



As spring approaches, insects wake up, eggs begin to hatch and diseases break dormancy ... chemical output will increase. Please remember our beneficials when spraying!

PHOTO CREDIT: Amy Dismukes

TSU NURSERY NEWS TO USE

ISSUE 34

APRI 13, 2022

WEED OF THE MONTH:


Sun Spurge, *Euphorbia helioscopia*, is a cool-season annual broadleaf weed native to Eurasia but is found throughout most of the United States. Sun spurge is in the Euphorbiaceae family (poinsettia) and emits a sticky milky sap from stems and leaves when cut. The sap is a skin irritant and all parts of the plant are poisonous if ingested. Plants are commonly found in disturbed areas and roadsides, widely observed in nursery fields in middle Tennessee where large patches can out-compete small liners. Sun spurge seeds germinate in fall and overwinter as small seedlings, maturing in early spring. Plants have a prostrate growth habit, with multiple branches arching upwards reaching 18 inches tall. Leaves are wider at the tip and have finely toothed sedges, arranged alternately along reddish stems. Sun spurge blooms in early spring, flowers are greenish-yellow and very small (not showy) with each forming a single seed. A single plant may only produce a few hundred seeds, but seeds may remain viable in the soil for over 20 years.

Sun spurge has a deep taproot system that is difficult to remove. Post-emergent herbicide applications (diquat and glyphosate) can control actively growing sun spurge. No pre-emergent herbicides are labeled for controlling sun spurge, but products that are effective on related weed species contain dimethenamid-P, dithiopyr, flumioxazin, indaziflam, oryzalin, and prodiamine. Please contact Dr. Anthony Witcher (awitcher@tnstate.edu) for more information on nursery weed control practices.

GROWERS, don't forget about FREE plastic recycling program at the TSU Nursery Research Center. For growers who use greenhouse plastic, using the plastic roller from the TSU Nursery Research Center is free of charge and saves time and money. Plastic from a typical house can be rolled by one person in less than four minutes. This saves labor, disposal fees and needless tons of used plastic entering landfills. It has been said to be "much easier and faster than older methods". The roller does not have to be on your site when you remove the poly. For more information or to reserve a roller, please contact Josh Reed at 931-743-2363.

BOXWOOD PSYLLID are leafhopper insects with piercing sucking mouthparts that feed only on boxwood. Boxwood psyllids overwinter as eggs inserted between the bud scales. The eggs begin to hatch in the spring as soon as the buds begin to open, giving rise to new leaves. Immatures feed on the young leaves and become adults between late May and early June. Following mating, females lay eggs under bud scales that will hatch in the spring.


PHOTO CREDIT: AMY DISMUKES

Feeding by the immatures causes a cupping of leaves as they remove sap from young foliage. These insects affect the aesthetics of the boxwood but do not significantly affect health or vigor.

Pruning and burning infested tips containing immatures before the adults lay eggs can be an effective strategy when timed correctly with scouting. Insecticidal soaps or summer horticultural oil can provide good control if applied when new growth begins and a good coverage is maintained. More than one treatment may be necessary if live immatures are still present after treatment. A soil drench with a systemic such as dinotefuran or imidacloprid will be taken up by the roots and distributed through the plant sap. Make the application of a systemic 2 to 4 weeks before immatures hatch. This method works well with beneficials as the insecticides are not being applied to the foliage. Pyrethroids can also provide good contact residual control but can harm natural enemies as well. Apply pyrethroids only if the population is dense and other methods of control are not working. For more information contact Phil Haar or Amy Dismukes.

FIREBLIGHT IS AROUND THE CORNER. Fireblight is a highly destructive disease caused by the bacterium *Erwinia amylovora*. It is a major disease of trees in the rose family, specifically apple, crabapple, pear, quine, serviceberry, cotoneaster, pyracantha, *Rubus* spp. and mountain ash). Fire blight attacks ALL PARTS OF THE PLANT and favors rain with temperatures above 60°. If these conditions are met during bloom, infection can be severe. The pathogen itself survives not only within the branch cankers but can also overwinter in debris on the nursery block floor. Keeping these blocks clean can greatly reduce disease. Initial infections occur through blossoms. The bacteria multiply in the nectar, moving into the flower and eventually down the branch forming cankers that girdle branches. The tissue above the canker dies, forming a distinct crook. Infection occurs during bloom so protectant antibiotics should be applied when the risk is high.


PHOTO CREDIT: AmY DISMUKES

- Select resistant varieties
- Avoid excessive nitrogen fertilization;
- Prune infected tissue 10 - 12” below canker, sterilizing shears between cuts, and destroy;
- USE BACTERICIDES PREVENTATIVELY. Once infection occurs, sprays are not effective. Apply streptmycin (8 oz/100 gal) when 20% of blooms are open, through petal fall. Spray every 5 days under normal conditions and every 3 to 4 days if the weather is unusually warm. Streptomycin is most effective when applied alone, as a dilute spray, under slow drying conditions. Certain coppers applied during dormancy can help reduce inoculum on site.

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