

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



TSU NURSERY NEWS TO USE

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PHOTO CREDIT: Amy Dismukes

WEED OF THE MONTH: Yellow nutsedge (*Cyperus esculentus*) is a warm-season perennial weed in the sedge family (*Cyperaceae*), closely related to grassy weeds but with several distinguishable traits including triangular shaped stems and leaves arranged in groups of three. Yellow nutsedge proliferates in hot weather, moist soil, and full sun but is adaptable to dry conditions and poor soil. A common weed in lawns and landscapes, yellow nutsedge can also infest field-grown nursery crops and nursery container production areas (gravel pads, drainage ditches, pine bark piles, etc.). Although plants can produce up to 1500 seeds, seed viability is low and plants spread primarily by rhizomes and tubers. Hand





weeding large plants is not recommended because the roots break off in the soil and re-sprout while cultivation will only increase the number of plants in the soil. Yellow nutsedge is not typically an issue in nursery containers, but can become a problem in

poorly maintained pine bark piles and when recycling old container substrate. Once established, small plants (2-3 mature leaves) can be controlled with post-emergent herbicides such as glyphosate, bentazon, sulfentrazone and sulfosulfuron but spray contact must be avoided with desirable plants and multiple applications may be required (labelled site use varies by product). Pre-emergent herbicides can suppress yellow nutsedge growth and effective products contain dichlobenil, dimethenamid-P, and S-metolachlor. 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. Multiple houses



are loaded on to a single roll, which is then dropped off at the Nursery Research Center for recycling. 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. Lay it on the ground beside the house until you can borrow the roller, or for when labor is available after the spring rush. For more information or to reserve a roller, please contact Josh Reed at 931-743-2363.



BLACK FLAGGING on ARBORVITAE (*Thuja occidentalis*) is very common across the state. The absence of disease organisms, insects or

mites associated with this condition suggests the problem is due to stress, however, the exact source of stress is unknown. Water stress, drying winds, high temperatures, injury to the roots or damage to lower stems are possibilities. In some instances, black flagging has occurred when none of these conditions were present, leaving researchers stumped.

Only younger foliage is affected. Branch tips show a dark-brown to black discoloration of the foliage; the color is not associated with normal or disease-induced

senescence. It can be one-sided, be evenly distributed over or occur only on some branches. Plants with black flagging are not permanently injured and the condition does not always reoccur. Repeated isolations

from affected tissue by multiple diagnosticians across the country have consistently failed to produce results. The injury is not caused by insects nor girdling cankers. Insecticides and fungicides have no effect on reducing incidence.

No chemical applications are recommended since this is not a disease, insect or mite problem, however, cultural controls can improve the appearance and health.

- prune affected foliage (and destroy) to remove unsightly tissue and allow sunlight in to stimulate new foliage growth
- when possible, water during dry periods
- fertilize in spring to stimulate production of new foliage

For more information, please contact me at adismuk1@Tnstate.edu or leave me a message at 931-815-5169.

FIREBLIGHT IS AROUND THE CORNER AND HEADED OUR WAY. 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 "shepherd's" crook. IPM strategies include:



- Selecting resistant varieties is the best way to deter fireblight, however, no member of the *Rosacea* family is truly resistant. Tolerant cultivars can be found at https://extension.colostate.edu/topic-areas/yard-garden/fire-blight-2-907/;
- Avoid excessive nitrogen fertilization;
- Prune infected tissue 10 12" below canker, sterilizing shears between cuts, and destroy; and
- USE BACTERICIDES PREVENTATIVELY. Once infection occurs, sprays are not effective. Apply streptomycin (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.

For more information, please contact me at adismuk1@Tnstate.edu or leave me a message at 931-815-5169.



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