Prevent Weed Invasions

Use ranch biosecurity as a weed control measure.

by ***Earl Creech, Brad Schultz*** & ***Ron Torell***

PHOTOS COURTESY OF RON TORELL

I'm sure that we have all experienced firsthand some of the effects of weeds. On some ranches, weeds reduce the quality and productivity of pasture, crop or rangeland. On others, weeds have caused injury to livestock. On still others, weeds affect the beauty or value of property. The list goes on and on.

To minimize the effect of weeds, agricultural producers spend a great deal of time and money on weed control. The latest estimate is that U.S. farmers and ranchers spend around $12 billion per year to control weeds.

With such a large sum of money spent on the problem, you might think that weeds would become a thing of the past. Yet, noxious and invasive weeds continue to spread at rates from 10% to more than 30% every year, depending on who you ask and what weed you are talking about.

So, as we look into the future, the number of acres affected by weeds and the cost associated with weed control will probably continue to grow.

Methods of weed control

There are two general approaches to weed control. The most common — and least effective — is to wait until a weed has spread from one end of the ranch to the other and has started to affect profitability before control becomes a priority. Unfortunately, by then the weed has become so well-established (i.e., large amounts of weed seed in the soil, extensive root system) that it will likely be around for many years, if not a lifetime.

The other approach is to take steps to prevent new weeds from ever becoming a problem. You have probably heard the medical adage, "An ounce of prevention is worth a pound of cure." In the case of weed management, a few dollars spent on prevention can be worth thousands (and sometimes millions) of dollars of cure.

Though often overlooked, prevention should be the cornerstone of the weed control program on every ranch. It is, by far, the most important thing we can do to save time and money in our weed control efforts.

Weeds on the move

To prevent weeds from entering our property, we first need to understand how weeds move from one place to another:

Contaminated products. Weeds can hitch a ride to your ranch with nearly anything that comes from the outside. Products that are sometimes contaminated with weed seed include hay, straw, grain and fill material. Even seed for planting crops, pasture or rangeland can contain weed seed. "Certified weed-free" products are becoming more common and provide some assurance that a new weed is not contained in the product you are purchasing. Another option, especially if the source of the product is nearby, is to inspect the field or area personally to see what weeds you may be buying.

Water. Water is the lifeblood of the West and, unfortunately, many weeds use water as a vehicle to move from one area to another. Banks of rivers, streams, canals and irrigation ditches can be monitored and kept weed-free to prevent downstream spread. The No. 1 goal of weed control along waterways is to prevent seed production (i.e., late-season weed control).

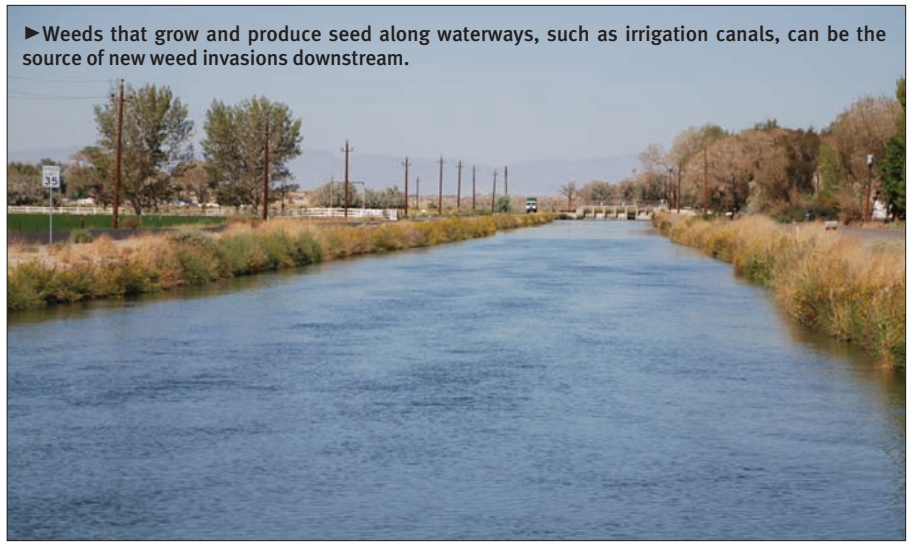
Wind. Certain weeds, such as dandelion and marestail, have developed ways of using wind to spread seed. In fact, some weed seeds can travel for a mile or more under the right conditions. Although we can't stop the wind, the amount of seed that blows in can be reduced by controlling weeds with windblown seed along your ranch borders. Any weeds that arrive on the interior of the ranch can be removed before they produce seed.

Animals and humans. Weed seeds (like those from cocklebur and puncturevine or goathead) can become attached to clothing, shoe laces, animal hair, etc. These seeds should be carefully removed and discarded, preferably in an area that is already infested.

►**Above:** Weeds often grow in or near hay fields where they can end up in the bale and transported long distances. Pictured is Russian knapweed growing along the border of an alfalfa field.

Other weed seeds can be consumed and passed through the digestive tract of animals, while still being able to germinate. When livestock have grazed in a weed-infested area, quarantining (by providing clean feed) those animals for five to seven days will allow the seed to pass without spreading the weed to a new area.

Equipment and vehicles. Although the shortest distance between two points is a straight line, driving equipment and vehicles around weed patches will prevent weed seed from being picked up and carried to a new area. When it can't be avoided, contaminated machines can be washed with water to remove weed seed. Since weed seed is frequently found on vehicles, roadways are at a high-risk for weed germination; new weeds should be carefully monitored.



►Weeds that grow and produce seed along waterways, such as irrigation canals, can be the source of new weed invasions downstream.

Prevention and eradication

Even with the best prevention program, some weeds will find a way to slip through the cracks. An early detection, rapid response program can help a ranch catch these new invaders. The idea is to find a new weed, whether it is a single plant or a small patch, and then to immediately begin control measures — hopefully resulting in eradication.

How can a person find these new weeds? The best approach is to be aware of what is growing on your ranch. If you see something that you do not recognize, take a moment to identify the plant. This can be done using a good weed identification book, or you can collect a plant sample and take it to your local Extension office where someone can help you. It may turn out to be something harmless, like a native plant, but it could also be a new invasive weed that, if left unchecked, might become a plague to your ranch for years to come.

If weeds and weed control are on your mind, contact your local Extension office for more information. In Nevada, contact Earl Creech, University of Nevada Cooperative Extension (UNCE) state weed specialist at 775-423-5121 or creeche@unce.unr.edu. You may also contact Brad Schultz, Humboldt County Extension educator at 775-623-6304 or shultzb@unce.unr.edu. AJ

Editor's Note: *Ron Torell is a UNCE livestock specialist.*