

Spray Damage to Tree Plantings

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There are many natural hazards in the establishment of tree plantings, including damage by rabbits, gophers, mice, insects, and diseases. Weather also takes its toll by causing winter burn, sun scald, frost cracks, drought, and sleet and snow breakage.

There have been man-made problems that man himself has corrected over the years with good cultivation, the elimination of grazing, keeping fire out of the tree plantings, etc. However, one man-made hazard is causing great damage to several species of trees and shrubs in our tree plantings. This is the drift from weed spraying on cropland.

Spray drift is the movement of airborne spray particles and it depends upon:

1. Size of droplets
2. Speed of the wind
3. Height above ground that spray is released

Most tree species can be damaged by these herbicide sprays but the species react differently from this damage. Damage may show some of the following symptoms:

Leaves -- small, deformed ("claw-like" as in the case of boxelder; boat-shaped as in the elms), crinkled, yellowish to light green color to brown (as if burned) and premature leaf drop.

Twigs -- generally, slightly curved to severe "S" curving. Tips deformed and showing unnatural color.

If the trees are hit directly, leaves damaged by spray will appear as if they had been burned. They may turn brown and fall off the tree.

Siberian elm, boxelder, and American elm are the species that show the greatest amount of damage. However, all species do not show this type of visual damage, but the growth rate shows a definite reduction. Whenever the odor of herbicide can be detected in the air, it probably is in a concentration strong enough to affect most trees and shrubs.

Exposure of trees and shrubs to spray drift may reduce the vigor so that other diseases and insects can strike and cause mortality. This may result in dead branches, dead trees, or even dead windbreaks.

To Reduce Spray Damage to Tree Plantings

Any chemical that is made to kill broadleaf weeds can kill broadleaf trees. To avoid damage to trees, shrubs, or other crops observe the following rules:

1. Do not spray on windy days.
2. Use the 2,4-D amine or oil soluble amine type sprays. Do not use the ester types, which may give off fumes.
3. An 8 to 10 foot wide cultivated strip around each windbreak will act as a buffer to lessen the danger of spray damage.
4. Certain weather conditions can cause updrafts and keep the spray aloft and cause it to drift "off limits."

North Dakota farmers and ranchers have planted over 200 million trees since 1936. This does not include the many thousands of trees and shrubs planted in our towns and cities.

Careful use of the least damaging herbicides will help assure long lived and attractive tree plantings.

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