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Little Barley, Downy Brome: Big Problem?

Downy brome and little barley were problems in many pastures and hayfields across southeast Kansas this last spring. Undesirable cool season grasses are commonly referred to as cheat or wild oats and encompass several different plants. Regardless of what ya call the offensive grass, desirable plant growth and forage quality is hindered.

Downy brome is a winter annual and thrives in all soils. This weed has an extensive shallow root system, enabling it to extract large amounts of water and nutrients from the soil, making it very competitive. See image below for identification. Reproduction is by seed, which are distributed in hay bales, in contaminated grass seed and seeds attached to moving animals. Depending on available water, nutrients and competition, plants are anywhere from 6 to 24 inches tall. Growth starts in fall or early spring. Downy brome is palatable before seed head emergence, but becomes inedible with maturity. Stressed plants can produce seed at only one or two inches tall! Mature plants can cause eye and mouth injuries. For chemical control, apply glyphosate at 8 to 11 ounces (oz) per acre (ac) when native grasses are dormant in the fall or early spring and downy brome is actively growing. Desirable cool-season grasses will be damaged.

Little barley can be found in pastures and hayfields, where its dense mat can delay the greening of more desirable forage grasses. Plant height ranges from 4 inches to 2 feet. The stiff seedheads can also injure grazers. See image below for identification. Researchers in Alabama found late winter and early spring treatments including nicosulfuron at 1 oz/ac provided greater than 90% control in 6 weeks. Control increased to 97% when metsulfuron (0.4 oz/ac) and 2,4-D Amine (1 lb active ingredient per acre) were added to the nicosulfuron. A low rate of Glyphosate, (14 fl oz per acre) provided 95% control in 6 weeks. Atrazine can also be used for little barley control; however, an 18-month grazing or haying restriction will likely apply to most any subsequent crop.

These undesirable grasses invade damaged pastures and rangelands, affected by drought or high stocking rates. They are best managed by integrating chemical and cultural control measures to eliminate seed sources, contain spread, and kill existing weeds. Using good grazing practices like rotations, proper stocking rates, and providing appropriate and timely soil nutrients will enhance any chemical program. Herbicides must be used with proper caution; correctly identify pesky plants and use the appropriate herbicide at the right plant stage for effective control.

As in all weed management programs, tank mixes and herbicide rotations should be implemented in the control of these grasses to avoid the development of herbicide resistance. Follow label rates and timing for best results. The label is the law.

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