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# Technical Release

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| **New Invasive Annual Grass Book Addresses Critical Questions for the Western United States****BOISE, ID.,** Jan. 26, 2016 — *Bromus* species – such as cheatgrass – are exotic annual grasses that have become the dominant annual grasses in the western hemisphere. Their spread and impacts across the western U.S. continue despite the many attempts by land managers to control these species. A new book edited by scientists from the U.S. Geological Survey, U.S. Forest Service, and Colorado State University was released today and answers critical research, planning, and management questions about these species.

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| A view of Nevada's Santa Rosa Range with grasslands in the foreground (Photo by: Nolan Preece) |

The Department of Interior Secretarial Order 3336 on Rangeland Fire Prevention, Management and Restoration directly addresses the need for additional science and research to unlock the key to controlling invasive exotic Bromus grasses and developing tools to protect and support resistant and resilient sagebrush landscapes in the United States. Sagebrush habitat is essential for the survival of the greater sage-grouse and other wildlife species as well as for economic activities, such as ranching and recreation. “There are nearly 150 species of Bromus globally,” said Matthew Germino, USGS ecologist and lead editor of the new book. “Despite the high number of studies and publications on the species that have invaded the western U.S., land managers still face challenges in controlling the spread and impact of these grasses across the landscape.”The book titled “Exotic Brome-Grasses in Arid and Semiarid Ecosystems of the Western U.S.: Causes, Consequences, and Management Implications,” synthesizes available literature on the biology, ecology, sociology, and economics of Bromus grasses to develop a more complete picture of the factors that influence their invasiveness, impacts, and management in the western U.S.The synthesis helps to answer questions on:* The effects of environmental factors on Bromus species distributions
* Arid and semiarid ecosystem attributes and processes that influence resistance to invasion by Bromus
* Traits of Bromus species that contribute to their invasiveness
* Impacts of Bromus invasions on ecosystems
* Effects of pathogens on Bromus invasions and their potential for biocontrol
* Effects of land uses on Bromus invasions
* Management options for exotic annual Bromus and their application
* Socioeconomic drivers and patterns of human response to Bromus invasion

 “The risks and problems associated with Bromus have been known in the U.S. for decades, but much of the past research was done to answer questions at local scales and focused on only a few causal factors,” said Jeanne Chambers, USFS research ecologist with the Rocky Mountain Research Station and co-editor. “Today, Bromus grass impacts are large scale and influenced by many interacting factors requiring a more holistic approach.”The book is the result of funding provided by the U.S. Department of Agriculture, Research, Extension, and Education Network – or REEnet – which brought together a diverse range of public agency and university specialists from around the U.S. to generate and refine ideas on Bromus grasses. Lessons learned from this synthesis can be used to address impacts of species like cheatgrass on the sagebrush-steppe which support over 350 wildlife species, including greater sage-grouse.Greater sage-grouse occur in parts of 11 U.S. states and 2 Canadian provinces in western North America.  Implementation of effective management actions for the benefit of sage-grouse continues to be a focus of Department of the Interior agencies following the decision by the U.S. Fish and Wildlife Service that the species is not warranted for listing under the Endangered Species Act.USGS provides science for a changing world. Visit [USGS.gov](http://usgs.gov/), and follow us on Twitter [@USGS](http://twitter.com/USGS) and our other [social media channels](http://usgs.gov/socialmedia).Subscribe to our news releases via [e-mail](http://www.usgs.gov/newsroom/list_server.asp), [RSS](http://feeds.feedburner.com/UsgsNewsroom) or [Twitter](http://twitter.com/USGSNews).USDA is an equal opportunity provider, employer, and lender.The Rocky Mountain Research Station is one of five regional units that make up the U.S. Forest Service Research and Development organization – the most extensive natural resources research organization in the world. The Station maintains 12 field laboratories throughout a 12-state territory encompassing the Great Basin, Southwest, Rocky Mountains, and parts of the Great Plains, and administers and conducts research on 14 experimental forests, ranges, and watersheds, while maintaining long-term databases for these areas. While anchored in the geography of the West our research is global in scale. RMRS research is broken into eight science program areas that serve the Forest Service as well as other federal and state agencies, international organizations, private groups and individuals. To find out more about the RMRS go to [www.fs.fed.us/rmrs](http://www.fs.fed.us/rmrs). You can also follow us on Twitter at [www.twitter.com/usfs\_rmrs](http://www.twitter.com/usfs_rmrs)### |



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