Department of Plant Sciences

NODDING SPURGE

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Nodding Spurge Chamaesyce nutans (Lag.) Small

Classification and Description

Nodding spurge is an erect, summer annual herb that is a member of the family Euphorbiaceae. It is closely related to, and often confused with, spotted spurge, *Chamaesyce maculata* (L.) Small. This native of North America occurs throughout Tennessee; it is a troublesome weed in row and vegetable crops, ornamentals, rights-of-way, pastures and hay fields, and many other situations. The cotyledons or seed leaves of seedlings are glabrous (lack trichomes or hairs) and the stems are red and glabrous. The first true leaves are opposite with irregularly toothed margins. As the plant grows (Fig. 1), it continues to form opposite, simple, oblong or oblong-elliptically shaped leaves that are approximately 0.1 to 0.6 inches wide and 0.2 to 1.6 inches long. The leaves and stems produce a milky irritant sap when cut or crushed. The plant has a fibrous root system, and it can grow to a height of approximately 30 inches. Nodding spurge produces separate, small, white male and female flowers (Fig. 2). The fruit of nodding spurge is a capsule, approximately 0.1 inches wide and long that contains ovoid, irregularly wrinkled seeds (Fig. 3).

Figure 1. Opposite leaf arrangement of nodding spurge.

Figure 2. Nodding spurge flower and seed capsule.

Figure 3. Nodding spurge seed.

Problems in Pastures and Hay Fields

As is the case with most other weeds, nodding spurge competes with grasses for light, water and nutrients, and it reduces the forage quality of pastures and hay. In hay fields, nodding spurge (as is the case with other summer annual and many perennial weeds) flourishes following the first hay cutting. Commonly used synthetic auxin herbicides such as 2,4-D, dicamba and GrazonNext HL (aminopyralid + 2,4-D) applied for control of other weeds present at that time, such as common cocklebur, common ragweed and horsenettle, do not control nodding spurge. This is particularly frustrating to producers seeking to produce clean hay or high-quality grazing.

Management in Pastures and Hay Fields

Maintaining a dense stand of grass, avoiding over-grazing, and maintaining proper soil pH and fertility will provide much-needed competition with spotted spurge. However, this alone is not sufficient in heavily infested fields. Research has shown that although the synthetic auxin herbicides are notoriously weak on this species, the sulfonylurea herbicide metsulfuron is very active on it. Currently, metsulfuron is available in a premixture with chlorsulfuron called Cimarron Plus. Also, a number of generic versions of metsulfuron alone are available. Cimarron Plus and generic metsulfuron can be tank-mixed with synthetic auxin herbicides labeled for use in pastures and hay fields. While established bermudagrass and established orchardgrass are very tolerant of metsulfuron, tall fescue is sensitive. Metsulfuron should not be applied to tall fescue stands less than 2 years old. In established tall fescue, producers will notice seed head suppression, stunting, yellowing, and in some cases, yield reduction. However, established tall fescue will recover fully.

Prior to application of any herbicide, be sure to thoroughly read and understand the herbicide label, and follow all directions and precautions. Also, remember that practicing good herbicide stewardship is everyone’s responsibility. For more information on herbicide stewardship, please visit our website: herbicidestewardship.com.

Reference

Anonymous. 2017. Cimarron Plus herbicide label. Bayer CropScience LP, Research Triangle Park, NC 27709. 12 pp.

Bryson, C.T. and M.S. DeFelice, eds. 2009. p. 189 *in* Weeds of the South, Univ. of Georgia Press, Athens, GA 30602. 468 pp.

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Fig. 1. https://missouristate.edu/pbtrewatha/nodding_spurge.htm

Fig. 2. https://www.flickr.com/photos/coreyaimond/6136509840

Fig. 3. http://soilcropandmore.info/crops/weeds/nodding_spurge.htm

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