

# Invasive annual grass survey

*Introduction:* The goal of this survey is to evaluate economic losses resulting from invasive annual grasses on private rangeland in Montana (cheatgrass, Japanese brome, ventenata, and medusahead). **Participation is completely voluntary; you may choose to not answer any questions. Only summary statistics will be reported.** Respondents will be entered to win one of two \$50 Amazon gift cards if survey is completed and contact information is provided at end of survey.

Any questions or concerns can be addressed to Jane Mangold ([jane.mangold@montana.edu](mailto:jane.mangold@montana.edu)) or Kate Binzen Fuller ([kate.fuller@montana.edu](mailto:kate.fuller@montana.edu)), MSU Extension. Thank you for taking the time to help us!

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## *Survey:*

1. Do you currently manage livestock?  
 Yes  
 No (*If no, you do not need to complete the rest of the survey. Thank you for your time*)
2. List the number of privately owned and/or leased rangeland acres your livestock graze each year ***excluding state, BLM, and other lands leased from government agencies.***  
Owned \_\_\_\_\_ (# of acres)  
  
Leased \_\_\_\_\_ (# of acres)

***Please answer all remaining questions about the largest contiguous block of privately owned land (not state or federally owned) on which you graze livestock. This block can be leased or owned. We'll refer to this as Block A for the remainder of the survey.***

3. How many acres is Block A? \_\_\_\_\_
4. What county is Block A located in? \_\_\_\_\_
5. Do you own Block A or lease it from someone?  
 Own  
 Lease
6. How would you describe the dominant vegetation on Block A?  
 Native grasses  
 Introduced forage grasses (e.g., crested wheatgrass, smooth brome, etc.)  
 Other  
 Not sure

*The rest of our survey pertains to four species of non-native annual grasses that are invasive in Montana. If needed, see the final page for identification information about each species.*

7. Can you identify these invasive annual grasses in the field?

	Yes	No	Never heard of it
Cheatgrass or downy brome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Japanese brome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ventenata	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medusahead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. What percentage of Block A is infested by the invasive annual grasses listed below, averaged over the last 5 years?

For example, if 10% of Block A is covered by cheatgrass, 5% by Japanese brome, and the remainder has very few or no invasive annual grasses, place 10% next to cheatgrass, 5% next to Japanese brome, and leave other slots blank. If you have invasive annual grasses other than those listed below, select "Other" and list the species and % in the slot. If you have no invasive annual grasses on Block A, select "None."

- Cheatgrass or downy brome \_\_\_\_\_
- Japanese brome \_\_\_\_\_
- Ventenata \_\_\_\_\_
- Medusahead \_\_\_\_\_
- Other \_\_\_\_\_
- None \_\_\_\_\_

9. Over the last 5 years, invasive annual grasses on Block A have:

- Increased
- Decreased
- Remained the same
- Don't know

10. What effect do invasive annual grasses have on your livestock production on Block A?

- Increase
- Decrease
- No effect
- Don't know

11. Please check strategies you have used for *controlling* invasive annual grasses on Block A (select all that apply) and estimate annual costs, averaged over the last 5 years.

If you use a strategy for other purposes as well (e.g., noxious weed control), please do your best to estimate what the costs would be for the invasive annual grasses only. Please *do not* include labor costs for you, your family members or your employees. Please *do* include applicable custom costs such as contract sprayers or herders.

- Herbicide  
Avg cost/year: \_\_\_\_\_
- Mechanical control (mowing, hand pulling, tilling, etc.)  
Avg cost/year \_\_\_\_\_
- Biological control (bacterial pathogens)  
Avg cost/year \_\_\_\_\_
- Targeted grazing (i.e., grazing for the purpose of annual grass control)  
Avg cost/year \_\_\_\_\_
- Revegetation (i.e., seeding competitive species)  
Avg cost/year \_\_\_\_\_
- Other: \_\_\_\_\_  
Avg cost/year \_\_\_\_\_
- None

12. Estimate how many **hours per year (averaged over the last 5 years)** that you, your family members, and/or employees spend managing invasive annual grasses on Block A.

\_\_\_\_\_

13. Can we contact you for follow up with additional questions?

- No
- No, but please enter me into drawing for \$50 Amazon gift card:  
Name and contact information: \_\_\_\_\_
- Yes, and please enter me into drawing for \$50 Amazon gift card:  
Name and contact information: \_\_\_\_\_

Thank you very much for your time! Please let us know if you have any comments or questions: Jane Mangold, MSU Extension Invasive Plant Specialist ([jane.mangold@montana.edu](mailto:jane.mangold@montana.edu)) or Kate Binzen Fuller, MSU Extension Agricultural Economist ([kate.fuller@montana.edu](mailto:kate.fuller@montana.edu)).

**Cheatgrass or downy brome (*Bromus tectorum*):**



**Ventenata (*Ventenata dubia*):**



**Japanese brome (*Bromus japonicus*):**



**Medusahead (*Taeniatherum caput-medusae*):**

