

CASE SUMMARY

Case #2011/1524

Complainant: Rosalie Yoder
6620 S. State Road 5
Topeka, IN 46571

Applicator: Chad Miller
Precision Turf Care
7330 W. CR250N
Shipsheiana, IN 46565
260-499-0132

Certified Applicator
Licensed Business

1. On August 25, 2011, I, Agent Andy Roth of the Office of Indiana State Chemist (OISC), performed an investigation at the property listed above in response to a claim of injury/damage to non-target trees possibly resulting from exposure to Imprelis Herbicide. At the site, I observed white and Austrian pines with distorted tips and drooping and twisted needles on new growth.
2. I photographed the site documenting the symptoms I observed:



Figure 1



Figure 2



Figure 3



Figure 4

3. I collected plant samples from white and Austrian pines exhibiting symptoms and submitted them to the Plant & Pest Diagnostic Lab (PPDL) at Purdue for assessment.

4. The report from the PPDL for the sample submitted indicates, "White Pine: The samples and pictures submitted show downward drooping, curved and twisted needles. These symptoms may be associated with injury caused by synthetic auxin (growth regulator type) herbicides. Typical symptoms caused by these herbicides can include epinasty (twisting and curving) of the leaves or needles, shoot and shoot tip; leaf cupping which can be upward or downward, and in extreme cases, new leaves can be irregular in color, size and shape (usually smaller than normal) and have abnormal leaf margins. When injury results in new shoot dieback in conifers there will be no regrowth this season, and with certain species, such as Norway spruce, the entire tree can die. The wide view photo shows a white pine in the back row near the fence that is dying. We frequently see white pine in this type of situation dying without a specific pathogen identified. Root decay from excess spring rains on clay soils and stress from crowding and drought (in both 2010 and 2011) are possible causes. Austrian Pine: There were no specific symptoms of herbicide injury on this sample. Dothistroma needle blight and Diplodia tip blight were found on the sample. The twisting of the tip is caused by the Diplodia infection. Austrian, Scots, mugo and red pine can be attacked Diplodia (*Spaeropsis*) tip blight, although the disease is most common in the landscape on Austrian pine. On Austrian pines symptoms develop on trees after cone-bearing age with the first spring symptoms appearing in late April to early May. Needles and shoots are stunted and killed very quickly and shoot tips are often quite resinous. Stressful site and environmental growing conditions such as drought predispose 2-neededled pines to infection by Diplodia. New infections year after year can lead to the death of older needles as well as branch dieback and ultimately tree death. Branch cankers are often coated with exuded resin, which dries and leaves white patches and droplets on the bark. Avoid using susceptible pines in drought prone situations and make sure existing trees get adequate water during dry summer periods. Prune out and destroy dead and dying branches promptly. The best prevention for this disease is to keep the trees growing as vigorously as possible. Invigorate the root system, as recommended in the publication HO-140 at:
<http://www.hort.purue.edu/ext/HO-140.pdf>

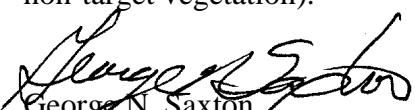
The lack of effective control measures on large Austrian pines infected with Diplodia and other fungal needle blights have caused many to forgo using Austrian pine in the landscape in favor of other trees. High value trees may be protected by spraying fungicides to new growth each spring but this is impractical in most situations."

5. According to application information collected from Precision Turf Care, Chad Miller applied Imprelis Herbicide (EPA Reg. No. 352-793) to the lawn on June 13, 2011, at the rate of 4.5 oz /acre using ride-on application equipment.


Andrew R. Roth
Pesticide Investigator

Date: October 24, 2011

Disposition: No violation of the Indiana Pesticide Use and Application Law was documented against the pesticide applicator. Effective September 15, 2011, the Indiana registration for Imprelis Herbicide, EPA Reg. #352-793, was cancelled because it was determined by OISC that the product is "misbranded" (it bears label directions that are inadequate to prevent unreasonable adverse effects to non-target vegetation).


George N. Saxton
Compliance Officer

Final Date: November 14, 2011