Dear Consumer: Herbicides Kill Trees!

EPA's conditional registrations continue to cause harm

By Nichelle Harriott

As spring gave way to a warm summer, many homeowners, gardeners, and landscape professionals began noticing an eerie sight. Scores of trees, mainly the majestic Norway Spruce and White Pine, were withering. Yellowing, browning, curling, and loss of needles typically characterized injury where trees were supposed to be green, at the height of summer. In severe cases whole trees were lost. In what some say could be one of the biggest disasters of its kind since the emerald ash borer killed millions of trees, losses were reported throughout the Midwest, in East Coast states, and as far south as Georgia. These cases had one thing in common: Imprelis. A new herbicide manufactured by DuPont and marketed as a "low environmental impact" pesticide, Imprelis was applied during the spring to control dandelion, clover, and other annual and perennial weeds on lawns and other landscapes in the vicinity of these once evergreen trees. Soon thereafter, trees began to die.

Imprelis —New Product, Unknown Risks

Imprelis, whose active ingredient is the potassium salt of aminocyclopyrachlor, is a new herbicide conditionally registered in September 2010. Conditional registration is allowed under Section 3(c)(7) of the *Federal Insecticide, Fungicide and Rodenticide Act* (FIFRA), which allows pesticide registration to be granted even though all data requirements have not been satisfied, with the assumption that no unreasonable adverse effects on the environment will occur. This was clearly not the case for Imprelis.

Aminocyclopyrachlor, a "selective herbicide" providing pre- and post-emergent control of weeds on a variety of non-crop sites, poses very low risk to humans, including workers due to its low toxicity according to EPA. However, it is biologically active in soil and is rapidly absorbed by roots and leaves. Aminocyclopyrachlor belongs to the pyridine carboxylic acid class of chemicals, including picloram, clopyralid, and aminopyralid, which have known incidents of contamination of non-target plant species, including the contamination of compost and severe damage to garden crops. Several states, as well as the United Kingdom, were prompted to take regulatory action due to these incidents.

Like the other chemicals in its class, it is environmentally persistent with half-lives ranging over 300-6000 days under various conditions. The chemical is highly mobile in the environment, a fact EPA hoped to 'mitigate' with surface and groundwater advisories and label language restrictions. Additionally, the agency recognized the threat aminocyclopyrachlor poses to endangered terrestrial plants, and several other non-target plant species and animal species. In EPA's ecological assessment, the agency states, "….[A]minocyclopyrachlor presents potential risks to both non-listed and listed terrestrial plants and 10 organisms that depend on terrestrial plants for habitat and forage." Several environmental degradates of this chemical considered "to be of possible concern," and other outstanding data gaps, including two "high priority studies," were all identified in EPA's ecological assessment when conditional registration was granted.

Conditional Registration: Catering to Industry's Bottom Line

In spite of evidence for the potential for severe environmental contamination, the agency granted conditional registration of aminocyclopyrachlor stating "it was in the public's interest," and that, "[A] single application of aminocyclopyrachlor will provide long-lasting control, obviating the need for multiple applications of the current alternatives and thereby reducing the pesticide load in the environment." Many new pesticides are rushed to market through conditional registration in an effort to help industry meet their bottom-line. When this occurs, products are introduced to consumers and the environment without complete evaluations of risks to human and environmental health. While all data should eventually be submitted, it often takes years before EPA acquires them –often with data submitted for the 15-year reregistration review cycle that all registered pesticides must go through. It is rare that the regulatory decision will be altered once data has

Consumer Alert

On August 16, 2011, EPA issued an alert to consumers that grass clippings treated and trees injured by herbicide Imprelis should NOT be used for composting or mulching as Imprelis could continue to cause non-target plant damage. Imprelis joins its other chemicals in its class as a known contaminator of compost.

Persistent herbicides known to contaminate compost and mulch and damage crops and gardens:

- Picloram (Trooper, Tordon, Alligare, Grazon);
- Clopyralid (Eclipse, Colt, Reclaim, Curtail, Accent,Confront Garrison);
- Aminopyralid (Milestone, Grazonnext, Chaparral);
- Aminocyclopyrachlor (Imprelis, Ortho Mat28N, Streamline, Scotts Weed & Feed)

been submitted. Recently, EPA came under scrutiny since it was revealed that the conditionally registered pesticide, clothianidin, did not have complete field data required on honey bees, even though the pesticide is known to pose risks to these vulnerable pollinators. This data is still outstanding even though clothianidin continues to be used in the environment. This problem is further compounded with the fact that EPA is unable to properly track registration data and decisions, and missing data can go unfulfilled for decades unknown to the agency.

EPA's Initial Concerns Overruled by Industry

After DuPont submitted information to the agency for registration of Imprelis, the proposed registration document was issued by EPA in June 2010. DuPont was not happy with EPA's preliminary findings. In a letter to EPA in response to the proposed registration decision, DuPont opposed the agency's measures to mitigate risks to non-target plants, including buffer zones, and aerial and ground application restrictions as outlined in EPA's document, and challenged EPA's risk assessment, claiming the agency "overestimates" environmental risks. The company stated, "DuPont believes that the stated buffers to non-target aquatic areas and non-target terrestrial areas are not necessary to mitigate off-target movement of aminocyclopyrachlor end-use products ..." Further DuPont continued, "Addition of buffers to aminocyclopyrachlor end-use products will result in lessened utilization of the products.."

DuPont instead requested the agency stick to the generic label language currently used on existing products. Following this request, EPA revised its initial recommendations, removed language requiring 50 foot buffer strips to protect water and non-target plants, and nozzle and wind speed restrictions, retracted disclaimers that the product has a high potential to contaminate months after application, and replaced these more protective statements with generic label language.

With less protective environmental hazard language and restrictions on product labels, and a conditional registration in place, there are now millions of dollars' worth of damaged or dead trees dotting the Midwest and East Coast of the U.S., with many more unknown incidents of Imprelis contamination, which may take years to manifest or contain.

Dead Trees and Regulatory Fallout

Once reports of angry consumers and damaged trees became known, DuPont issued a letter on June 17, 2011 to pest management professionals cautioning against the use of Imprelis where Norway spruce or white pine trees are present or close to a treated area. EPA sent a letter to DuPont on August 3, inviting DuPont to meet to discuss implementation of a "Stop Sale, Use, or Removal Order." It urges the company to make public all records or other documents regarding scientific studies conducted on Imprelis. It states that EPA is uncomfortable with the amount of registration information DuPont claimed as confidential business information (CBI) under FIFRA. According to the letter, "EPA believes that the public interest demands that this information be made publicly available as soon as possible and, therefore, EPA strongly encourages DuPont to reconsider its CBI claims for these studies, especially for the phytotoxicity studies related to effects on trees." The next day, DuPont suspended sales of Imprelis and announced that it will soon conduct a product return and refund program.

Section 13 of FIFRA allows EPA to remove from the market any products found to be "in violation of any of the provisions of this Act." Using this authority, EPA stated that the product was misbranded and issued a "Stop Sale, Use, or Removal Order" to DuPont on August 11. Even though EPA was aware that aminocyclopyrachlor could pose a danger to the environment due to its high mobility and persistence, especially to non-target species and in spite of its retraction of more protective environmental label statements on aminocyclopyrachlor products, the agency states it "is investigating whether these incidents are the result of product misuse, inadequate warnings and use directions on the product's label, persistence in soil and plant material, uptake of the product through the root systems and absorbed into the plant tissue, environmental factors, potential runoff issues or other possible causes."

With the loss of hundreds of trees, some as tall as 30-50 feet, and some with historic or sentimental value, several lawsuits against DuPont are now pending.