CASE SUMMARY

Case #2011/1290

Complainant: Peggy & Jeff Yeary
1415 E CR 550 S
Frankfort, IN 46041
317-710-5802

Applicator: Roberto Tapia — Registered Technician
Start to Finish, Inc. — Licensed Business
3375 S CR 500 E
Whitestown, IN 46075
317-769-2211
317-710-5802

1. On July 26, 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 Jeff Yeary, the complainant and the owner of Start to Finish Inc. I observed the following symptoms on multiple varieties of evergreen trees throughout the property:
    a) Curling at the top (see figure 1).
    b) Browning of the candles (see figure 2).
    c) Browning throughout the branch (see figure 3).

    I observed the following symptoms on several pawpaw trees on the property:
    a) Yellowing of the leaves (see figure 5 & 6).
    b) Scorching of the leaf tips (see figure 5).
    c) Cupping and curling of leaves (see figure 5 & 6).
    d) Defoliation of leaves (see figure 4).

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


Figure 1


Figure 2


Figure 3

Figure 4

Figure 5

Figure 6

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) Pawpaw

4. I collected the following environmental sample for chemical analysis by the OISC Residue Laboratory:
    a) Vegetation sample- pawpaw tree

5. The report from the PPDL stated in part, "*There was no evidence of significant mite or insect injury or fungal disease on the spruce and paw paw samples submitted.*
The samples exhibited distortion and dieback, symptoms that are typically found to be associated with injury that can be caused by a synthetic auxinic (growth regulator type) herbicide. Typical symptoms caused by these herbicides can include epinasty (twisting and curving) of the leaves or needles, shoot and shoot tip; dieback of distorted shoot tips; 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. If injury results in new shoot dieback in conifers there will be no regrowth this season.
The paw paw sample also exhibited a yellow-green mottle and leaf scorch. Yellow-green mottling and mosaic is often expressed by plants infected with a virus disease. Marginal leaf scorch is not a typical symptom expressed by plants infected with a virus. We have no documentation as to whether the discoloration on the paw paw could be caused by exposure to a synthetic auxinic (growth regulator type) herbicide."

6. 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 #4:
    a) Vegetation sample- pawpaw tree *BDL*
    BDL= below detection limits

7. According to the application information collected from the applicator, Imprelis Herbicide (EPA Reg. No. 352-793) was applied on May 11, 2011 at a rate of 4.0 fluid ounces per acre using a ride on sprayer.

8. The lab results and the report from the PPDL would suggest the symptoms seen on the pawpaw tree were not related to the Imprelis application. However, it appeared the symptoms seen on the evergreen trees were related to the Imprelis application.

Elizabeth C. Carter
Pesticide Investigator

Date: September 21, 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