



# Home, Yard, and Garden Pest Newsletter

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## Dutch Elm Disease

Dutch elm disease (DED) is a destructive wilt disease caused two closely related fungi, *Ophiostoma ulmi* and *Ophiostoma novo-ulmi*. Since its introduction to the United States in the 1930s (Illinois 1950s) DED has killed millions of native elm trees. American elm (*Ulmus americana*) and red elm (*Ulmus rubra*) are very susceptible. Asiatic elms, Lacebark elm (*Ulmus parvifolia*) and Siberian elm (*Ulmus pumila*), are the most resistant species.

DED is still common in Illinois and the University of Illinois Plant Clinic confirms numerous cases on an annual basis. Most new DED infections are first observed during June. Infections often begin in the upper crown, with symptoms first appearing at the end of a branch (called “flagging”). Leaves on an infected branch wilt, turn a dull green to yellow, and then brown before dropping prematurely. The infection rapidly progresses through the tree. Once in the tree’s vascular system, the fungus produces toxins that induce the tree to form gums and tyloses that plug the water-conducting cells, greatly restricting the flow of water from roots to the foliage. Elms

infected during early summer usually die in one year, small trees within a few weeks, and larger elms may die slowly, sometimes over two or more years.

Several other diseases and abiotic disorders cause wilting symptoms similar to DED. Positive identification of DED requires culturing and identification of the causal fungus. Plant diagnostic labs culture live wood taken from symptomatic branches showing vascular streaking. The ideal branch size is thumb thickness and 6 to 8 inches long.

Dutch elm disease spreads by root grafts or bark beetles (native and introduced). The beetles feed, lay eggs, hatch from eggs, and create a series of tunnels or galleries in the wood. The adult beetles eventually emerge from diseased trees and carry the sticky spores of the DED fungus to healthy elm trees.

### Management

Sanitation effectively slows the spread of DED by removing sources of beetle habitat. Many municipalities have strict ordinances requiring prompt removal and destruction of DED-infected elms. Dispose of diseased wood by burning, burying, chipping or debarking cut elm wood.



*Chlorotic, wilted foliage on elm tree infected with Dutch elm disease, Travis Cleveland, University of Illinois.*

For some trees, the DED fungus can be eradicated by pruning out the diseased limb or limbs. Pruning is most likely to work if a new upper-crown DED infection is detected early, and when less than 5% of the crown is affected. Pruning is an aggressive procedure, often requiring branches to be cut several feet below detectable vascular discoloration. Be sure to disinfect pruning tools between cuts.

Large elms growing within 25 to 50 feet of each other are likely to have root grafts. Root grafts should be mechanically severed (36 – 40 inches below ground) before the diseased tree is removed.



*Elm tree recently killed by Dutch Elm Disease. Note the other dead elm in the background. Travis Cleveland, University of Illinois.*

Injections of systemic fungicides containing propiconazole or thiabendazole have been shown to prevent new infections and stop the fungal colonization of uninfected parts of the tree. These fungicides are rather costly and provide no guarantees. Injections should be made by trained arborists and technicians.

A good selection of DED-resistant or tolerant varieties and hybrids are available to choose from. Many selections also offer insect resistance and desirable vase-shaped form upon maturity. The Morton Arboretum has a list of [Elm cultivars](#) and their descriptions on their website.

*Travis Cleveland*

## A Few More Weeds That Do Well in Drought

### Common Purslane (Wild Portulaca) (*Portulaca oleracea*)

This warm-season annual broadleaf reproduces by seeds and spreads by rooting stem pieces. Common purslane germinates late in the season and forms a long taproot with fibrous lateral roots. The stems are succulent, smooth, fleshy, usually purple-red, and may root at lower nodes. The stems are many-branched, reach up to 24 inches long, and grow in a prostrate fashion to form mats. The leaves are alternate to nearly opposite, wedge-shaped (rounded at the tip and narrowed at the base), up to 1-1/4 inches long, thick, fleshy, and smooth and are often clustered near the ends of branches. The yellow flowers are borne individually in the leaf axils or clustered at the ends of branches. There are five petals. The fruit is a globular capsule. Flowering occurs from July through September. Common purslane thrives in sunny, fertile, sandy soils and can be troublesome in late-summer seedings. It tolerates poor, compacted soils and once established, drought.



*Common purslane, Michelle Wiesbrook, University of Illinois.*

### Nimblewill (*Muhlenbergia schreberii*)

This warm-season perennial is often found in older, moist turf areas in shady settings but tolerates full sun. It becomes quite noticeable when cool season turfgrass goes dormant. It spreads by seeds and spreading stems (stolons). In turf, nimblewill forms dense patches, often a foot or more in diameter. It

has fibrous roots. When actively growing, nimblewill produces grayish to bluish green, short, flat leaves up to 2 inches long. The long, slender flower stalks appear in the late summer. They are borne both at the ends of stems and in leaf axils and are 2 to 6 inches long and cylindrical. When dormant (mid-autumn through mid- to late spring), nimblewill is a faded, dull brown; the patches tend to appear fuzzy, somewhat resembling a scouring pad. These patches are especially apparent when cool-season turf is green and actively growing in spring and autumn.



*Nimblewill, Michelle Wiesbrook, University of Illinois.*

### **Broadleaf Plantain (*Plantago major*) and Blackseed Plantain (*P. rugelii*)**

These cool-season perennials reproduce by seeds. These plantains form a spreading or upright basal rosette of broadly oval leaves with a short taproot and fibrous roots. The leaves are broad-oval, pubescent or smooth, and dark green. The petioles can be reddish or purplish. The leaves are up to 10 inches long and 6 inches wide, the margins entire or wavy, and the veins prominent and parallel. Plantain flowers are numerous, inconspicuous, and small. They are borne in dense clusters at the upper ends of leafless flowering stalks and appear like fingers or rattails. They grow 8 to 20 inches tall from May to September. Blackseed and broadleaf plantains occur in lawns throughout the growing season. They tolerate some shade, low mowing, low fertility, compacted soils, and dry sites but prefer fertile, moist soils.



*Broadleaf plantain, Michelle Wiesbrook, University of Illinois.*

### **Buckhorn Plantain (*Plantago lanceolata*)**

This cool-season perennial reproduces by seeds. Buckhorn plantain forms a spreading or upright basal rosette of narrowly oval leaves that grow above a long, sturdy taproot with lateral branches. Leaves of buckhorn plantain are sometimes twisted and curled, dark green, and up to 1-1/2 inches wide and 8 inches long. The tips are sharp and the veins prominent and parallel. Buckhorn plantain forms many small, whitish tan flowers that are tightly clustered at the ends of long, hairy stems. The inflorescences are conelike spikes resembling a bullet. The flower stalks are 6 to 30 inches tall, and the flowers occur from May through October. Buckhorn plantain occurs commonly on drier sites, on neutral to basic soils, and in low-quality turfs of low to moderate soil fertility throughout the growing season. It can tolerate compacted soils and low mowing heights.



*Buckhorn plantain, Michelle Wiesbrook, University of Illinois.*

## Field bindweed (*Convolvulus arvensis*)

This perennial weed reproduces by seeds and rhizomes. The stems are smooth, slender, and twining. Stems spread over the soil surface or turfgrass and also climb on objects, such as other plants. The leaves are alternate and ovate, and they have basal lobes (arrowhead shaped). The flowers are pink or white funnel-shaped tubes, produced June to September. This plant can persist in many cultivated and uncultivated environments and is difficult to control because of its extensive root system.



Field bindweed, Michelle Wiesbrook, University of Illinois.

### Controlling these weeds

In established lawns, populations of these weeds can be managed by maintaining proper turf density. However, in hot and dry conditions, turfgrass may be allowed to go dormant. Fertilize in the fall. Small populations of plantains may be removed by hand, removing as much of the taproot as possible. Common purslane plants are easily pulled but destroy or physically remove the stems, as they may root in open soil. Physical removal of bindweed and nimblewill will be more challenging due to the rhizomes or stolons present. For best results, apply postemergence herbicides in late spring through midsummer when plants are young and actively growing. Applications for many weeds could extend into autumn even. Keep in mind that dry conditions may result in less than stellar control and a second application may be warranted. Preemergent herbicides will prevent emergence next year. Carefully read and follow label directions.

More information on these weeds can be found here:

- [Common Purslane](#)
- [Nimblewill](#)
- [Plantain](#)
- [Bindweed](#)

For assistance with identification, consult with your local University of Illinois Extension office or the booklet, "[Identifying Weeds in Midwestern Turf and Landscapes](#)". You may also submit plant samples to our [Plant Clinic](#) located in Urbana.

Michelle Wiesbrook

## University of Illinois Extension Horticulture Resources - Summer 2023

Looking for more horticulture and gardening information? The University of Illinois Extension has two resources with summer content that may interest you.

### Gardeners Corner

[Gardeners Corner](#) is a quarterly newsletter produced by a team of Illinois Extension horticulture experts. Each issue highlights seasonal recommendations and how-tos that will make your houseplants, landscape, or garden shine in any season. The [Summer 2023](#) edition of the newsletter includes the following topics:

- Go green with eco-friendly lawn care
- Reduce storm damage by looking for tree defects before bad weather strikes
- Care for perennial gardens with 3 proven pruning methods
- Elevate your expectations with raised bed gardening
- Want more from your garden? Plant a fall crop of cucumbers
- How to grow tropical ginger for at home spice
- Make flowers and memories last forever with drying for design
- Build privacy with plants for secret gardens

These and past Gardeners Corner topics are available at [go.illinois.edu/gardenerscorner](https://go.illinois.edu/gardenerscorner). You can also get direct access to this newsletter by joining the Gardeners Corner email list

## Four Seasons Gardening webinars

University of Illinois Extension's Four Seasons Gardening series focuses on home gardening, environmental stewardship, and backyard food production. Join these one-hour sessions to build your gardening know-how! Each webinar is free. [Registration](#) is required. If a reasonable accommodation is needed to participate, contact Gemini Bhalsod at [gbhalsod@illinois.edu](mailto:gbhalsod@illinois.edu). Early requests are strongly encouraged to allow sufficient time for meeting access needs. Summer Four Seasons Gardening webinar topics include:

### More than Shade: Explore Summer Blooming Trees

- July 11 at 1:30 p.m..
- After spring blooms fade and summer arrives, trees are often showing green foliage and offer the opportunity for shade from the summer heat. Trees are more than that, as summer-blooming trees and shrubs are just getting started. Discover different summer-blooming trees that provide a boost of color and ornamental features in the landscape over another season.
- Presenter: Sarah Vogel, Extension Horticulture Educator

### Before the Build: Considerations for Backyard Greenhouses

- August 22 at 1:30 p.m.
- Have you ever thought of going outside to your backyard greenhouse during the cold weather months to pick fresh lettuce or plant some basil? Explore a variety of budget-friendly backyard greenhouses, what can be grown in them, and how to extend a growing season.
- Presenter: Christina Lueking, Extension Horticulture Educator

Travis Cleveland

## Modified Growing Degree Days

Station Location	Actual Total	Historical Average (11 year)	One-Week Projection
<b>Base 50° F - March 1 through May 10</b>			
Freeport	1070	995	1214
St. Charles	1051	965	1199
DeKalb	1051	988	1197
Monmouth	1276	1157	1438
Peoria	1251	1208	1420
Champaign	1356	1262	1522
Springfield	1345	1398	1522
Perry	1325	1317	1498
Brownstown	1559	1304	1741
Belleville	1460	1494	1652
Rend Lake	1574	1593	1775
Carbondale	1465	1518	1665
Dixon Springs	1497	1546	1692

Insect development is temperature dependent. We can use [degree days](#) to help predict insect emergence and activity. Home, Yard, and Garden readers can use the links below with the degree day accumulations above to determine what insect pests could be active in their area.

[GDD of Landscape Pests](#)

[GDD of Conifer Pests](#)

Degree day accumulations calculated using the [Pest Degree-Day Calculator](#) (a project by the Department of Crop Sciences at the University of Illinois and the Illinois Water Survey).

Kelly Estes



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