

An invasive species is defined as something that is not from the region and whose appearance in an ecosystem could cause economic or environmental damage. Invasive species can be many things, such as Canada thistle, European starlings, or zebra mussels. Nebraska has several invasive plants that thrive here, such as Canada thistle, common buckthorn, downy brome, Japanese barberry, and many others besides. These invasive species are problematic, but what do they actually do to an environment, and how can we fix it?

The first step to becoming an invasive species is for it to move from its place of origin to an area where it is not native. Once there, the organism finds a niche in the ecosystem of the area. A niche is a specific place in an ecosystem that an organism inhabits. This doesn't necessarily mean a specific location, rather a specific role. For example, mountain lions are a predator of a prairie ecosystem. An invasive species will either fill an empty niche, or be able to better survive in this niche than a native organism that is already existing in that niche. As it out-competes the native creature, it will take more of the resources, such as shelter or food, and produce more offspring, slowly forcing the native species out of the niche and replacing it. The population of the invasive species will continue to increase until the food, water and other resources cannot support the population anymore. But at this point, the damage to the chain of the ecosystem has already been damaged.

In order to be an invasive plant, it has to meet the two criteria of 1. Not being from the area, and 2. Causes damage of some sort, either monetary or to the environment. So anything native to Nebraska, such as Eastern Red Cedar, cannot technically be declared invasive even if it is a problematic and widespread plant. These invasive species are a problem, and not just because of the damage that they cause to ecosystems. I will use Eastern Red Cedar trees as an example because most people are familiar with them, but they are not technically invasive. Eastern Red Cedar trees are spread very easily by birds, so they are often found under power lines, in fence rows, and in pastures. They are causing monetary damage because they need to be removed, which takes time, labor, and possibly money depending on how big the tree is and what kind of tools are needed to remove it. They reduce the amount of available grazing plants because they take up space and nutrients needed by pasture plants without the benefit of providing food for the cattle in that pasture. Invasive species can also serve as an alternate host for diseases, such as cedar apple rust. Some diseases will spend the summer on one species of plant, and then survive through the winter on a different species of plant. For these diseases, the best remedy is to remove one of the hosts from the area, interrupting the life cycle of the disease.

Now that we know what invasive species are and the kind of damage that they cause, what do we do about it? Unfortunately, there isn't a simple answer to this. If there was one good way to eliminate all of the leafy spurge in Nebraska, it would have been done already. I believe that the best way for us to help as individuals is to be aware of which plants are invasive species, and remove them from our homes and gardens whenever possible. For more information on invasive species, contact Miranda Earnest at the Buffalo County Extension Office, 308-236-1235 or [mearnest2@unl.edu](mailto:mearnest2@unl.edu).