# FALL **NEWSLETTER 2021**



### **OUR MISSION** STATEMENT

Encourage, foster, support, and promote horticulture for all Master Gardener Volunteers and residents of Barron County and to promote the UW-Extension from which we are founded.

#### BARRON COUNTY MASTER GARDENER VOLUNTEERS

## Late Summer Tips—Carol Kettner

August is a time when people notice evidence of disease or insect damage on vegetable plants, ornamental shrubs, and many other plants. But don't just run to the store for a chemical to treat a disease or kill everything in sight. This is also a time of the year when the pollinators are out in massive numbers. Butterflies, bees, wasps, small birds, are all eating nectar and seeds in great amounts.

One common disease this year, not only on tomatoes, but even on lilacs and other ornamental shrubs, is Septoria Leaf Spot. If you have severe damage, this is not the time to treat with a fungicide. Diana Alfuth, UW-Extension Horticulture Outreach Specialist, explained the problem:

"Unfortunately, if you're seeing Septoria on your plants now, it's a bit late to treat. Fungicides are preventatives, not curatives, so they should be applied BEFORE the fungus takes hold. As soon as leaves start breaking bud (in the Spring) apply fungicides. The "spots" and lesions don't show up until later in the year, but the infection occurs earlier. If the fungicide is on the leaf when the fungal spore lands, it kills the spore before it can germinate into the leaf."

If this is an ongoing problem for you, Alfuth recommends a copper or chlorothalonil-containing fungicide (labeled for the plant you are treating) applied when buds break in the spring. Check this publication: https://hort.extension.wisc.edu/ files/2014/11/Septoria-Leaf-Spot 0.pdf.

One thing that is important is to clean up the debris from affected plants and destroy it instead of adding it to your compost.

A common question at this time of the year: "Should I fertilize my lawn now?" The Wisconsin Horticulture site recommends the following:

- Early in September (e.g., around Labor Day), fertilize your lawn using a controlledrelease or slow-release formulation. For grass growing in the sun, use the label rate of the fertilizer that you have selected. For grass growing in the shade, apply half of the label rate.
- Apply an herbicide to your established lawn to control broadleaf weeds. Fall is the best time to apply herbicides for weed control. DO NOT apply herbicides to lawns planted in August or September.





Extension

# Black Walnut Toxicity

Ann Joy and Brian Hudelson, UW-Madison Plant Pathology and Laura Jull, UW-Madison Horticulture

#### What is black walnut toxicity?

Black walnut trees (Juglans nigra) produce a toxic substance (called juglone) that prevents many plants

from growing under or near them. Related trees like butternut (J. cinerea) and shagbark hickory (Carya ovata) also juglone, but in lower produce concentrations than black walnut. Juglone occurs in all parts of black walnut trees, but especially in buds, nut hulls and roots. The toxic effects of a mature black walnut tree can extend 50 to 80 feet from the trunk of the tree, with the greatest toxicity occurring within the tree's dripline. In this area, plants susceptible to juglone may wilt or die; plants tolerant to juglone will grow normally. Vegetables such as tomato, potato, eggplant and pepper, and ornamentals such as lilac, peony, rhododendron and azalea are particularly sensitive to juglone.



toxicity. Removing a walnut tree may not be practical as the tree could be the focal point in a landscape. In addition, even if a walnut tree is removed, juglones will

> not immediately be eliminated, because it is next to impossible to remove all root pieces from the soil and remaining pieces may continue to exude toxins for several years as they decay.

> When establishing a garden around a walnut tree, try to plant species that are tolerant to juglone (see table on the reverse side). If you are growing sensitive species near a walnut tree, transplant them elsewhere in your garden. If you must grow sensitive plants near a black walnut, keep beds free of walnut leaves and hulls and remove walnut seedlings as they appear. Growing shallow rooted woody and herbaceous plants, and improving

# What do the effects of black walnut toxicity look like?

Plants sensitive to juglone may be stunted, have yellow or brown, twisted leaves, exhibit wilting of

some or all plant parts, and die over time. Often, the vascular (i.e., water-conducting) tissue of affected plants will be discolored. Symptoms may occur rapidly, even within a few days after sensitive species are transplanted into a walnut tree's root zone. Alternatively, some plants may survive for years near a young walnut tree, but will wilt and die as the tree increases in size. Black walnut toxicity can be confused with wilts caused by bacterial and fungal pathogens (e.g., see University of Wisconsin Garden Facts X1008), herbicide injury (see University of Wisconsin Garden Facts X1004), or drought.

# How do I avoid problems with black walnut toxicity?

There is no cure for a plant affected by walnut

Th in set tr ba te ta O to ba sc pa

drainage can also diminish the effects of juglone. Alternatively, consider building raised beds with wood, stone, or concrete barriers that limit root growth through and under the beds. When disposing of bark and wood from a walnut tree, do not use these materials for mulch.

> The information in the following table is intended to provide guidance in selecting plants to grow near walnut trees. Inclusion of plants in this table is based on observation, not on formal testing. In addition, the plant lists in this table are by no means exhaustive. Oftentimes the juglone sensitivity or tolerance of specific plants has never been observed or documented. Finally, sources often disagree on whether particular plants (e.g., columbine, lily, narcissus, tulip) are juglone sensitive or

tolerant. Some varieties may be susceptible while others are tolerant. Most plant species with conflicting information regarding their sensitivity or tolerance to juglone have not been included in the table. Table ion the next page.

# Black Walnut Toxicity Continued . . .

	Sensitive to Juglone	Tolerant of Juglone
Vegetables	asparagus, cabbage, eggplant, pep- per, potato, rhubarb, tomato	beans, beet, carrot, corn, melon, onion, parsnip, squash
Flowers	autumn crocus, chrysanthemum, for- get-me-not, petunia, peonies	aster, astilbe, bee balm, begonia, black-eyed Susan, bluebell, calendula, crocus, daylily, ferns, grape hyacinth, some hosta varieties, hollyhock, impatiens, Jack-in-the-pulpit, Jacob's ladder, marigold, morning glory, pansy, phlox, Siberian iris, squill, sweet woodruff, trillium, zinnia
Trees	alder, apple and crabapple, bass- wood, pine, spruce, silver maple, white birch	black locust, catalpa, Eastern redbud, hackber- ry, Canadian hemlock, hickory, most maples, oaks, pagoda dogwood, poplar, red cedar
Shrubs and Vines	azalea, blackberry (and most ber- ries other than black raspberry), cotoneaster, hydrangea, lilac, mountain laurel, potentilla, privet, rhododendron, yew	arborvitae, bittersweet, black raspberry, clem- atis, currant, forsythia, euonymus, greenbrier, most honeysuckle, pachysandra, rose-of- Sharon, sumac, most viburnum, Virginia creep- er, wild grape, wild rose, willow, witch hazel
Field Crops and Grasses	alfalfa, tobacco	fescue, Kentucky bluegrass, orchard grass, soybean, timothy, wheat, white clover

## Summer Doldrums—Wilted Tomatoes in the Garden

A post from Brian Hudelson at the University of Wisconsin-Madison/Extension Plant Disease Diagnostics Clinic—PDDC)

I've recently received a slew of questions about wilted tomatoes in home gardens. Here are the top five reasons that tomatoes can wilt based on samples that I have received in my clinic over the years.

#### Walnut toxicity

One of the lessons that I have learned after doing plant disease diagnostics for over 20 years is that when a home gardener consults me about wilting tomatoes, the first question I should ask is, "Do you have a walnut tree near your vegetable garden?" More times than not, the answer is "Yes" and the walnut tree is the cause of the problem. Black walnuts produce toxins (exuded by roots and produced in leaves and fruits) that adversally affect a wide range of plants, Tomatoes are particularly sensitive and are often die from the exposure. Anytime that tomatoes are grown in the root zone of a walnut tree (which extends three to five times the height of the tree from the trunk), problems can arise. Cutting down walnut trees will not solve the problem in the short term, because roots from the cut tree can continue to exude toxins for 15 to 20 years. Often the



best recourse when walnut trees are present in a landscape is to grow tomatoes in raised beds or in pots to keep tomato roots as far above walnut roots as possible.

# Wilted Tomatoes in the Garden Continued. ..

#### **Drought stress**

In 2021, lack of rain has been a potential cause for wilting in tomatoes and virtually every other plant. Most established plants require about one inch of water per week. When rain is insufficient (as it has been in much of Wisconsin this year), it's important to apply supplemental water to plants with a soaker or drip hose. Proper water-



ing can not only prevent wilting in tomatoes, but it can also help improve calcium uptake and reduce problems with blossom end rot. Using an inch or two of a high-quality mulch (my favorites are shredded oak bark mulch and red cedar mulch) around plants can help retain moisture and lessen wilting issues. Mulching around tomatoes also helps reduce movement of spores

(produced in bits of old tomato debris in the soil) of the fungi that cause Septoria leaf spot and early blight.

#### **Bacterial canker**

The bacterium that causes this disease (Clavibacter michiganensis subsp. michiganensis – THERE'S a mouthful) is seedborne, so gardeners typically introduce this pathogen into their gardens on contaminated tomato seeds or

transplants. Plants initially look healthy, but the bacterium eventualy colonizes, discolors and disrupts the waterconducting (vascular) tissue inside the plant, leading to wilting. Infec-



tions can lead to long, somewhat subtle cracks in stems and ultimately less subtle open wounds (i.e., cankers) in stems near the soil line. Another telltale symptom of the disease can be ghostly-white spots with a darker center (called bird's-eye spots) on tomato fruits. Removal and destruction of infected plants, and rotation away from susceptible vegetables (e.g., tomatoes and peppers) for several years in the affected area of a garden are typical management strategies. <u>Verticillium wilt.</u> Many gardeners are familiar with this disease in the context of the death and destruction

it brings to woody trees and shrubs. However, Verticillium, the cause of Verticillium wilt, is an equal opportunity destroyer and can



kill a wide range of herbaceous plants as well, including popular vegetables such as solanaceous crops (e.g., tomato, potato, eggplant, pepper) and vine crops (e.g., cucumber, squash, pumpkin). This fungus is routinely found in the soil and can build up over time if susceptible vegetable crops are grown over and over in an area where the fungus is located. Verticillium infects through the roots and colonizes and plugs a tomato's (or other plant's) water-conducting tissue, leading to wilting. Discoloration of a tomato plant's vascular tissue is a typical symptom of this disease, but stem cracks and cankers are not. Rotation can be useful as a control strategy for Verticillium wilt, although it is less effective than for bacterial canker because of the wider host range for Verticillium (including many weeds). For tomatoes, use of resistant varieties can also be useful. To identify resistant varieties, look for a "V" after the variety name on a tomato seed packet or in the variety description in your favorite seed catalog.

**<u>Fusarium wilt.</u>** This disease is very similar to Verticillium wilt except for the fungus involved. For Fusarium

Fusarium wilt, OXysporum f. sp. lycoperthe sici culis Fusarium oxprit. ysporum is a large fungal species with many special forms (that's what "f. sp." stands for), each one adapted to infect a specific host plant or a very small range of host



## Wilted Tomatoes in the Garden Continued. ..

plants (e.g. vine crops). Fusarium oxysporum f. sp. lycopersici is specific to tomatoes and will not infect a specific host plant or a very small range of host plants (e.g,vine crops). If you ever encounter this disease, rotation away from tomatoes in the affected area for several years should work well as a management strategy. In addition, you can use resistant tomato varieties. Look for one or more "Fs" after the variety name.

As you can imagine, figuring out the exact reason your tomatoes are wilting can be challenging, particularly if there is disease involved. To find out more about the clinic and its activities, check out the PDDC website. To keep up-todate about new PDDC education materials and programs, follow the clinic on Twitter or Facebook (@UWPDDC) or contact the clinic at pddc@wisc.edu and ask to be added to the PDDC's listserv (UWPDDCLearn).

## Vegetable Disease Quick Reference—Brian Hudelson, UW-Madison Plant Pathology







#### Septoria Leaf Spot and Early Blight

Host: TomatoPathogen: Septoria lycopersicia and Alternaria solaniSigns/Symptoms: Spotting and eventual total collapse of leave working from the bottom of the plant up.For more information: UW Garden Facts D0100/D0046

#### Late Blight:

Hosts: Tomato, potato Pathogen: Phytophthora infestans Signs/Symptoms: Water-soaked sport on leave, leathery areas on tomato fruits, rapid plant death. For more information see: UW Garden Fasts DD0068

#### **Blossom End Rot**

Hosts: tomato, pepper, eggplant, cucumber, squashCause: Calcium deficiencySigns/Symptoms: Decayed areas on the bottom sides of vegetable fruits.For more information see: UW Garden Facts D0022



#### **Powdery Mildew**

Hosts: Any vegetable, particularly vine crops, peas Pathogens: Miscellaneous powdery mildew fungi Signs/Symptoms: Powdery white growth on leaves For more information see: UW-Garden Facts D0086















#### Common Corn Smut Hosts: Corn Pathogen: Ustilago maydis Signs/Symptoms: pasty white masses on corn ears eventually decomposing into a brown powder For more information see: UW Garden Facts D0031

#### Black Rot

Hosts: Crucifers (e.g. cabbage, broccoli, cauliflower
Pathogen: Xanthomonas campestris pv. Campetris
Signs/Symptoms: V-shaped yellow/dead areas on leaves progressing into plant deterioration and death.
For more information see: UW Garden Facts DD0019

#### Potato Scab

Hosts: Potato, carrot, beet, other root cropsPathogen: Streptomyces scabiesSigns/Symptoms: Brown, rough ,scab-like areas on tubers and rootsFor more information see: UW Garden Facts D0083

#### Verticillium Wilt

Host: Tomato, pepper, eggplant potato, vine crops
Pathogen: Verticillium
Signs/Symptoms: Leaf yellowing and wilting of plants followed by eventual plant death
For more information see: UW Garden Facts D0122

#### Aster Yellows

Hosts: Carrot Pathogens: Aster yellows phytoplasma Signs/Symptoms: Yellow/orange/purple leaves, stunted roots with tufts of white hairy roots For more information see: UW Garden Facts D0007

#### **Bacterial Wilt**

Hosts: Vine crops Pathogen: Erwinia tracheiphila Signs/Symptoms: Sectional wilting and eventual death of plants after cucumber beetle feeding. For more information see: UW Garden Facts D0014

#### **Basil Downy Mildew**

Host: Basil Pathogen: Peronsspora belbahjrii Signs/Symptoms: Downward-cupped, yellow leaves with purple-gray fuzz on leaf undersurfaces For more information see: UW Garden Facts D0015

## Wilting Squash could be Squash Vine Borers—If you find them, this article

#### will prepare you for next year.

(This information is from a publication of the University of Minnesota by Jeffrey Hahn, Extension entomologist and Suzanne Burkness, College of Food, Agricultural and Natural Resource Sciences.)

The squash vine borer is a common clearwing moth in home gardens. It is a serious pest of vine crops, commonly attacking summer squash, winter squash and pumpkins.

- Cucumbers and melons are less frequently affected.
- It is active mid-June through July.
- In home gardens, entire crops may be lost in a year of high borer populations.



Feeding by larvae causes yellowing of leaves and wilting.

# How to identify squash vine borers (Melittia curcurbitae)

The adult borer resembles a wasp.

- It is about 1/2 inch long with an orange abdomen with black dots.
- The first pair of wings is metallic green while the back pair of wings is clear.

• The back wing are folded when they are at rest, and may not be seen clearly.

• Eggs are flat, brown, and about 1/25 inch long.

The larvae are white or cream-colored with brown heads, growing to almost an inch in length.

#### Life cycle of squash vine borers

Squash vine borer adults emerge in late June or early July, from cocoons in the ground. Adults are good fliers.

These moths fly during the day while nearly all other moths fly at night.



- After emerging squash vine borers lay eggs one at a time at the base of susceptible plants.
- The eggs hatch in about one week and the resulting larvae bore into stems to feed.
- The larvae feed through the center of the stems, blocking the flow of water to the rest of the plant.
- The larvae feed for four to six weeks, then exit the stems and burrow about one to two inches into the soil to pupate.
- They remain there until the following summer.
- There is one generation per year.

#### Damage caused by squash vine borers



The first symptom of a borer attack is wilting of affected plants.

Wilting may occur only in strong sun at first, but if the problem is left unchecked, the plants eventually collapse and die. When you look at a wilting plant closely, you might notice holes near the base of the plant.

## Wilting Squash Borer Continued . . .

- These holes are filled with moist, greenish or orange sawdust-like material called frass.
- Over time, the base may become mushy or rot away altogether.
- Several borer larvae may attack a single plant.

#### Protect your garden from squash vine borers

Squash vine borers are challenging to prevent or manage. Once the larvae invade the stem, it is difficult to treat squash vine borers. Check your squash for the presence of adult borers starting the last week of June. There are two methods for detecting squash vine borer adults.

- Watch for activity in the garden. The moths are easily noticed and heard when they fly.
- Use a container (pan, pail, bowl) colored yellow and filled with water. Squash vine borer adults are attracted to yellow. They will fly to the container and be trapped when they fall into the water. Place traps by late June, checking your traps at least once a day.

Once the presence of squash vine borers is confirmed, pick one of the methods to control their population.

#### Plan your planting schedule carefully

- Plant vine crops that are usually not attacked by squash vine borers, such as butternut squash, cucumbers, melons and watermelons.
- Plant a second planting of summer squash in early July. These plants will mature after adult borers have finished laying eggs and will not suffer any damage.
- Pull and destroy any plants killed by the borers.

#### Using a physical barrier

Place floating row covers over your vine crops when they start to vine (or for non-vining varieties, starting late June or early July) or when you first detect squash vine borer adults.

- Keep the barriers in place for about two weeks after the first adult borer has been seen.
- Secure the row covers in a way that prevents adults from moving underneath it.
- Don't use row covers if cucurbits were planted in the same area the previous year.

This is because squash vine borers spend the winter in the soil near their host plants. When the adults emerge the following summer, they may be trapped under the row cover instead of being kept out.

- Practice rotation to minimize this by planting cucurbits in different areas of your garden (if possible) or alternate seasons.
- **Caution:** Do not use floating row covers anytime crops are flowering. This prevents bees from pollinating your vegetables.

#### Using pesticides

If pesticides are needed, spray or dust the stems at their base.

- Start treatments when vines begin to run (or the last week of June or early July for non-vining varieties) or when the first adult borers are detected.
- Repeat in 7-10 days.
- Two applications help manage most squash vine borer adults.

For more thorough coverage, continue treatments at 7-10 day intervals until the end of July. Common names of active ingredients effective against squash vine borers are: carbaryl, permethrin, bifenthrin and esfenvalerate.

If your crop is still successfully attacked by borers, you can try to kill the borer inside the vine. Keep in mind that you may not be able to save the plant.

- As soon as wilting is noticed, use a sharp knife to cut a slit in the affected stem.
- Slice carefully up the vine until you locate the borer (or borers).

Once you have killed any borers with the tip of the knife, mound moist soil over the cut area and keep this spot well watered. New roots may grow along the cut stem, allowing the plant to survive.

**CAUTION:** Mention of a pesticide or use of a pesticide label is for educational purposes only. Always follow the pesticide label directions attached to the pesticide container you are using. Remember, the label is the law.

Be sure that the fruit/vegetable you wish to treat is listed on the label of the pesticide you intend to use. Also be sure to observe the number of days between pesticide application and when you can harvest your crop.

## Making and using Compost in the Garden

Written by: Christine Wren and Jo Van Rossum

Food Waste currently makes up 30 to 40% of U.S. household waste. Home composting can reduce the use of water and synthetic fertilizers while improving the health of your soil and plants.

Making your own compost is an easy, practical, and satisfying way to make use of yard waste and table scraps. Home composting can reduce the use of water an synthetic fertilizers while improving the health of your soil and plants. For homeowners living in areas where laws and ordinances limit or prohibit the disposal of leave and yard clippings into landfills, composting is a sensible alternative.

Compost is a humus-rich organic soil amendment that contains nutrients essential for plant growth. These nutrients are a result of the microbial decomposition of biodegradable materials—food scraps, paper materials, yard waste—that have ben piled, mixed, and moistened.

#### How to Make Compost

Start by choosing a site that is convenient and received about 5 to 8 hours of sun . Let's face it—the easier the compost pile is to get to, the more likely adding materials will become a habit rather than a chore!

After you have decided where to place the compost, decide if you will keep your compost in a pile, a simple bin made out of wood or chicken wire, or a manufactured compost unit. Lids are not necessary, but they can prevent nuisance animals from getting into the compost.

Begin composting by adding materials such as leaves, garden debris, eggshells, chopped or shredded branches, grass clippings vegetable and fruit scraps, and coffee grounds. **Microorganisms** in your compost will feed on these organic materials fore energy, using air an water through a process called **aerobic respiration**.

Microorganisms metabolize best with a diet of two parts **brown** materials to one part **green** (see table 1). Having the proper ratio of ingredients will increase the rate of decomposition. The pile needs to be at least 3 X 3 X 3 feet in size to heat up properly.

Once the pile is created, decomposition begins and the microorganism population expands quickly. To jumpstart the process, add a shovel full of garden soil or compost, which typically includes thousands of naturally occurring microorganisms.

## THE SCIENCE OF COMPOST

The three major microorganisms present in a compost pile are **bacteria**, **actinomycetes**, **and fungi**. Populations of these organisms fluctuate during decomposition and work differently as the temperature changes in he compost pile. From 0 to 55 degrees F, bacteria and fungi initiate the decomposition process. When the pile reaches 40 degrees F, bacteria and fungi activity increase dramatically until the temperature reaches 90 degrees F, at which point actinomycetes take over as decomposition continues.

A **compost thermometer** will help you track temperatures within the pile as the microorganisms break down organic materials, releasing carbon dioxide and heat. The pile's temperature continues to increase as the microorganisms metabolize the added materials. Temperatures in the center of the pile can each 135 to 160 degrees F. in a rather short period of time.



## Making and Using Compost in the Garden Continued . . .

Mature Compost has reached an internal temperature of 105 degrees F or higher for five consecutive days; the temperature should exceed 130 degrees

F or higher for four hours to eliminate weed seeds, insect eggs, and diseases.

Once the pile has reached maximum temperatures, the pile will need to be turned. Mixing or turning the pile completely every week or so introduces new food sources and increases air circulation to the microorganisms working in the warmer central portion of the pile. A pitchfork works great, but other tools are available.

Add water as you turn your pile during periods of little rain and when you add new materials—your compost pile should feel as damp as a wrung-out sponge. You Once all the available organic materials are broken down, the pile enters the curing stage. Microorganism activity

> dramatically decreases, causing the pile to cool. At this stage most of the materials are broken down into compost that is ready to be used in the garden. By maintaining your pile properly (see table 2), the finished compost should be ready to use in about four to five months. At this point all the materials added will be unrecognizable and the compost will be fairly moist, with a rich dark brown color and an earthy smell.

If you aren't interested in taking your pile's temperature or turning it on a regular basis—don't worry! The materials you add (even weed seeds) will eventually decompose. It will just take longer, usually a year or more.

#### TABLE 2. Common compost problems

Brown Materials (2 Parts)	Green Materials (1	Do Not Compost	Problem	Solution	
(2 1 01:0)	party		Your compost pile smells bad	Too much water or too many nitrogen-rich green	
<ul> <li>Dry leaves</li> <li>Twigs less than 1/4" in diameter</li> </ul>	Green Leaves     Grass Clippings (a)	Meat	materials may cause the pile to have a bad color.		
	<ul> <li>Grass Clippings (a)</li> <li>Weeds (before they have gone to</li> </ul>	Whole Eggs	Add more bro and turn the p	Add more brown materials and turn the pile.	
<ul> <li>Shredded newspaper</li> <li>Straw</li> <li>Shredded</li> </ul>	<ul> <li>Leftover plants at the end of the season</li> </ul>	<ul> <li>Dairy Products</li> <li>Diseased or insect- infested plants</li> </ul>	Your compost pile isn't heating up; in fact, noth- ing seems to be	Too much brown materials or not enough water may have slowed your pile's rate of decomposition. Turn in	
<ul> <li>Shredded household cardboard :egg cartons, paper towel and</li> </ul>	<ul> <li>Coffee Grounds</li> <li>Fruit and Vegetable scraps</li> </ul>	• Persistent perennial weeds such as yel- low nutsedge, Canada thistle,	happening.	more green materials and add water, if needed.	
toilet paper • rolls •	<ul><li>Eggshells</li><li>Manure (cow,</li></ul>	<ul><li>quack grass</li><li>Pet Waste</li></ul>	pesticides, insecticides, herbicides, or fungicides. B. Adding wood ash is risky as it's easy to overdo (see		
<ul> <li>Sawdust (if enough extra green materials is added)</li> </ul>	horse, or poultry)	<ul> <li>Wood Ash (b)</li> <li>Black Walnut Leaves (c)</li> </ul>	A3635 in Resources) C. Black Walnut leave that can be harmful to	es contain juglone, a compound o other plants.	

#### TABLE 1. Materials for composting

(2 Parts)	part)		
( - · · · · · · )	p = ,		Yc pi
<ul> <li>Dry leaves</li> <li>Twigs less than 1/4" in diameter</li> <li>Shredded newspaper</li> <li>Straw</li> <li>Shredded household cardboard :egg cartons, paper towel and toilet paper rolls</li> <li>Sawdust (if enough extra green materials</li> </ul>	<ul> <li>Green Leaves</li> <li>Grass Clippings (a)</li> <li>Weeds (before they have gone to seed)</li> <li>Leftover plants at the end of the season</li> <li>Coffee Grounds</li> <li>Fruit and Vegetable scraps</li> <li>Eggshells</li> <li>Manure (cow, horse, or poultry)</li> </ul>	<ul> <li>Meat</li> <li>Bones</li> <li>Whole Eggs</li> <li>Grease</li> <li>Dairy Products</li> <li>Diseased or insect- infested plants</li> <li>Persistent perennial weeds such as yel- low nutsedge, Canada thistle, quack grass</li> <li>Pet Waste</li> <li>Wood Ash (b)</li> <li>Black Walnut Leaves</li> </ul>	Pi Yc pi in ha B A C t
is added)		(c)	





## Making and using Compost in the Garden Continued . . .

#### Using Compost in the Landscape

Compost has many uses in the landscape. Incorporating compost is an excellent way to amend your soil's overall health. Compost slowly works into the soil and provides slow -release nutrients to plants. It also moderates soil temperature, improves soil drainage, fertility, and structure, and can suppress weeds.

**In clay soils,** the introduction of compost will loosen the soil and make nutrients more available to plant roots.

**In sandy soils,** adding compost increases water retention and provides important nutrients that otherwise may not be available.

With **ornamental plants,** use compost just as you would bark or other mulch: apply a 2 to 3 inch layer between plants shrubs and trees, keeping it about 1 to 2 inches away from tree trunks and shrub and plant stems.

To improve your lawn, use compost as a topdressing.

Add compost to your **vegetable garden** prior to tilling or as mulch on the top of the soil:

- If you till a 2-inch layer of compost into the soil prior to planting, the compost will be incorporated into the soil and the nutrients will be available to the plants more quickly.
- For those who prefer a no-till or partial till option in the vegetable garden, compost can be used as mulch. Apply a 2 to 3 inch layer between plants, no closer than 1 to 12 inches from the plant's base.

No matter how you compost or what you do with it, the important thing to remember is that you efforts are benefitting your soil and plants and keeping reusable yard waste and food scraps out of the landfill.

**Tree planting note:** Do **NOT** add compost when planting a tree, as this can cause root restriction—always backfill with the original soil you removed from the hole.

## **Composting Tip**

Keep a small bucket in the kitchen to collect scraps, and top it off with a small amount of water before taking it out to your compost pile. Not only will it help rinse your container, your compost pile will gain some much-needed moisture tool.

## OTHER SOURCES

Need more compost than you can produce at home? Compost is readily available at most gardening home improvement and hardware stores. Many areas offer their own compost to the public, but trend cautiously:

Municipal Compost: may contain persistent weed seeds or residue chemicals from yard waste. Ask your local municipality about their compost management process and how they handle yard waste.

Mushroom compost: the by-product of what mushroom farmers use to grow mushrooms on—has become very popular . . . And for good reason! It's an attractive dark color, high in nutrients, fairly lightweight, easy to work with, and largely weed free. It makes a great mulch in landscape beds and vegetables gardens, and you can use it in raised beds and container plantings as well. Many landscape center and retailers sell it in bulk, and a few mushroom farms in Wisconsin sell it direct to the public.





#### UNIVERSITY OF WISCONSIN-MADISON

Extension—Barron County Barron County Government Center 335 E. Monroe Avenue, Room 2206 Barron, WI 54812

> Phone: 715-537-6250 Fax: 715-537-6814



UNIVERSITY OF WISCONSIN-EXTENSION

Non Profit Organization U.S. Postage Paid Barron, WI 54812 Permit No. 74

ADDRESS SERVICE REQUESTED

#### Resources—Where to find answers!

Factsheets-https://pddc.wisc.edu/

Fruit-fruit.wisc.edu

UWEX Publications-https//learning store.uwex.edu

Insect Info-http://labs. Russell.wisc.edu/insectlab/

General Wisconsin horticulture info-https://hort.uwex.edu

Horticulture training and articles—https://wimastergardener.org/articles

Weed identification-https//weedid.wisc.edu

Wisconsin Pest Bulletin-https://datcpservices.wisconsin.gov/pb/

The University of Wisconsin—Extension provides Title IX which include affirmative action and equal opportunity in education, programming, and employment for all qualified persons regardless of race, color, gender, creed, disability, religion, national origin, ancestry, age, sexual orientation, pregnancy, marital or parental status, arrest or conviction record or veteran status.

Requests for reasonable accommodations for disabilities or limitations should be made prior to the program or activity for which it is needed. Please do so as early as possible prior to the program or activity so that proper arrangements can be made. Requests are confidential (ADA requirements.)