
Invasive Weeds Threaten Wildlands, Economic Health

The spread of nonnative, or invasive, weeds poses a growing threat to public lands and economic health across the western United States. The federal government has described this invasion as a “biological wildfire.” The problem with invasive weeds is so serious because unlike weeds that evolved here over thousands of years, these invasives do not have natural enemies to limit their reproduction and spread. Invasive weeds displace native plants, degrade range and alter critical wildlife habitat. They also impose a growing economic cost on farmers and ranchers and the larger western economy.

Off-road Vehicles Spread Invasive Weeds:

Weeds are carried across the landscape by the wind, water, wildlife, people and vehicles. While most vehicles disperse weeds along well-established transportation routes, dirt bikes, all-terrain vehicles (ATVs) and other off-road vehicles traveling cross-country can spread invasive weeds over a wide area in only a few hours.

- A study in Montana demonstrated that a single ATV can disperse more than 2,000 invasive knapweed seeds over a 10-mile radius. The research also found that these seeds are more likely to germinate and crowd out native plants in areas where soil has been compacted by off-road vehicles. (Montana State University Extension Service, 1992)
- Research in Wisconsin in 2002 found that ATVs commonly transport a variety of weed seeds. This study concludes that ATVs could spread nearly 200 million seeds, many of them noxious weeds, statewide over the next 20 years. (Tom Rooney, University of Wisconsin)

Weeds are Taking Over the Landscape:

Invasive weeds are spreading across the country at a growing rate.

- The U.S. Department of Agriculture reports that “invasive and noxious weeds are expected to infest 140 million acres by 2010.” (Agriculture Research Service, Rangeland, Pasture and Forages Program,

Integrated Management of Weeds and Other Pests.)

- The Bureau of Land Management (BLM) estimates that 4,600 acres of federal land in the west are lost each day to weed infestation. (Western Governors' Association, Combating the Economic and Environmental Devastation from Invasive Species, December 2000)

Weeds Cause Significant Economic Impacts:

In addition to negatively impacting the natural environment, invasive weeds cause serious and growing economic harm. Farmers, ranchers and others who depend on the land for their livelihood often suffer the most direct harm, but the impacts extend much more broadly across the economies of many western and plains states.

- Cornell University researchers conservatively estimate that non-native weeds cause at least \$25 billion in crop and forage losses annually. (Pimentel et al, Environmental and Economic Costs Associated with Non-Indigenous Species in the United States, June 1999)
- The Idaho Department of Agriculture reports that “[N]oxious weeds are estimated to have a direct cost to all Idaho lands of \$300 million annually.” (Idaho Department of Agriculture, Bureau of Vegetation Management, Frequently Asked Questions About Weeds)

- The U.S. Geological Survey estimates that leafy spurge causes more than \$100 million in damage, particularly to agricultural producers, in Great Plains states annually. (People, Land and Water, U.S. Department of Interior, July/August 2000)
- Colorado researchers found that three types of invasive weeds alone reduce wheat yields by at least 7 million bushels per year. Farmers with infested fields report at least a 50 percent reduction in yield - a loss of \$24 million to Colorado's 14,000 wheat producers, and \$36 million more in losses to Colorado's rural economy annually. (Personal conversation, Colorado State Weed Coordinator citing 1990 study, September 2003)
- The Montana State University Extension Service summarizes the threat posed by invasive knapweeds: "The economic impact to agriculture and wildlands from these weeds is substantial. The potential annual loss to Montana's economy from spotted knapweed alone is estimated to be \$42 million. If knapweed continues to invade highly vulnerable lands, the potential annual loss to Montana's livestock industry would be \$155 million each year." (Montana State University Extension Service, Montana Knapweeds: Identification, Biology and Management, 2001)
- In 1994 grazing capacity lost to leafy spurge in Montana, North and South Dakota, and Wyoming would have supported a herd of about 90,000 cows generated about \$37.1 million in annual livestock sales. Direct and secondary economic impacts of leafy spurge infestations on grazing land and wild land in the four-state area amount to approximately \$129 million and represent the potential loss of 1,433 jobs. (Invasive Plants: Changing the Landscape of America, Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW))

Weeds Harm Livestock and Big Game:

A federal government report highlights the impacts of invasive weeds on wildlife: "Although it is difficult to quantify the effects on wildlife, nonnative plants replace native plants that are preferred as forage by big

game species and as habitat by smaller wildlife species." (Invasive Plants: Changing the Landscape of America, Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW))

- Research in Montana found that spotted knapweed infestations reduced available winter forage for elk by 50 to 90 percent. (Montana Weed Control Association)
- Leafy spurge is toxic to cattle and wild ungulates and wild starthistle is poisonous to horses. (The Spread of Invasive Weeds in Western Wildlands: A State of Biological Emergency, Governor's Idaho Weed Summit, May 1998)

Weeds Contribute to Wildfire:

Weeds are more than a nuisance. Large-scale infestations can put communities at risk.

- A report by the Western Governors Association concludes: "Wildfires and noxious weeds are closely linked in the West. Invasive noxious weeds, such as cheatgrass, create larger fuel loads than do native plants, resulting in hotter and more frequent fires. These hotter fires do more damage to native plants than to weeds, promoting further expansion of the invasive plants – a vicious cycle." (Combating the Economic and Environmental Devastation from Invasive Species, December 2000)
- Research in the Great Basin concludes that the frequency of fire has increased from once every sixty to one hundred ten years to every three to five years on millions of acres infested with cheatgrass. (The Spread of Invasive Weeds in Western Wildlands: A State of Biological Emergency, Governor's Idaho Weed Summit, May 1998)
- Research across the west also documents how fire accelerates the spread of invasive weeds across the landscape.