



**Kelly Feehan**

*Extension Educator – Community Environment*

2715 13<sup>th</sup> Street, Columbus, NE 68601

[402-563-4901](tel:402-563-4901)

[environment.unl.edu](mailto:environment.unl.edu)

[water.unl.edu/stormwater](mailto:water.unl.edu/stormwater)

[platte.unl.edu](mailto:platte.unl.edu)

Twitter: @KellyFeehan2

## Invasive Plant Species: What are they and what impacts do they have?

By: Kelly Feehan, Extension Educator

For Release: March 1, 2021

With increasing concerns about invasive plant species, what are these and how can they cause harm?

Invasive species are non-native plants whose introduction causes or is likely to cause harm to the economy, environment, or human health.

While some people choose to plant only native plants, know there are non-native plants not considered to be invasive. These are sold and used in gardens and landscapes with less concern of harm.

And then there are noxious weeds. Invasive plant species may or may not be designated a noxious weed by the Nebraska Department of Agriculture. This designation is based on the impact of the plant in its new environment.

For example, purple loosestrife is an invasive species that has been designated a Nebraska noxious weed. As such, it is illegal to sell or plant and people that have it growing on their property are required to destroy it.

Plants considered to be invasive species, but which have not been designated a noxious weed by a county or state, can still be sold and planted. However, because of the harm they cause, knowing which plants are on a states invasive species and watch list is wise.

For Nebraska, these lists can be found at <https://neinvasives.com/plants> . They include some plants found in landscapes like callery or ornamental pear (*Pyrus calleryana*), tatarian honeysuckle (*Lonicera tartarica*), Tree-of-heaven (*Ailanthus altissima*) and St. Johnswort (*Hypericum perforatum*).

It is important to know both the genus and species name of plants listed as invasive species. For example, while oriental bittersweet (*Celastrus orbiculatus*) is listed, American bittersweet (*Celastrus scandens*) is not.

Why the concern about invasive species and what harm can they cause? When a non-native species is introduced, it is freed from natural predators or competitors from its native habitat. This gives the non-native species an advantage, allowing it outcompete native species for available water, light, and space.

This reduces diversity in a plant community leading to ecosystem disruptions. For example, purple loosestrife, in a wet setting, rapidly outcompetes native plants that provide food for songbirds and other local fauna. Purple loosestrife has no food value for wildlife..

In the case of ornamental pear, these support fewer insects, such as caterpillars, needed as food for songbirds. Ornamental pear, once a sterile species, is no longer sterile in all cases and these trees are beginning to outcompete native plants in natural settings.

Invasive plants may add significantly to the fuel load of an area, either in mass or because it contains volatile compounds. This can mean fires burn hotter and faster than native plants would.

Invasive species can damage or contaminate crops, increasing costs to agricultural and, in turn, to the public for food and other products. Industries such as the cattle industry can be affected when invasive plants that are inedible by cattle, infest ranges or contaminate forage.

Other services such as electricity have cost increases resulting from the management and control of invasive species, such as money spent by power companies to keep invasive plants from growing in right of ways, up poles, or along power lines.

Source: eXtension; a national Cooperative Extension resource

## PSAs - March 01, 2021 - Kelly Feehan

If a pesticide stored in an unheated area freezes, what are the effects on the pesticide? The place to start for this information is to read the label directions for storage for that specific pesticide. In general, wettable powders and granules are not affected by low temperatures. If liquid pesticides freeze, there is a risk of damage to the container, leading to leaks so take care when handling a frozen pesticide container. If frozen, some pesticides can be thawed slowly at room temperature. Never use a flame or heat to thaw a frozen pesticide; and check for cracks in containers when handling. When frozen, the active ingredient can separate from solvents or emulsifiers. After thawing, roll and or gently shake the container to re-suspend ingredients. If crystals are still present after shaking, the product should not be used as it will no longer be effective. In this case, it needs to be disposed of according to label direction only.

With snow still present and recent cold temperatures, the thought of vegetable gardens may seem a ways off; but it won't be long before planting takes place; and it is often done too early. Planting seeds or transplants of any crop is best based on soil temperature more than air temperature or the calendar. If soils are too cold at planting, seed can rot, seedlings can damp off and die, and transplants may sit there without growing. Early planting is done to try and have an earlier harvest, but due to seed rotting and stunted growth, harvest is often delayed instead of hurried along. Cool season vegetables, like peas and lettuce, germinate and grow at soil temperatures of 40 to 45 degrees Fahrenheit. Warm season vegetables like tomatoes, beans and sweet corn need a soil temperature of 55 degrees F. with vine crops and peppers needing 60 degrees. Watch soil temperatures on websites; or invest in your own garden soil thermometer.

With recent cold temperatures, the greatest risk for plant damage is likely on small fruits and fruit trees. Time will tell how much damage occurred, but here are a few things to know. For small fruits, like strawberries, the insulating snow cover helped prevent freeze injury. Exposed plant parts were subject to injury; and while plants may survive and grow, flower buds within the crown may have been killed reducing yields. For raspberries, exposed canes may be killed near the ground or snow line, but plant crowns and roots will still grow. Hardy fruit trees like apple and pear are likely fine; however flower buds may be damaged. Flowering buds of peaches are damaged at 10 degrees below zero, cherry at minus 15, and apple and pear flower buds tolerate temperatures down to minus 25 or minus 30. There are many other variables so again, time will tell how much, if any, freeze damage we see to fruiting plants. (Source: Ward Upham, K-State)

Fire blight is a bacterial disease affecting apple, crabapple, pear, hawthorn, and related plants. The bacteria overwinters in cankers or sunken diseased areas on tree branches. Cankers produce a sticky exudate in spring and from this, bacteria is spread by insects, wind-blown rain, careless pruning or pruning at the wrong time. While pruning to remove infected branches is an important control method of fire blight, it needs to be done while trees are dormant and before cankers begin to exude. If pruning is done too late, such as during spring growth, this increases the spread of bacteria. Along with pruning at the correct time, cut infected branches at least 8 to 12 inches below cankers. Remove pruned material from the area. To help avoid spreading bacteria during pruning, dip or spray the pruning tool before each cut with a 10 percent solution of bleach, or one part bleach to nine parts water.

My garden has not been producing well, or, I have an area in my lawn where I can't get grass to grow, should I do a soil test to tell me what's wrong? This is a question often asked about soil testing. While having a soil lab do a soil test is a good idea to know more about your soil, the basic soil test most homeowners have done will not tell you everything about a soil; and the cause of poor plant growth may or may not be soil related. Most basic soil tests test for soil pH, organic matter content, and phosphorous and potassium levels only. If you've never had a soil test done, or it's been a while, then go ahead and do so; but know a soil test might not provide the answer you are looking for. Other issues like poor soil structure or drainage, root or shade competition, or incorrect care practices of watering or fertilization, may be the cause of poor plant growth. All of these need to be evaluated to assess the situation.