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### BROWNING OF EVERGREEN

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We began the growing season with some evergreen trees and shrubs turning brown and now appear to be ending the season with a little more evergreen browning.

In spring, most browning is due to winter drying. When needles turn brown during fall, it can be due to a number of factors including natural needle drop, spruce mites, bagworms or fungal disease.

To reduce spring browning, it is important to water evergreens now. Keep the soil moist 8 inches deep from the trunk to 4 to 6 feet beyond the dripline up until the soil freezes. Be sure to avoid overwatering. We've had hot, dry weather this year making fall watering critical.

At this time of year, needle browning can be due to natural needle drop which is harmless. It occurs about every three to seven years on most conifers and is as normal as shade trees dropping their leaves in fall.

Natural needle drop shows up as a sudden yellowing or browning of almost all interior needles. In some cases, only one and two year old needles remain green. When touched, discolored needles easily fall off the tree. Again, this is natural and nothing needs to be done.

The only pest for which control might be needed this late in the season is spruce mite. These cool season mites are active only in spring and fall. They spend the summer in the egg stage.

To check for mites, tap an off color branch over a white sheet of paper. If specks that drop onto the paper begin to crawl around after a few seconds, they're likely mites and not dust. This test works best if a small branch is brought indoors as there will be no wind to move the specks around.

If quite a few mites are found, the tree can be hosed down with a strong stream of water to dislodge mites. Another option is applying a summer oil or insecticidal soap according to label direction.

When checking evergreens, especially spruce, arborvitae and junipers, also look for bagworms. While bagworm numbers were significantly decreased this year due to last winter's cold temperatures and predators, some trees are still infested.

At this time of year, bagworms are two inch long, triangular shaped bags covered with fragments of brown needles. The bags will be tightly attached to twigs and filled with eggs for overwintering. Insecticides will not control them at this stage.

From now until June, pick and destroy as many of the bags as feasible. In late June of next year, an application of a chemical insecticide or the organic compound *Bacillus thuringiensis* can be applied to infested evergreens for bagworm control.

There are fungal diseases that infect evergreens and lead to browning over the summer. However, fungicides applied at this time of year will not control diseases. The correct fungicide needs to be applied at the correct time next spring, usually in April and again in May, to have any effect.

If a disease is suspected, now is the time to identify if browning is due to a disease to know if fungicides applications are warranted next spring. Some signs of needle diseases are browning of needles from the bottom of the tree up and inside out, dead needs on branch tips, or red or yellow spots on needles.

Evergreen samples can be brought to an Extension office for identification of issues if needed.

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Spruce mites are one of the few insect pests that control might be needed at this time of year. These cool season mites only feed during spring and fall. If discolored spruce needles are noticed, check for mites by tapping a branch over a white sheet of paper. Observe the paper closely and if specks that drop onto the paper begin to crawl around after a few seconds, these are likely mites and not dust. This test works best if a small branch is brought indoors so there is no wind to move the specks around. If quite a few mites are found, spruce trees can be hosed down a few times with a strong stream of water to dislodge mites and their tiny webbing. Another option is applying a summer oil or insecticidal soap according to the label. Be aware there are a number of causes of evergreen browning and the only one a control measure would work for now is spruce mites. For example, fungicides applied for diseases during fall will not work.

Fall armyworms have been damaging lawns. If a lawn is damaged, will it recover? Fortunately, armyworm damage is mainly through leaf feeding with little damage to turf crowns. Lawns can recover if only partial leaf removal occurs or if the grass crowns, now exposed to higher sunlight levels, are protected from water loss and drying. To help recovery, keep damaged areas watered and watch for new leaf blades. If an early September fertilizer application has not already been applied, a light application can be made to further stimulate new leaves. If the lawn is too badly damaged to recover, overseeding this winter or next spring is recommended. Fall armyworms will not survive winter and control next year will not be needed. Fall armyworm rarely reaches high enough numbers to cause damage in Nebraska. The last outbreak was about 15 years ago, and chances are it will be a while before we see damage again.

While it is too late to seed or overseed turfgrass this fall, sod can still be laid up until the soil freezes. The cool conditions of late fall and early winter can be successful as long as irrigation is available to minimize the sod drying out on exposed sites in the absence of rainfall. Soil preparation for late season sod installation is just as important as for spring or summer installation. Areas to be sodded should have some tillage to relieve compaction and to work in compost to improve soil structure. Both will aid in root establishment. After sod is laid, ensure the turfgrass has sufficient moisture during any dry period laying the sod through March and until spring rains begin. Winter watering can be done when air temperatures are above 45 degrees Fahrenheit, and is best done early in the day so there no standing water around plant crowns to freeze overnight. Delay fertilizer applications until spring if sod is installed in late fall.

If you grow roses, wait until mid to late April of next spring to prune roses. The reason is many roses, even hardy ones, sustain winter injury during winter and the ends of stems and branches are damaged. These damaged ends need to be removed for plant health and appearance. If roses are pruned during fall or winter, they will still sustain winter injury and the rose would need to be pruned again in April. This increases work for the gardener, and the rose may need to be pruned shorter than desired. On tender or less hardy roses, waiting until mid-to late April to prune has been shown to decrease the amount of winter injury on plants. Rose pruning is one task best left until spring. It is okay to prune most other shrubs, but wait until after they are dormant and leaves have dropped. If it is an early spring blooming shrub, wait until after blooming next spring to do light pruning or flower buds will be removed.

Fall is the time for insects and spiders to accidentally invade homes as temperatures cool. The most frightening group of fall invaders seems to be spiders; and of these, wolf spiders create the most fear due to their size and sudden movements. Wolf spiders are the largest spiders in Nebraska. Their bodies alone can reach up to one and one-third inch long and this does not include their legs which are long and hairy. They have been mistaken for tarantulas. Many wolf spiders are nocturnal or active at dawn and dusk. They do not build webs to capture prey, but are active hunters that wait patiently for their prey and then suddenly pounce. Hence the name "wolf spider". Wolf spiders are not venomous. Other than the fear they create, they are harmless. As with all fall invaders, the best means of keeping them out of the home is with weather stripping, caulking, tight fitting doors and windows, and screens in good repair.