CASE SUMMARY

Case #2011/1145

Complainant: Jim Stover
1362 Joway Court
Upland, IN 46989
765-998-0239

Applicator: Joe Chandler
Grant County Lawn Inc.
PO Box 1595
Marion, IN 46952
765-384-5219

Registered Technician
Licensed Business

1. On July 11, 2011, I, Agent Beth Carter of the Office of Indiana State Chemist (OISC) performed an investigation at the complainant's property in response to a claim of injury/damage to non-target trees possibly resulting from exposure to the herbicide Imprelis. A Notice of Inspection was issued to Jim Stover. I observed the following on multiple spruce trees including one dwarf spruce during my on-site investigation:
    a) Browning of the needle tips (see figure 1 through 4).
    b) Distorting of the needle tips (see figure 3).
    c) Curling at the top of the tree (see figure 2).
    d) Yellowing of needles (see figure 5).
    e) Spiraling of the dead area (see figure 4)

2. I took the following photos depicting injured/damaged vegetation:


Figure 1


Figure 2


Figure 3

Figure 4

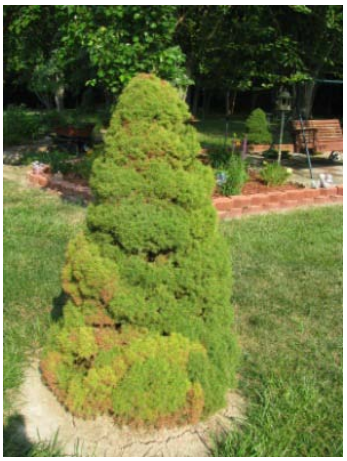

Figure 5

3. I collected the following vegetation samples from visibly impacted non-target vegetation as described in paragraph #1 for examination by the Purdue Plant Pest Diagnostic Laboratory (PPDL):
    a) Spruce
    b) Dwarf spruce

4. I collected the following environmental sample for chemical analysis by the OISC Residue Laboratory:
    a) Vegetation sample (spruce)
    b) Soil from lawn (composite)
    c) Soil inside drip line

    NOTE: A decision was made by OISC management to not analyze the environmental samples in this case. That decision was based on: 1) the large number of similar environmental samples already analyzed that had produced representative results consistent with the presence of visible exposure symptoms; 2) the expertise developed by OISC investigators through repetition to identify Imprelis exposure symptoms without chemical confirmation; and 3) the large number of similar cases being investigated by OISC at the same time.

5. The report from the PPDL stated in part: "*Spruce: The sample (and pictures) submitted show symptoms that are 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 size and shape (usually smaller than normal) and have abnormal leaf margins. No disease or insects were found.*
    Dwarf Spruce: This is spruce needle miner. Note the leaves are tied together. This insect has one generation per year with adults emerging now and eggs being laid on needles. Homeowners are best advised to wash the trees with a strong stream of water to remove the larvae feeding on branches in late summer and early spring. A residual insecticide (Talstar) could be helpful in killing larvae that hatch from eggs laid on leaves.

    Please see this bulletin for more details:
    http://bugs.osu.edu/bugdoc/Shetlar/factsheet/christmasstree/spruce_needleminer.htm."

6. According to the application information collected from Grant County Lawn, Imprelis Herbicide (EPA Reg. No. 352-793) was applied on April 22, 2011, at the rate of 4.5 fluid ounces per acre with a hose and reel type sprayer.

Elizabeth C. Carter
Pesticide Investigator

Date: September 23, 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: October 19, 2011