



Home, Yard, and Garden Pest Newsletter

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Fall Armyworm in Turfgrass

Large populations of fall armyworms (*Spodoptera frugiperda*) are being seen throughout the eastern US. This species has a broad host range including corn, wheat, soybeans, vegetables, and fruit trees in agricultural areas; trees, shrubs and flowers in landscapes; and bermudagrass, Kentucky bluegrass, fescues and ryegrass in turfgrass areas.

Fall armyworms move through an area feeding in groups. When they have consumed all the food in one area, they may move on to another. It is common to see fall armyworm larvae move from cornfields or fields of small grains into nearby turfgrass areas.

Fall armyworms are unable to overwinter in Illinois. Each year, the adults fly northward from warmer regions (including Texas, Florida, Central America and the West Indies). While they may have up to 11 generations in the warmer portions of their range, in Illinois, they have 1-2 generations in late summer and early fall.



Left: Fall armyworm (*Spodoptera frugiperda*) larva, Clemson University - USDA Cooperative Extension Slide Series, Bugwood.org

Center: Fall armyworm larva showing Y-shaped marking, Frank Peairs, Colorado State University, Bugwood.org

Right: Fall armyworm larva eating another larva, Frank Peairs, Colorado State University, Bugwood.org

Because similar species can be confused with fall armyworms, like armyworm (*Mythimna unipuncta*), common armyworm (*Mythimna convecta*) and yellow striped armyworm (*Spodoptera ornithogalli*), it's important to identify which species you're dealing with.

Larvae grow up to 1 1/3 inch long. They vary in coloration with some being dark green, tan or brown. They can be distinguished from other caterpillars by the Y-shaped marking that runs from the top of its head down between its eyes and the orange stripe that runs along each side.



Left: Fall armyworm male moth, John Capinera, University of Florida, Bugwood.org

Right: Fall armyworm egg mass, Richard Sprenkel, University of Florida, Bugwood.org



Adults males have brown forewings with tan and gray markings and a white triangular shape near the tip of the wing. The forewings of females are brown with less distinct markings than males. Both males and females have silvery-white hind wings

Fall armyworm egg masses can be found on grass, leaves and structures in the landscape. The egg masses may contain up to 400 eggs laid in 3-4 layers. The eggs are covered in silk, giving the egg mass a fuzzy appearance.

The eggs hatch in 5-7 days. Newly hatched larvae will drop from the leaves to the turfgrass below on a thread of silk and begin to feed on the grass blades. When larvae are young, they feed on the surface of grass blades, but large caterpillars can chew the grass blades off. Larger caterpillars may even begin to cannibalize the smaller caterpillars. The larvae complete 5-6 larvae growth stages in 3-4 weeks.

Larvae feed on the grass blades, but typically do not feed on the crowns. Watering and fertilizing can give the stressed, dry plants a chance to grow new blades from the surviving crowns after the fall armyworms have been controlled.

Biological treatments, including Bt products (Condor) or spinosad (Conserve), are effective controls.

Chemical controls for fall armyworm include: carbaryl (Sevin); chlorantroniliprole (Acelepryn); clothianidin (Arena); pyrethroids like bifenthrin (Onyx, Talstar), deltamethrin (DeltaGard) or lambda-cyhalothrin (Lambda Select, Scimitar); or trichlorfon (Dylox).

There have been reports that some fall armyworm populations have not responded well to pyrethroids. It may be a good idea to begin treatment with a different mode of action or to switch to a different mode of action if pyrethroids are not controlling the fall armyworm population.

If neonicotinoids are chosen, it is important to avoid applying them to flowering plants (including clover and flowering weeds) to prevent pollinator exposure. Because these products are transported within the plant, they have the potential to harm pollinators visiting flowers on any treated plant.

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Common Purslane – Common in Late Summer

Common purslane is typically a late-germinating summer annual broadleaf weed. I've seen much of it growing happily recently. I think common purslane (*Portulaca oleracea*) is interesting in that some curse its appearance in their garden while others embrace it. Again, we are reminded that a weed is only a weed if it is unwanted where it is growing. The primary redeeming quality to purslane is that it is edible and recipes abound online. Ironically, one weed book I have calls it a "good weed." Notably, there are several cultivated, flowering, ornamental types of *Portulaca* that should not be confused with this weedy common type.

The stems of common purslane are succulent (juicy if you will), smooth, often reddish, and prostrate.

They can reach to approximately 24 inches in length and form a prostrate mat. The leaves are thick, fleshy, shiny, and smooth. They are alternate to nearly opposite, rounded at the tip but narrowed at the base, and up to 1¼ in. long. They are often clustered near the ends of branches. Overall, this plant is very reminiscent of a jade plant.



Common purslane close up. Michelle Wiesbrook. University of Illinois.

The flowers appear July through September. They are yellow with 5 petals, borne individually in the leaf axils or clustered at the ends of branches. The fruit is a globular capsule that splits at the middle.

This weed thrives in sunny, fertile, sandy soils but will tolerate poor, compacted soils. It is extremely common in cultivated areas, such as gardens, bare-soil areas in landscape beds, and cultivated nursery fields. Common purslane is extremely drought resistant; in fact it thrives in hot, dry conditions. With some areas of the state still experiencing drier than normal conditions, we are likely to see an increase in populations of it this year. It is almost impossible to control through cultivation alone. Actually, cultivation will propagate (multiply) this plant. Before you till your garden, be sure to check for the presence of this weed. Timely, proper identification is important.

The root system consists of a long taproot with

fibrous lateral roots. It is fairly shallow, so hand pulling is fairly easy. Cutting with a hoe at the base of the plant is also effective. There is one note of importance here: Stems will root wherever so don't leave plant fragments lying after weeding or you will be weeding again shortly. An older client told me once of how her mother would send her out to weed with two collection bags – one was for the “fat” weeds -- purslane.

Common purslane grows well in sunny spots and tight crevices. Years ago, I was hired to do some weeding for a home gardener. I was fresh out of college and armed with the knowledge that this species was indeed a weed! Low and behold she had a lot of it growing in between the pavers of her patio. I was surprised to be told that she was encouraging it to grow there and that I should leave the area alone. The site was perfect for growing it. Why fight it? She planned to eat it instead. Brilliant! The leaves can be eaten cooked or raw and they are reportedly rich in omega-3 fatty acids and beta-carotene as well as high in magnesium, potassium and some other nutrients. They have a slightly sour taste and are considered to be a delicacy in certain parts of the world.



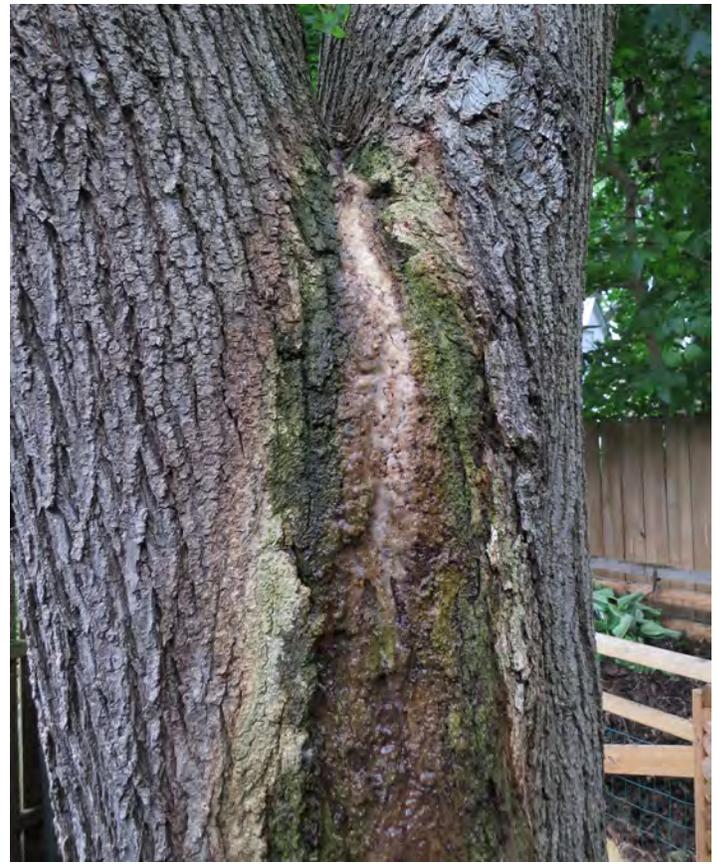
A raised bed full of common purslane. Michelle Wiesbrook. University of Illinois.

On the other hand if you are not interested in having a population of common purslane in your garden, landscape or lawn, prevention is a good tactic.

Remove or kill plants before they produce seed. In a landscape bed, mulch can be effective. In a vegetable garden, newspapers, black plastic and grass clippings are a few “ground covers” that can be used to prevent seed germination. For lawns, raise the mowing height if practical to shade out this weed. Adjust your cultural practices in order to encourage better growth of the turf and to make it more competitive.

Several herbicides are labeled for controlling common purslane. Postemergence herbicides may be used on existing plants. However, for next summer, preemergence herbicides could be applied prior to emergence in late spring or early summer. For cool-season lawns, these herbicides can be used: triclopyr, fluroxypyr, dicamba, dithiopyr, pendimethalin, prodiamine. For vegetable gardens, trifluralin or napropamide may be tried. In landscape beds, pendimethalin, oryzalin, and trifluralin will provide effective control. Additionally, spot applications of glyphosate can be effective. These lists are not all-inclusive and other herbicides may be used as long as the label allows it and includes common purslane in the list of target pests. Be sure to carefully read and follow all pesticide label directions.

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Slime flux on Siberian elm, Ulmus pumila. Travis Cleveland, University of Illinois.

Wetwood and Slime Flux

A tree that is oozing a foul-smelling fluid is likely to alarm anyone concerned about their tree’s health. Add in discoloration and a slimy texture, and it is easy to understand their distress. Fortunately, the symptoms associated with wetwood and slime flux appear worse than they actually are.

Wetwood refers to a condition in which the heartwood is water-soaked, often having a foul odor. Slime flux refers to the slimy, odorous fluid seeping from wetwood affected trees. Wetwood and slime flux are common on older elm trees in Illinois. We also see them on other tree species, including poplar, oak, maple, redbud, sycamore, and willow. Wetwood does not kill trees, but it is associated with trees in decline. Both conditions are usually unimportant in landscape trees aside from the diminished appearance of the bark. Slime flux is most conspicuous in the summer, although it can occur from April to December



Slime flux on Elm, Ulmus sp. Travis Cleveland, University of Illinois.

The true cause lies within the tree, where bacteria in the inner sapwood and heartwood ferment, building internal gas pressure. This gas pressure forces the liquid to seep out of crotches, branch stubs, cracks, and other wounds. The liquid then flows down the trunk, wetting and soaking large areas of bark. Bacteria, yeasts, and other fungi often colonize the fluid resulting in a slimy texture, hence the name slime flux. As it dries, a light gray/white encrustation remains.

There are no viable measures to prevent or control wetwood and slime flux, but the following may be helpful. Fertilize stressed trees in the spring or fall to stimulate vigorous growth. Use proper pruning techniques to encourage rapid callus formation over wounds. Disinfect cutting tools when working on trees known to wetwood. We do not recommend the use of pipes to “drain” wetwood and slime flux. In the past, pipes were to get the liquid off the trunk, but the process of inserting the pipe may cause further injury within the trunk.

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