AG NOTES

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MARES TAIL

You might think that in the number one horse county in Tennessee I would be talking about a part of a horse. But I'm actually talking about a weed that is becoming a problem in home landscapes, and I'm seeing them all over town, even in or near our lawn. I've added a picture from a nearby lawn. I did find some good information in a 2018 newsletter from Joe Boggs of the The Ohio State University.

Marestail (*Conyza canadensis*, family Asteraceae), which is also known as "Canadian horseweed," or just "horseweed," has moved from field crops to become a plague in landscapes and nurseries. The main reason is that certain biotypes are resistant to glyphosate (e.g. Roundup) as well as a number of other agricultural herbicides. This is one of the heavily used weed control products for homeowners, and now we need to switch to other products and methods.

Marestail presents three management challenges. First, the weed can flourish under a wide range of growing conditions. It will endure both drought as well as water-logged soils such as in drainage ditches. Plants will produce viable seeds in poor, low nutrient soils as well as highly fertile soils. (I've even seen them grow through seams between concrete and pavement.)

The second challenge is this annual weed's opportunistic life-cycle with the ability to behave both as a summer and winter annual. Seeds may germinate in late-summer to early fall (winter annual cycle) or in the spring (summer annual cycle). (It mostly is a fall-plant.)

Once seeds germinate, the plant forms a ground-hugging rosette that can be easily mistaken for other weeds. As a winter annual, marestail remains in the rosette stage through the winter, and then it bolts in the spring. As a summer annual, the weed remains in the rosette stage for only a very short time, and then it bolts in early to mid-summer. Thus, seed production is asynchronous with seed heads appearing at different times of the year. Once marestail bolts, it quickly forms a single, unbranched hairy stem that is densely covered in alternating oblanceolate leaves measuring 3 - 4 inches in length.

Marestail is a prolific seed producer and membership in the Asteraceae family is clearly demonstrated by the tiny, puff-ball-like seed heads which resemble miniature dandelion seed heads. Marestail can be effectively managed culturally with the key to success being early identification and persistence. Tilling new beds or new landscape installations in the spring that are infested with marestail will destroy young plants in the rosette stage. This will help to prevent future battles with this weed.

Mulch will help suppress seed germination. If seed does germinate, maintaining a 2 – 3" mulch layer makes hand-pulling more effective because plants will partially root in the loose mulch rather than entirely in the soil. Trying to hand-pull young plants anchored in dry or compacted soil often results in the single stem breaking off. (That's not good.) Decapitated young plants behave like the Greek Hydra by producing multiple stems each with their own seed head.

I think one of the key ways to work against this weed is continual mowing or string trimming which prevents seed head development and will eventually exhaust the resources of this annual plant and keep it from producing seeds. Once it gets to the seed sage, it's a losing battle for the next year, because these light seeds can travel in the wind.

Since it is resistant to glyphosate, one good choice for chemical control is timely applications of a product called Trimec, a three-way combination of good weed control products 2,4-D, dicamba and MCPP or MCPA. 2,4-D is effective if mixed with dicamba, MCPP, or MCPA. As with any pesticide application, you must read and follow label directions. Pay close attention to recommended distances to desired plants including warnings about plant root zones.

Of course, no marestail management strategy should depend entirely on herbicides. That's how we got into trouble with this weed in the first place! So cut ‘em, pull ‘em, keep ‘em from making seed, kill ‘em, just wear them out with a combination of control efforts.

WILD VIOLET

I got a picture sent about another tough weed. I’ll share this information from UT’s Publication W807. It’s available on the UT Extension website.

Wild violet (Viola spp.) is one of the most difficult to control perennial broadleaf weeds found in managed turfgrass systems such as residential and commercial lawns. There are many species of wild violet and most are difficult to distinguish from one another. Violets are often desirable in ornamental plantings and can escape into turfgrass where they become an undesirable weed.

Wild violet is a low-growing, clumping perennial with heart-shaped leaves that often cup inwards forming a funnel-type shape. The flowers can vary in color; it is not uncommon to see species with white, blue, purple or violet petals. Wild violets grow aggressively from rhizomes and are commonly found in moist, fertile soils that are shaded.

The best defense against any weed infestation is to maintain a dense, vigorous stand of turfgrass. Growing conditions that favor turf often discourage the growth of weeds like wild violet. Decreasing shade and soil moisture will create an environment better suited for turfgrass growth and less conducive for wild violet. Increasing mowing frequency can aid in decreasing wild violet populations; however, this practice does not eradicate them.

Additionally, perform soil testing regularly and apply nutrients according to soil test recommendations. While cultural practices can be used to help discourage wild violet infestations, they will not provide complete control. In lieu of using a shovel to remove wild violets from turf or replacing sod, herbicide applications will be required for eradication.

There are no preemergence herbicides labeled for wild violet control. However, several herbicides are available for postemergence control. University of Tennessee research has found that sequential applications of these postemergence herbicides are required to remove wild violet from turfgrass systems. When applied to wild violet, most postemergence herbicides will cause twisting and curling of foliage. This response indicates that the herbicides are working; however, in many cases plants will recover from this symptom and resume normal growth.

Herbicides containing pyridine chemistry (e.g., fluroxypyr, triclopyr, etc.) tend to have the best activity on wild violet. These represent a small subset of the herbicides that can be used to selectively treat wild violet in turfgrass.

There is no postemergence herbicide that will eradicate wild violet from turfgrass in a single application; all will need to be applied sequentially (likely over multiple seasons) for complete removal. The optimal time to treat perennial weeds like wild violet is in autumn. Avoid making applications during summer under conditions of high temperature and drought.