

# Invasive Plants in Pennsylvania

## Cheatgrass and Poverty Brome

*Bromus tectorum* and *Bromus sterilis*



*Bromus tectorum*, Steve Dewey, Utah State University

### Background:

Cheatgrass was first introduced into North America sometime before 1860. Evidence suggests that it arrived as a seed lot and ballast soil contaminant. Cheatgrass is used as a feed for livestock and is sometimes planted to decrease erosion. Poverty brome is a Eurasian grass, introduced in South America, North America, and Australia. The common name refers to the poor quality of this brome grass as livestock forage or fodder.

### Range:

A native of Mediterranean Europe, cheatgrass now ranges across North America and is particularly problematic in the west and Canada, whereas poverty grass is found more readily in New England and across the U.S..

### Description:

Cheatgrass is an annual grass that forms tufts up to two feet tall. Short, soft hairs cover its leaves and sheaths. The flowers, which appear in early summer, occur in drooping terminal clusters that take on a greenish, red or purple hue. Poverty brome can reach over three feet tall with a nearly hairless stems that turn upward at the tips.



*Bromus sterilis*, Robert Videki, Doronicum Kft., Invasive.org

### Habitat:

Cheatgrass and poverty brome is mostly found in disturbed sites, such as waste areas, roadsides, agricultural fields, pastures and rights-of-way. It does well in open areas with dry, sandy soil.

### Biology and Spread:

The seeds of these invasive plants are dispersed by gravity, wind and other mechanical means. Their barbed awns are capable of piercing and adhering to fur and clothing. When the seeds germinate in the fall, the developing root system expands during the winter, allowing these brome grasses to exploit water and nutrients early, giving it a head start in spring.

### Ecological Threat:

These brome grasses thrive in disturbed areas. Once established on a site, they prevent natives from returning. These non-native brome grasses have the ability to draw down soil moisture and nutrients to very low levels, thus gaining a competitive advantage. Their tendency is to mature early and dry out: promoting fire, which has fundamentally changed many ecosystems in the West.



*Bromus sterilis*, Robert Videki, Doronicum Kft., Invasive.org

## How to Control these Species:

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### Physical

It is important to avoid disturbance caused by overgrazing, cultivation and frequent fires.

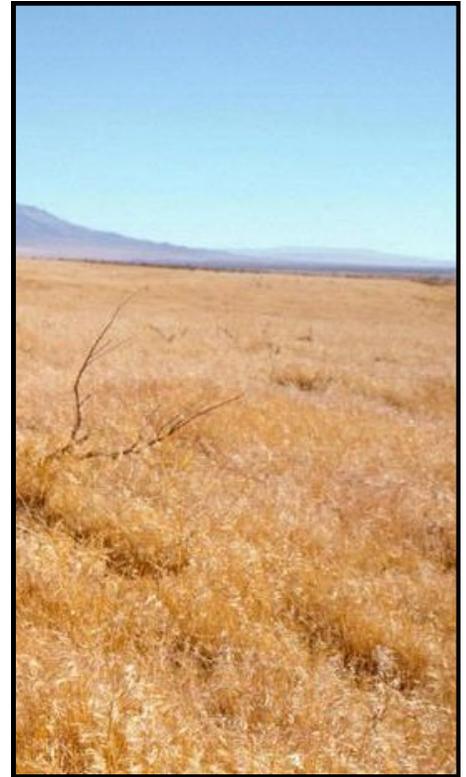
Small infestations can be controlled by hand pulling. Care must be taken to remove most of the root. Treatment should be followed by re-seeding of native perennials.

Mowing or cutting is not recommended; seed will continue to mature on cut plants. Prescribed fire can be dangerous with these brome grasses.

### Chemical

Herbicide should be applied in early spring or late fall when non-target species are dormant to ensure selective control. These brome grasses are controlled best when plants are less than four inches in height and growing vigorously.

A variety of herbicides are used in the control of these grasses. Some, such as quizalofop, hit brome grasses in early spring, while others, such as atrazine, take care of seedlings in the fall. Be sure to follow herbicide instructions carefully.



John M. Randall, The Nature Conservancy  
[www.forestryimages.org](http://www.forestryimages.org)

### Look-A-Likes:

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Cheatgrass and poverty brome could easily be confused with other native grasses, especially bromes, such as Canada brome (*Bromus pubescens*).



*Bromus pubescens*, Dan Tenaglia,  
[www.missouriplants.com](http://www.missouriplants.com)

### References:

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*Center for Invasive Species and Ecosystem Health:*

<http://www.invasive.org/browse/subinfo.cfm?sub=5214>

*Global Invasive Species Database:* <http://www.issg.org/database/species/ecology.asp?fr=1&si=266>

*New England Wild Flower Society:*

[gobotany.newenglandwild.org/species/bromus/sterilis](http://gobotany.newenglandwild.org/species/bromus/sterilis)

### For More Information:

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*DCNR Invasive Species Site:* <http://www.dcnr.state.pa.us/conservationscience/invasivespecies/index.htm>

*DCNR Invasive Exotic Plant Tutorial for Natural Lands Managers:*  
<http://www.dcnr.state.pa.us/forestry/invasivetutorial/cheatgrass.htm>