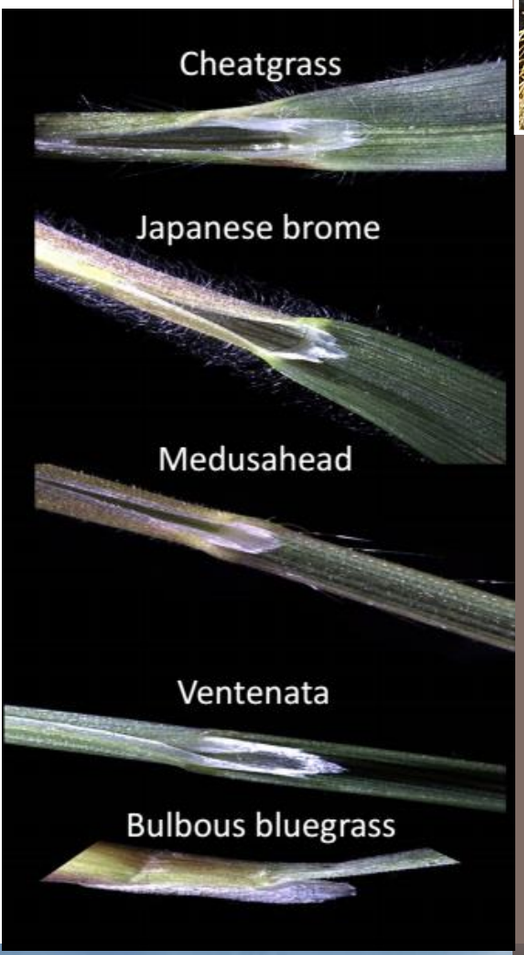
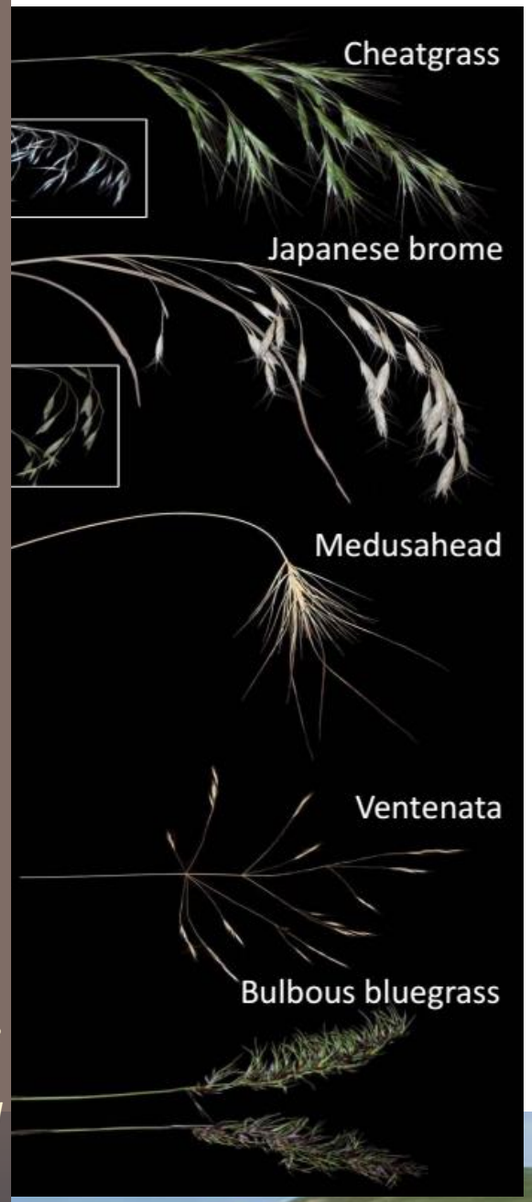
Northeast Wyoming Invasive Grasses Working Group

2018 Annual Review



The issue

*In June 2016, self-sustaining populations of two invasive grasses, medusahead (*Taeniatherum caput-medusae*) and ventenata (*Ventenata dubia*), were documented in northern Wyoming. These were new occurrences of both species for the state of Wyoming and for the larger Great Plains ecoregion. Both species negatively impact rangeland resources for livestock and wildlife, with particularly strong impacts on sagebrush grassland communities. For example, Wyoming has the most sagebrush of any state at 43 million acres and is a stronghold for Greater Sage-grouse. These invasive grasses and their potential for spread and subsequent fire risk require a timely response. Many questions accompanied the initial findings of these invasive species: How widely distributed are they? Where did they come from? What will their impacts be? How do we manage or control them?*



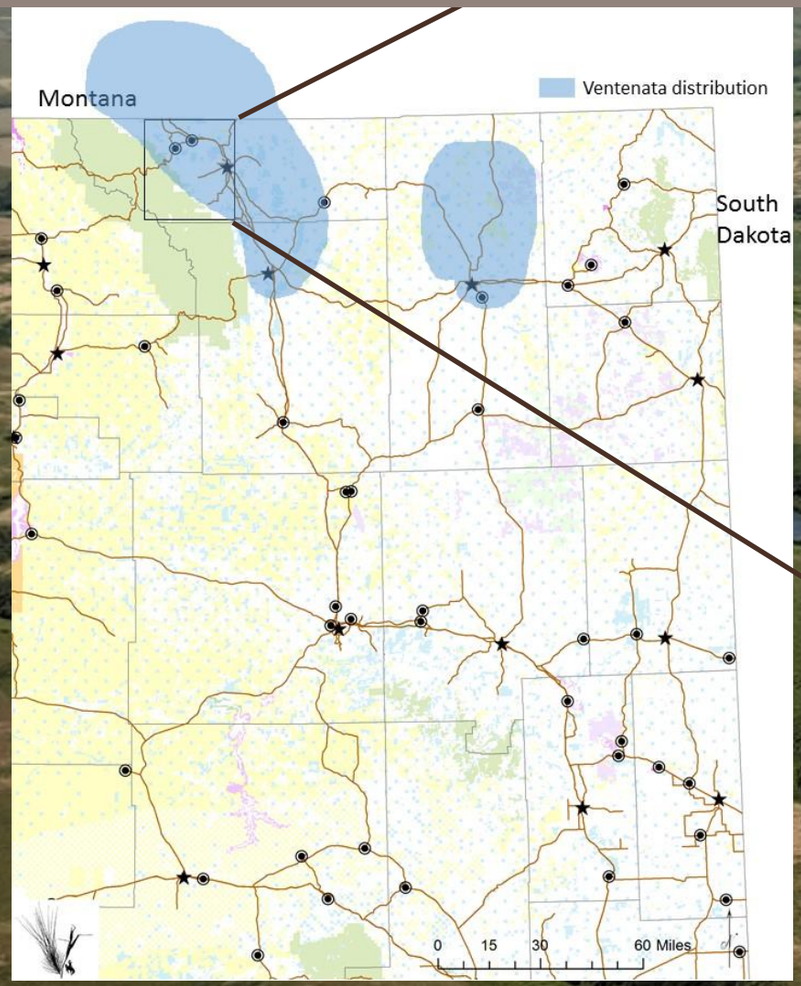
Our approach

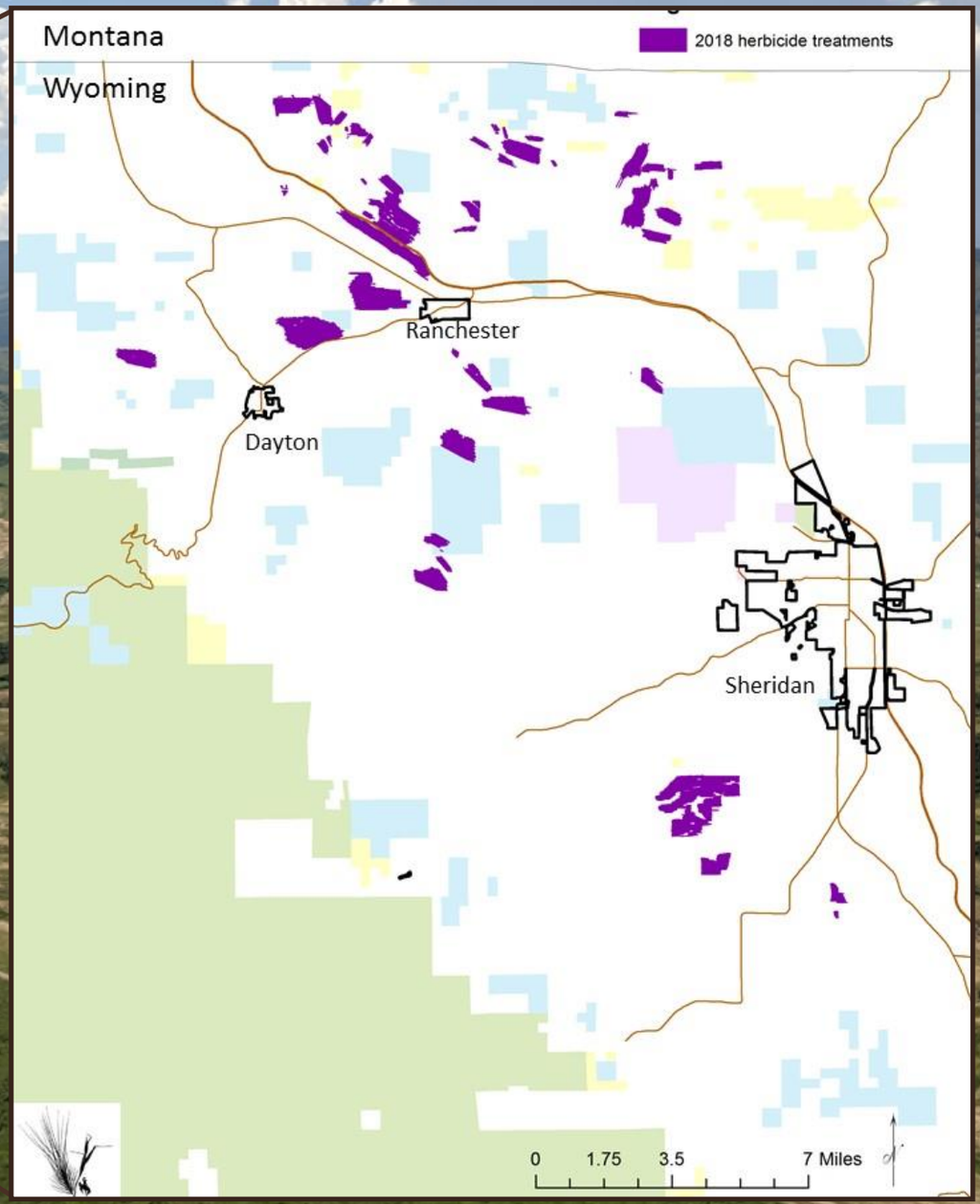
NEWIGWG partners work together to implement an innovative approach for landscape-scale management of emerging invasive weeds. Our multi-tiered survey methods combine broad-scale searches with localized intensive surveys for higher resolution once small patches are found. This contributes to our modular EDRR approach to ensure new populations are treated within the season they are found. Monitoring of treatment areas informs future management decisions by indicating triggers for additional management actions and by providing data-driven evidence of treatment efficacy. Combining monitoring data with site-specific research trials allows NEWIGWG to work at the leading edge of invasive species science, continually refining our management approach. Outreach and education provide the lynchpin to this cooperative approach by increasing awareness in the community, giving opportunities for landowners and managers to become involved, and ensuring effective communication among partners.

Needles in a haystack

Understanding distribution of the target species directly informs landscape-scale strategic management. NEWIGWG uses intensive survey, aerial imagery, citizen scientists, and other means to develop a clear picture of the distribution of medusahead and ventenata. By the end of 2018, over 50,000 acres have been intensively surveyed and mapped for medusahead and ventenata. Additional informal surveys have extended into neighboring counties. 2018 highlights:

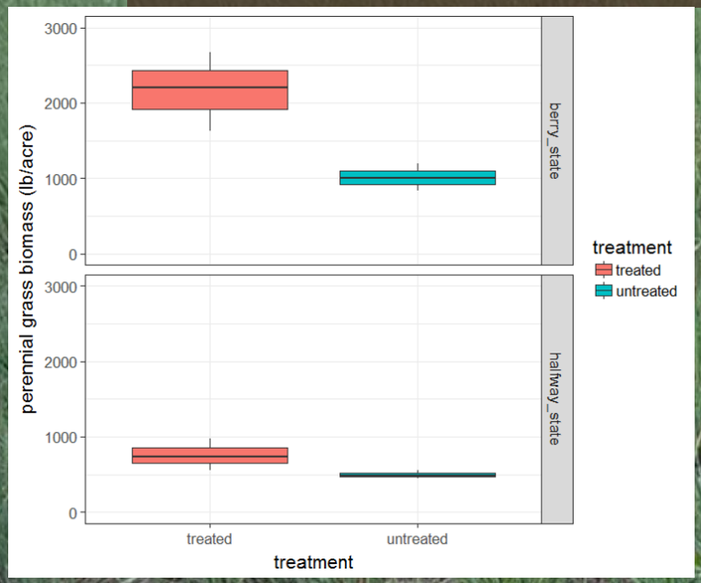
- *Surveyed reported medusahead in Bighorn County—no population found*
- *23,000 acres intensively surveyed in Sheridan County*
- *Large increase in landowner-reported cases*

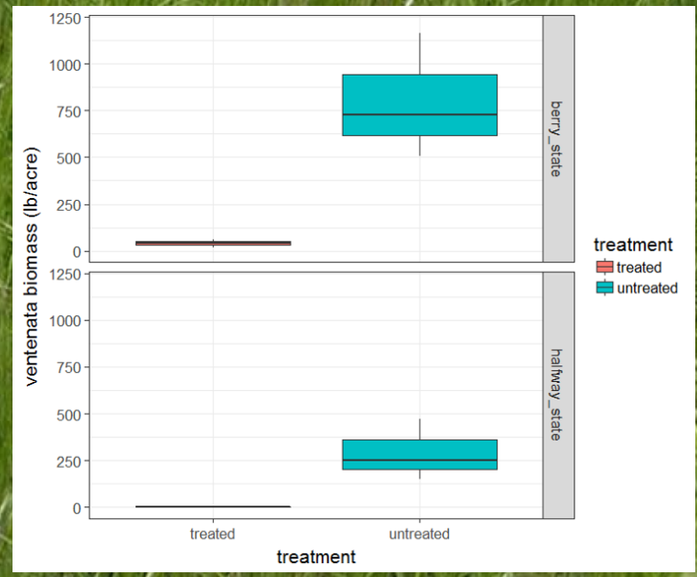




LINKING RESEARCH TO MANAGEMENT

NEWIGWG's partnership with University of Wyoming and Sheridan College provides opportunities to directly link research to on-the-ground management. Cooperative research projects initiated in 2018 include: screening newly-seeded desirable species for herbicide tolerance, vector-pathway analysis potential medusahead spread, evaluating seed germinability from deformed medusahead seedheads in treated areas, assessing how application timing affects indaziflam efficacy, comparing various herbicide treatments for ventenata control and impacts on vegetation, assessing how annual grasses affect forage availability under moisture stress, and others.





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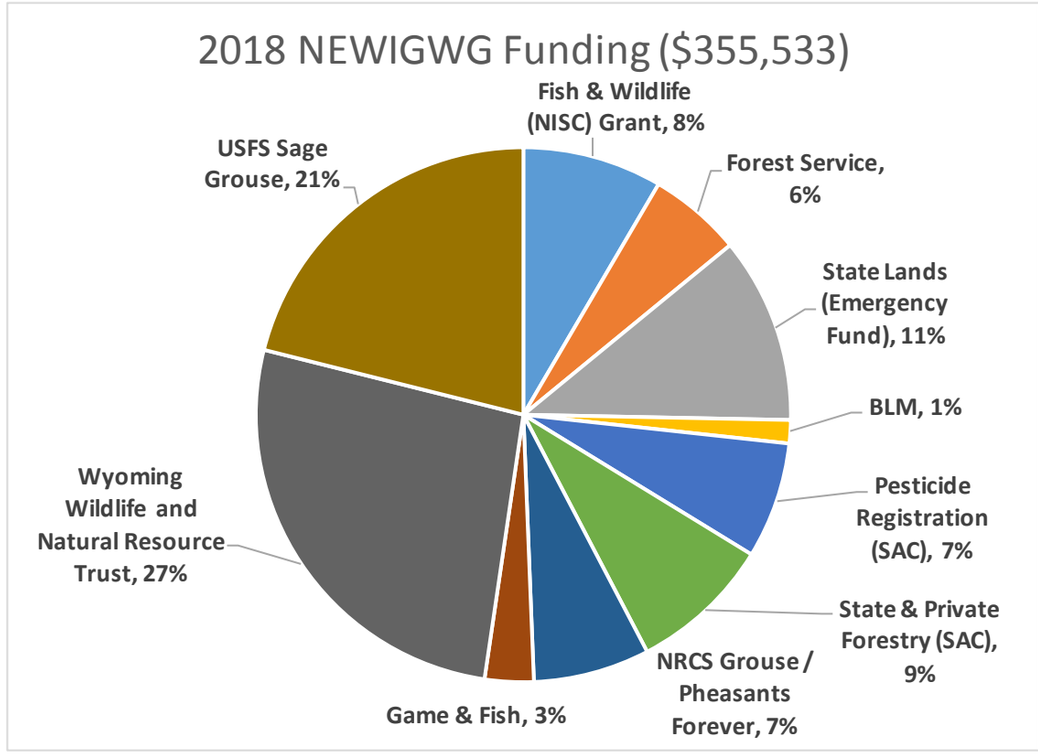
At a glance:

	2018	Total
Surveyed acres[1]	23,000	50,000
New acres treated	2,800	5,000
Acres re-treated	2,200	2,200
"Partner" acres treated[2]	2,100	2,800
Outreach contacts	1500	4500
Boot brush Stations	10	16
Research projects	9	12

1—Survey:treatment ratio is roughly 8:1, indicating that medusahead is present on ~10% of surveyed lands

2—Primarily ventenata acres treated with non-NEWIGWG funding, such as NRCS programs or landowner costs



NEWIGWG funding sources for calendar year 2018.

To continue the positive impacts NEWIGWG has had thus far, we must continually learn and improve. A landscape-scale Early Detection-Rapid Response program relies on effective detection capacity, so we are expanding our efforts in remote sensing in 2019. Detailed vegetation data collection will be integral to decision-making moving forward, especially with ties to economic benefits of our management. Sustainable, long-term funding for treatments and monitoring is critical, yet difficult to obtain. Key partners are engaged and energized to move forward with commitment to making meaningful change by reducing the impacts of medusahead and ventenata in Wyoming.

Who is NEWIGWG?

- Multiple private landowners
- Sheridan County Weed and Pest
- Johnson County Weed and Pest
- Campbell County Weed and Pest
- Bighorn County Weed and Pest
- U.S. Fish and Wildlife Service
- Bureau of Land Management
- U.S. Forest Service
- Natural Resources Conservation Service
- Sheridan County Conservation District
- Campbell County Conservation District
- Clear Creek Conservation District
- Powder River Conservation District
- University of Wyoming
- Sheridan College
- The Nature Conservancy
- Wyoming Office of State Lands and Investments
- Wyoming Game and Fish Department
- American Bird Conservancy
- Sheridan Community Land Trust
- Wyoming Military Department
- Corteva Agriscience
- Bayer Corporation