

Old World Bluestems

ID and Control

Old World Bluestems are a group of introduced grasses from Europe, central and mid Asia, the Middle-East, Africa, and the surrounding areas. They were introduced into the United States in the late 1920's early 1930's as improved grasses.

While these grasses are called bluestems they are not closely related to Big Bluestem or Little Bluestem. The closest native relative to the Old World Bluestems is Silver Bluestem, which has fair forage value but is grazed by livestock only when the plant is young. In many instances, Old World Bluestem and Silver Bluestem can be found growing near each other especially in disturbed areas along roadways.

The Old World Bluestems are survivors of centuries of overgrazing. They are drought tolerant, aggressive, prolific seed producers and unpalatable to livestock in relation to our desired native grasses. They are well adapted to high calcareous and high ph soils. They also do well on any well drained soil. In many areas, Old World Bluestems are invading into our native grass pastures. Invasion can occur anytime our natives are stressed, whether from grazing, drought or wildfire. Yellow Bluestem and Caucasian Bluestem are the primary Old World Bluestem species in eastern Kansas.

Caucasian Bluestem

- 1) is a warm season perennial bunch grass
- 2) it grows 2-3 feet tall
- 3) has thin, tapered yellowish-green leaves
- 4) long hairs can be found around the base of the leaf blade
- 5) flowers late June thru October with reddish-purple seed head.
- 6) often found on roadsides and spread by mowing the roadsides after heading



Yellow Bluestem

- 1) is very similar to Caucasian Bluestem but is often taller
- 2) long hairs can be found around the leaf base and often extend further up the leaf blade
- 3) nodes are brownish-purple
- 4) flowers late summer to early fall
- 5) A more digitate (finger-like) head helps distinguish Yellow Bluestem from Caucasian Bluestem



Control Methods - (herbicides are the only control method to date)

Using Arsenal

1. Arsenal should be applied in June to early July or at least before seedhead emergence.
2. 0.25 to 0.5 lb/acre (the lower rate should probably be applied twice during the same season about 8 weeks apart.)
3. Native grasses seem to tolerate Arsenal well at the rates suggested.
4. There are no grazing restrictions; do not cut forage for hay for 7 days after an Arsenal application.
5. Unaware of any toxicity issues with cattle, unless poisonous plants are sprayed and then eaten.

Arsenal can be applied by ground application including spot treatment. No more than 1/10 of the area to be grazed can be treated. Partial treatment of areas within a pasture will attract grazing animals and thus associated species will probably be grazed.

Using Glyphosate

1. Glyphosate should be applied when the Old World Bluestem is actively growing, prior to seed production.
2. Apply 2 pounds/acre Glyphosate. Be sure to add a non-ionic surfactant. Under dry soil conditions a higher rate of glyphosate is needed i.e.3 pounds/acre.
3. For spot treatment use a 0.5% solution in water.
4. Check the glyphosate label making sure it lists for pasture and rangeland.
5. Remember glyphosate is a non-selective herbicide and will damage most green growing plants.