

A weed-free meadow in the San Juans.
Photo by Rod Cook

*"O beautiful for
spacious skies,
For amber waves
of grain, For
purple mountain
majesties, Above
the fruited plain!"*

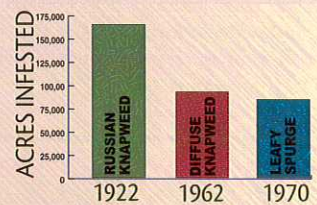
Colorado's majestic beauty was the inspiration for Katharine Bates' lyrics to "America the Beautiful". Today we are slowly losing our "Purple Mountain Majesty" and our "Amber Waves of Grain" to the incessant biological pollution of noxious weeds. If we, the people of Colorado, can't stop the spread of these persistent invaders, our children and the future generations in Colorado will have little or no idea what Katharine Bates was expressing in her thoughtful and inspirational words.

Noxious weeds can't be controlled without your help and knowledge. The Colorado Weed Management Association offers this brochure to Colorado's citizens and visitors in an effort to provide information about this critical issue and to emphasize the urgent need to take action to help keep Colorado the vision of "America the Beautiful."

What is a Noxious Weed?

A weed can be described as a plant that is invasive and alien to the surrounding ecosystem often forming monocultures. The term "noxious" means that it is on a federal, state, or local list that recommends or mandates management of that plant.

Most noxious weeds found in Colorado have not been here long but have become well established in a relatively short period.



These reported dates are the earliest official records.

The Colorado Legislature enacted the Colorado Noxious Weed Act in 1990 and established the State Noxious Weed Management Trust Fund in 1996. This program has helped fund over 85 cooperative weed management projects throughout Colorado. Although the Fund has been increased to \$290,000 in 2001, the amount calculates to less than one penny per acre of land in the state.

The Governor of Colorado issued an Executive Order concerning the management of noxious weeds:

*"All landowners have
a responsibility to plan and
implement a coordinated
program that utilizes a
variety of integrated
methods to manage noxious
weeds, the purpose of which
is to achieve desirable
plant communities."*

-Bill Owens, Governor of Colorado



Field bindweed damages farm machinery. Photo by Rod Cook

Impacts to Agriculture...

Agriculture provides Coloradans with 86,000 jobs, adds \$16 billion to the economy, and helps feed the world by exporting \$1 billion in food annually.

As noxious weeds continue to spread to farm and ranch land, livestock production declines, crop yields lower and jobs are lost. Weed management costs add to production costs and raises the price of food.

There are 29,500 farms and ranches on 32.5 million acres in Colorado, which equals half of the state. Agricultural lands throughout Colorado also provide valuable habitat for wildlife. The invasion and spread of noxious weeds reduces the useable habitat for Colorado's wildlife.

Many noxious weeds that have become established on rangeland can be poisonous and dangerous to livestock and domestic animals. The most poisonous of these plants include halogeton, poison hemlock, houndstongue and black henbane.



Russian knapweed is deadly to horses.
Photo by Rod Cook

Land Values

In the last few years, weed awareness among Coloradans has increased significantly. Noxious weeds are recognized as one of the most important environmental and agricultural issues of today.

Many prospective property buyers are now aware of the disadvantages to purchasing weed-infested property.

Some real estate agents are now disclosing information on weed infestations in sales contracts resulting in higher costs for both the seller and buyer.

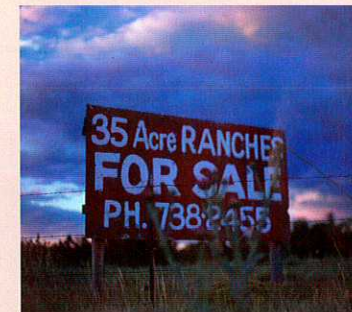


Photo by Rod Cook

A few facts...

- ◆ In 1986, a 1300 acre ranch in Oregon was abandoned because of a severe leafy spurge infestation. The land was purchased at a public auction for \$22/acre while surrounding non-infested land went for \$150/acre.
- ◆ Many ranches in Colorado that once supported cattle will support none today because of leafy spurge.
- ◆ The costs required to return the weed-infested land to full productivity have caused land purchasers to reduce their offers and lenders to reduce the amount loaned.

Spread the word... not the weeds!

In less than five generations, noxious weeds have infested hundreds of thousands of acres in our state. These plants threaten farming and ranching, causing higher prices for you at the grocery store. If you are a potential buyer or seller of property, weeds will affect you by impacting land values. When we want to get away for some leisure time, we have seen that weeds are affecting recreational opportunities. The spread of noxious weeds has led to habitat degradation for our native plants and wildlife.

Fortunately, we are becoming increasingly aware of the threat of noxious weeds. Opportunities and partnerships now exist to reduce the rate of spread of our established noxious weeds and to possibly eradicate the new invaders such as yellow starthistle. Throughout Colorado, communities are joining together to work cooperatively to manage noxious weeds.

The Colorado Weed Management Association (CWMA) would like to invite you to become an active participant in this effort. We need your help. CWMA provides educational materials and training that can assist you in weed identification and management.

For further information contact:

Colorado Weed Management Association
Phone: (970) 887-1228
E-mail: cwma@rkymtnhi.com



For information on specific weed concerns contact your local municipal, county weed manager or extension agent.

This brochure was produced by the CWMA Education Committee: Steve Anthony, Rod Cook, Alicia Doran, Adena Green, Don Miller and Paul Schreiner.

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Wildlife

Our state is blessed with an abundance and variety of wildlife and wildflowers. Noxious weeds degrade wildlife habitat because wildlife doesn't adapt to plants from Asia and Europe. Reduction of native plants directly impacts the presence, abundance, and activities of wildlife.



Mule deer in musk thistle
Photo by Robert Watson

Here are a few examples of the impacts of noxious weeds to Colorado's wildlife...

- ◆ In the Disappointment Creek area north of Delores, Colorado, the invasion of Russian knapweed has drastically reduced the availability of key winter range for wildlife.
- ◆ Tamarisk and Russian olive have reduced nesting habitat for birds. Along the lower Colorado River areas infested with tamarisk had 41% fewer birds compared to nearby native plant communities.
- ◆ In Axial Basin near Craig, whitetop has

reduced the winter forage for deer and elk.

- ◆ Purple loosestrife has invaded wetlands and riparian areas in Colorado, including the South Platte, Poudre and Colorado watersheds. Spawning fish, ducks, cranes, and turtles leave when loosestrife invades an area.



Purple loosestrife
Photo by Ann Larson

Native Plants

Most noxious weeds dominate plant communities and form monocultures that impact native biological diversity. Many of these monocultures are poisonous, such as Russian knapweed. These invasions are long term, displacing native plants and animals, and disrupting nature's fire cycle. The highly flammable invasive grass, cheatgrass, has altered the frequency of fires on western rangelands to the extent that they now take place every three to five years, instead of every 60 years. The native sagebrush and grass communities are gone in many areas.

Whats more...

- ▼ Invasive trees and shrubs, such as Russian olive and tamarisk, have taken over many stream bank miles in Colorado, virtually eliminating the native cottonwood riparian forest in some areas and the song birds that depend upon them.
- ▼ Biologists estimate that wildlife use of a marsh is reduced by 90% when the invasive weed purple loosestrife takes over.
- ▼ Yellow starthistle has infested forty million acres in California and has made its way to Colorado. It is an immediate threat to the health and productivity of native rangelands.



Yellow starthistle
Photo by Alicia Doran

Threatened & Endangered Species



Spiranthes diluvialis
Photo by Bill Jennings

Over 500 species of rare plants are found in Colorado, and over 100 of these

are considered imperiled. Weeds threaten Colorado's biodiversity by out competing native species, and are second only to habitat destruction as a cause of species decline. As weeds begin to impact biodiversity, the species most susceptible to extinction are those that are already rare.

Species like Russian olive and tamarisk can transform habitats and make them inhospitable to native plants by shading, competition and water table alteration. For example, some populations of the federally listed Ute ladies'-tresses (*Spiranthes diluvialis*) are threatened due to shading of their wet meadow habitat by Russian-olive. Leafy spurge, yellow toadflax, teasel, and dalmatian toadflax also threaten this species. Weeds such as yellow toadflax threaten even alpine areas, which harbor 15% of Colorado's rare plant species. Eradicating weeds in areas that support rare plant populations will help maintain Colorado's biological wealth.

Some rare plants are adapted to specific ecological conditions but are poor competitors. Weeds, with their ability to adapt and survive, are invading these habitats and crowding out our rare plant species.

Recreation

Colorado has a lot to offer...

Residents and tourists alike enjoy a wide array of recreation opportunities such as skiing, hiking, biking, boating and fishing. Some of the best trout streams and rivers in the world are located in Colorado. Many of these areas are becoming so overgrown with non-native thistles that it's becoming difficult to gain access to their banks.

Houndstongue and burdock are invading trailheads frequented by hikers and bikers throughout the state.



Houndstongue
Photo by Ann Larson

How can you help?

- If you find a weed-infested area, let the landowner or land managing agency know so that they can take steps to manage the weeds.
- Remove weed seeds from pack animals by brushing them thoroughly and cleaning their hooves before transport.
- Carry only weed-free certified feed for pack animals.
- Try to avoid walking or driving through weed-infested areas. Weed seeds are notorious hitchhikers.
- Remove seeds from clothing, socks, boots and camping gear before leaving a weed-infested area.
- Don't pick wildflowers or noxious weeds. Many weed infestations are established when seeds fall off of transported flowers.

What are Noxious Weeds Doing to Colorado?



In less than five generations, noxious weeds have infested hundreds of thousands of acres in our state.