor
- If there is **any allergic reaction, call for medical help** (swelling around the eyes, lips or genitals, abdominal pain, muscle twitches, blue or purple mottling at the site of the bite, nausea, vomiting, a fever, development of a deep sore or oozing wound).
- In Michigan, **only the black widow spider and the brown recluse are poisonous** and pose a danger to humans. These are not typically found in gardens. Black widows are found in wood piles, meter boxes and other undisturbed places, not in the ground. The brown recluse cannot survive in temperatures below 40 degrees, so they are rarely found outside. If **bitten by a black widow or brown recluse, seek medical attention** to lessen the severity of the symptoms.
Meanwhile:
 - Cleanse the wound; apply ice; if possible, tie a bandage above the bite site; and move as little as possible to slow the spread of the venom.

3. Are all insects “pests” in the garden?

- Not all insects in the garden are harmful. Some insects are good bugs, “beneficials.”
- **Good bugs:** a cool poster showing natural predators and parasites that feed on garden pests: <http://www.ipm.ucdavis.edu/FAQ/natural-enemies-poster.pdf>
- Ideas on attracting beneficial bugs: <http://www.motherearthnews.com/organic-gardening/attracting-beneficial-insects-to-your-garden.aspx>
- **Bad bugs:** a site to look up pests based on the plant: <http://www.ipm.ucdavis.edu/PMG/menu.homegarden>
- A good insect image gallery: <http://www.ent.iastate.edu/imagegallery/>

4. Is it okay to use chemicals and pesticides to manage pests?

- **No.** According to **Michigan Regulation 637, Pesticide Use**, (see [this document](#) to view the regulation) which applies to school and other public buildings, school gardens cannot apply pesticides. Please contact the AAPS Facilities Department with additional questions. There are other methods of fertilizing and dealing with insect pests that we advocate.
- Some general guidelines on safe alternatives for pest management: <http://www.no-dig-vegetablegarden.com/natural-pest-control-remedies.html>

Resources

Information on how to prevent and deal with insect bites and stings in children is available.

<http://www.healthychildren.org/English/health-issues/conditions/skin/pages/Insect-Bites-and-Stings.aspx>

Information on spiders in Michigan:

- <http://www.creaturecontrol.net/Spiders>
- <http://www.markleyspest.com/Arachnid-Page.php>