

Controlling Tough Grasses in No-Till

Courtesy of The Samuel Roberts Noble Foundation, Ardmore, Oklahoma.



Prairie cupgrass is an annual, although it can tiller enough in a season to give it a clumpy appearance.

Tumble windmill-grass, prairie cup-grass, and threeawn are some of the more challenging grasses to control on the southern plains. While none are terribly prolific, these “go-back” grasses may come to dominate a field’s weed spectrum if given the opportunity. The farmer’s job is to deny them that opportunity. Here’s a closer look at each, including their vulnerabilities.

Prairie Cupgrass (*Eriochloa contracta*)

Prairie cupgrass is an annual, germinating over a long period during spring and summer—much like foxtails and crabgrass. The major difference is the susceptibility to glyphosate: if you’ve done lots of low-rate glyphosate (16 – 24 oz of 4 lbs/g active ingredient, a.k.a. 3 lbs/g acid equivalent¹) in the past, you’ve probably eliminated lots of the more easily killed species and allowed the cupgrass to proliferate. Some fields may have a predominance of cupgrass for other reasons—this species may be slightly more tolerant of drought, poor soils, etc. than are some of the other summer annual grasses (green and yellow foxtail, crabgrass, etc.).

Control of prairie cupgrass can be accomplished with higher rates of glyphosate (40 to 64 oz), which can be especially effective if the cupgrass is not extremely stressed from heat and drought. Great Bend, KS producer Kevin Wiltse has done battle with cupgrass on many occasions, and reports good success with tank-mixing grass herbicides (Select, Assure, etc.) with glyphosate either as burndowns or post-emerge in RR soybeans.

Note: these grass herbicides have some minor soil residual which has the potential to adversely affect germination of grass crops such as milo or corn; therefore, this tankmix program is best suited to preplant situations for broadleaf crops such as sunflowers, or when planting of the grass crops will be delayed to allow the grass herbicide to degrade—a week or two is sufficient for many of these products, but check the label or consult with a knowledgeable sales rep. According to Pat Geier, K-State weed scientist at Hays, 8 oz of Select alone post-emerge in sunflowers works good on prairie cupgrass, and is their “standard treatment.” For glyphosate alone, Geier’s research has shown 48 oz to be reasonably consistent. Geier concurs with Wiltse that the tankmixes of Select and glyphosate are very good on cupgrass.

Wiltse: “The guys having trouble with cupgrass are the ones doing chem-fallow.”

In milo or corn, prairie cupgrass can be controlled with pre-emerge applications of most acetamides (e.g., Bicep, Guardsman), although the rate may well need to be higher than for the more easily controlled foxtails and crabgrass. According to Geier, the acetamides are effective on cupgrass, although at slightly higher rates than what are needed for controlling barnyardgrass or stinkgrass, which in turn require a bit more than foxtails or crabgrass.



Prairie cupgrass seed head. The seeds shatter easily as they mature, sometimes with the upper seeds already fallen while the lower seeds are still green.

Courtesy of The Noble Foundation.

¹ All rates of glyphosate in this article refer to this concentration, which is found, for example, in the ‘old’ Roundup and Roundup Ultra, GlyphoMax, Touchdown IQ, Glystar Plus, etc.).