Native & non-native Weeding

Invasive, non-native weeds have caused serious problems for years.

Sometimes, these problems are primarily economic. For example, land values can be reduced 60 to 80 percent due to serious infestations of invasive non-native weeds such as leafy spurge or one of a number of knapweeds. Economic damage often results from reduced land productivity and the expenses associated with managing these problem plants using chemical, biological, and mechanical approaches.

Ecological damage can also occur and, in many cases, is hard to put a price tag on. Some invasive, non-native weeds can transform native plant communities into almost a monoculture of the invader. This can completely change an area to the point where the benefits the land previously provided to society and wildlife are lost.

There are many beneficial non-native plants. Here, non-native plants were used to stabilize and revegetate abandoned tailings piles from mining activity. This mix of non-native plants includes species known not to be invasive such as orchard grass, bromes, timothy milk vetch, and alfalfa.

There is no question our worst problems are caused by invasive plant species that are not native to North America, but does this mean that all non-native species are bad?

Consider the following:

1) Non-native species are typically invasive.
2) Invasive species are typically non-native.

Which is more accurate? Given the magnitude of problems caused by invasive non-native plants, it may be tempting to accept statement 1 as fact; however, statement 1 is not very accurate. Of the thousands of plants that have been purposely introduced to North America, far less than 10 percent have escaped cultivation and become problematic invaders. Many of the plants used for crops, landscaping, and other applications are not native to North America but were brought here from other continents. Most of these are generally considered beneficial plants.

The patch of plants growing in the center of this picture shows how some invasive non-native plants can grow in almost pure stands often called monocultures. In this example, the invader is a perennial plant called Russian knapweed. There are several species of knapweed that are aggressive, non-native invaders.

Statement 2, on the other hand, is very accurate. Our most problematic invasive plants are not native to North America. Many are natives of Europe or Asia and have been introduced to North America either on purpose or by accident. Intentional plant introductions include those used for agriculture, as ornamentals, or for soil stabilization. In the 19th century, there were groups known as acclimatization societies, whose main mission was to bring species from the Old World to North America to determine which ones would survive here and be used to benefit life in the New World. As a result, plant introduction has been going on for quite some time. A small percentage of these intentionally introduced plants have escaped and become problem plants.

plants:
out the bad from the good

There are also a number of ways non-native plants are and have been introduced to North America by accident. Some were introduced because their seeds were mixed in with the seeds of plants intentionally introduced as crops or ornamentals (seed contaminants). Others attached themselves to animals or humans and were brought in as "hitchhikers."

Some of our worst problem invaders were introduced in soil used by ships, which would commonly use soil from their country of origin to provide weight stabilization for the trip to North America. When cargo was loaded in a North American port, a portion or all of that soil would have been offloaded here in North America.

So what? Who cares, and what does it mean for life in Wyoming? First, it is important to remember not all non-native plants are problem invaders. Actually, many have proven to be beneficial to society, including food production and landscaping, and may even be ecologically benign. Some are important for revegetating previously disturbed land, creating and improving wildlife habitat, or helping manage problems caused by invasive weeds.

That being said, landowners should use caution when selecting seeds to plant. Recall that, although not all non-native plants are invasive, our worst problem invaders are non-native. Stay away from seeds identified as "aggressive," that "may escape cultivation," or that are "difficult to remove after establishment." There is a pretty good chance these will end up as future problem invaders.


Here is another problematic non-native invader. Leafy spurge is fairly common in Wyoming and is another example of a very aggressive perennial plant.

Finally, familiarize yourself with the designated noxious weeds and other problem invaders in Wyoming. These are plants already known to cause big problems, and the reality is you can still buy seeds for many of these from a number of sources. It is strange and disturbing but true.


Pictured are two aggressive non-native invaders. The plant on the left with pink flowers is spotted knapweed, which prefers relatively moist, or slightly higher elevation, areas. Diffuse knapweed on the right with white flowers does just fine in relatively drier areas and lower elevations. Some close relatives of these two can still be purchased for ornamental purposes and many Centaurea spp. can be found in seed mixtures – buyer beware!

Local offices of the University of Wyoming Cooperative Extension Service (UW CES), federal Natural Resources Conservation Service, county weed and pest control districts, and conservation districts can provide information on problem plants.

Consider the use of native plants, but resist concluding a plant must be native to be "good." The availability of native plant material is improving, and prices are becoming more competitive.

Taking a few simple precautions when it comes to selecting plants can go a long way when it comes to helping Wyoming weed out the bad from the good.

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