CASE SUMMARY

Case #2011/1300

Complainant: Ronald "Steve" Bush
802 Summerway Dr.
Shelbyville, IN 46176
317-392-3429

Applicator: Greg Reinbold
Lawn & Grounds Care Consulting
2395 E PR Wrenbriar Lane
Shelbyville, IN 46176
317-398-7297

Certified Applicator
Licensed Business

1. On July 27, 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 Steve Bush. Mr. Bush stated that he had not applied Imprelis to his property, but rather his neighbor, Dave Childress, had an application of Imprelis done by Greg Reinbold of Lawn & Grounds Care Consulting.

2. There were approximately five spruce trees along the northern edge of the Bush property that bordered the Childress property. (See figure 1.) I observed the following symptoms on the adjacent spruce trees during my on-site investigation:
   a) Curling at the top (see figure 2).
   b) Browning of needle tips and entire branch (see figure 3).
   c) Spiraling of dead areas (see figure 4).

3. I took the following photos of the property and injured/damaged vegetation:

Fig 1

Fig 2

Bush

Childress

Fig 3

Fig 4

4. I collected a vegetation sample from a visibly impacted spruce tree for examination by the Purdue Plant Pest Diagnostic Laboratory (PPDL).

5. I collected the following environmental samples for chemical analysis by the OISC Residue Laboratory:
   a) Vegetation sample - spruce
   b) Soil sample from neighbor's yard (Childress)
   c) Soil sample from complainant's yard (Bush)

6. The PPDL report stated the following: "*There was no evidence of significant mite or insect injury or disease on the sample submitted.*
   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. 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."

7. According to the report from the OISC Residue Lab the following levels of aminocyclopyrachlor (active ingredient in Imprelis Herbicide) were found in the samples referenced in item #5:
   a) Vegetation sample – spruce 24.0 PPB
   b) Soil sample from neighbor's yard (Childress) 3.2 PPB
   c) Soil sample from complainant's yard (Bush) BDL

   PPB=Parts Per Billion BDL=Below Detection Limits

8. According to the information collected from the applicator, Imprelis Herbicide (EPA Reg. No. 352-793) was applied on May 16, 2011, at the rate of 4.5 fluid ounces per acre using a tank and reel sprayer.

Elizabeth C. Carter
Pesticide Investigator

Date: September 20, 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 17, 2011