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Khakiweed Management in Turfgrass

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Khakiweed (*Alternanthera pungens*) and mat chafflower (*Alternanthera caracasana*) are prostrate perennial weeds that originated in Central and South America. Stems are reddish in color and covered in numerous fine hairs. They are capable of rooting at the nodes and producing new plants. The low growth and lateral stems can become a thick carpet and can contribute to reduced turf density. Leaf margins are smooth, sparsely hairy, and prominently veined on the underside. Leaves develop a waxy cuticle, that thickens with age, giving them a dark green glossy appearance. White, inconspicuous, flowers are produced from mid-summer through early fall. Seeds are formed in the fall in prickly burs that can attach to animal fur, clothes and equipment. Khakiweed seeds will typically germinate after spring or summer rains but new plants are also produced vegetatively from root and stem fragments. A thick, waxy cuticle and formation of a deep taproot make khakiweed very drought resistant and help it to survive even during dry periods.

Pre-emergence control options

There are no pre-emergence products currently labeled for khakiweed. The active ingredient isoxaben is a pre-emerge product that could be impactful but requires a half- to one-inch water event to ensure activation. Applications are most effective during initial germination when soil temperatures are about 60 to 70 degrees F, although pre-emerge products that persist several months can be applied earlier.

Post-emergence control options

Products containing the following active ingredients: 2,4-D, MCPP, MCPA, carfentrazone, dicamba, metsulfuron, triclopyr, and/or fluroxypyr have shown activity on khakiweed. Products that combine two or more of these are more likely to provide control. Research has also shown that sequential applications of metsulfuron, approximately 4 weeks apart, can provide the most consistent season-long control.
Other than metsulfuron, any of these products can delay spring green-up of warm-season grasses if applied during spring transition, although St. Augustine grass can be particularly sensitive. Metsulfuron can damage or kill trees and shrubs if applied near the root zone. Glyphosate is also effective if the plant is actively growing and bare spots around the treated area are acceptable. Remember it can damage or kill all plants.

Surfactants

Surfactants are typically helpful when treating broadleaf weeds because they can reduce the surface tension of the spray solution and increase penetration of herbicide into the leaf surface. In the case of khakiweed, due to its thick waxy cuticle, adding a non-ionic surfactant as recommended by the product label will be needed to maximize herbicide efficacy.

Application Timing

The optimum time for treating broadleaves is when there is adequate soil moisture and plants are young and actively growing. Plants with lack of moisture or not growing are much less likely to be controlled. Post applications to khakiweed should be made starting in the spring when plants are smaller and actively growing. Sequential follow up applications should be made approximately 4 weeks later or when plants begin to regrow.

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