

Can Grazing Eliminate Weeds?

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I'm often asked for evidence that grazing can eliminate weeds. Here's how I generally respond:

First I ask a different question: "Do you really have to eliminate the weed?"

The history of our war on weeds is long. On this continent we have legislation going back to the 1700s regarding the elimination of weeds. My grandfather's 1934 "Book of Knowledge" puts it this way: "Agriculture is an eternal war against weeds... It has been said that the weeds of the earth are one of the most formidable agents ever established for man's overthrow. It is only as he conquers them that he rises. Man in the physical sense, is but a weakling, and when he lets nature in the fullness of her powers overtake him, he is well-nigh at her mercy... When man ignores them they rise to the height of their powers." The only benefit of weeds according to the Book of Knowledge is that we add to our own strength by "vanquishing these bitter foes." (Vol. 9 pg. 3392 and 3394)

With this long, history, thinking about calling a truce is hard. But maybe it would help if we think of weeds in a new way. Generally we label plants that are considered to be nuisances, or that are unwanted in gardens or agricultural areas as "weeds." But once your cattle are eating them are they still a nuisance?

These are plants that can have many beneficial qualities. Many are as nutritious as alfalfa. High protein levels in some plants can also allow animals to take advantage of other low quality forage that otherwise might not meet their nutritional needs. For example, distaff thistle is green and growing in California when other grasses are dry and brown. Its protein can help ruminants maintain healthy rumen microbes, and those microbes can do a better job of breaking down the cellulose in the dry forage.

In addition to being nutritious, weeds are often available when other forages aren't, either because of the time of year or due to drought conditions. During the drought of 1934-1939 Russian thistle provided a large part of the grazing for small ranches and farms. It makes sense when you realize that its protein levels include a high of about 25% in May, only dropping below 10% during the winter months. Many ranchers in the west also look forward to the early spring and late fall green up of cheat grass, one of our most aggressive annual invaders.

Perhaps eliminating the weed doesn't have to be our goal. Maybe what we're really striving for is diversity, where one species doesn't out compete another and cause an imbalance. With this goal, doesn't it make more sense to let our livestock do the work for us?

But can grazing eliminate a weed?

I don't think anything can eliminate a weed, but by managing our grazing we should be able to reduce populations.

So far no one anywhere has evidence of having eliminated a weed with pesticides, with insects or with grazing. The problem is that we have a seed bank in the soil that provides new seedlings, and some of each plant always seems to get away. So managing weeds is something like managing the hair on your head. You can get one really great haircut, but don't expect it to last the rest of your life. Chances are good that you're going to need another haircut in a month or two. In the case of weeds, you're always going to have to do something to manage them.

We have, on the other hand, done a pretty effective job in some cases of reducing plant populations. The way we managed our grazing in the early 1900s helped to reduce populations of perennial grasses in some areas of the country, even when that wasn't our intent. We simply grazed the same area too often to too short a stubble height until the plant could no longer compete.

It's that kind of grazing that will also help us control weeds. There are all kinds of studies indicating that yes, grazing can, at a minimum, reduce the vigor and spread of weeds. For example, scientists found that grazing diffuse knapweed in the bolting stage reduced the number of plants by 50% and reduced seed set by 50% as well. In fact, most grazing prescriptions for weeds focus on preventing seed set by grazing multiple times in a season. If this works with your animal and vegetation management goals, then it's a potential avenue for eliminating your weed problem. Just be sure that the forage you'd like to protect isn't being damaged in the process.

If a little less intensive management plan suits your goals and the time you have available, don't despair. It will just take a little bit longer for your weed population to change.

In the end, weed management is about your goals and how much time and money you have to spend on getting there. Grazing can be a useful tool for reducing the amount of money you have to spend, and may even give you a chance to reevaluate whether you're really interested in carrying on a war that man hasn't won for generations.