



**US Composting Council**

**Compost: Nature's Way to Grow!**

**Officers**

**President**

**Lorrie Loder**  
Synagro

**Vice President**

**Rod Tyler**  
Filtrex International, LLC

**Treasurer**

**Patrick Geraty**  
St. Louis Composting

**Secretary**

**Brian Fleury**  
WeCare Organics, LLC

**Past President**

**Frank Franciosi**  
Novozymes North America

**Board of Directors**

**Sally Brown**

University of Washington

**Matt Cotton**

Integrated Waste  
Management Consulting

**Ron Alexander**

R. Alexander Associates

**Rhodes Yeppen**

Novamont North America, Inc.

**Wayne King, Sr.**

ERTH Products

**Michael Whitt**

Shakopee Mdewakanton  
Sioux Community

**Heidi Ringhofer**

Western Lake Superior  
Sanitary District

**Paul Sellew**

Harvest Power, Inc.

**Chuck Wilson**

A-1 Organics

**Jeff Ziegenbein**

Inland Empire Utilities Agency

**Board Member**

**Emeritus**

**Eliot Epstein, Ph.D.**

Epstein Environmental  
Consultants, LLC

**Executive Director**

**Lori Scozzafava**

February 18, 2014

OPP Docket EPA-HQ-OPP-2013-0740 Case # 0096  
Environmental Protection Agency Docket Center  
1200 Pennsylvania Ave. NW.  
Washington, DC 20460-0001

Re: Picloram re-registration Docket:EPA-HQ-OPP-2013-0740

The US Composting Council strongly opposes the re-registration of Picloram. As a persistent herbicide used to control broadleaf weeds in rangeland, grassland, right-of-ways, Picloram can easily end up in compost, so that when the compost gets used the residual Picloram can have severe deleterious impacts on non-target plants.

Picloram is very persistent in soils, with an average half-life of over 100 days, which means that it will still be present in soil 1-3 years after application.<sup>1</sup> That persistence leads to measurable amounts of Picloram on crops. Tolerances for Picloram on hay and forage crops are 400 ppm<sup>2</sup>, yet the "plant-safe concentration" in soils 4000 times lower, .01 ppm<sup>3</sup>. Moreover, the herbicide quickly passes through the digestive track of animals, so animals fed hay or straw with residues even 10 times less than the legal tolerance will have levels well above safe for susceptible plants. Picloram is degraded by soil microbes very slowly, and is known to be highly persistent after composting of picloram-contaminated materials.<sup>4</sup>

Persistent herbicides such as Picloram found in compost and soils threaten the economic viability of many the multi-billion dollar composting industry in the United States. Composters face liability claims, product testing, and financial losses. With every new incident of crop or garden damage due to herbicide-contaminated compost, consumer confidence in the use of compost will decline. Popular press articles with titles that include "killer compost" accelerate this decline.<sup>5</sup>

The most common pathway known for Picloram and other persistent herbicides making their way into compost is through manures and bedding, although grass clippings and other yard debris can be contaminated as well. Depending on the region, these compounds are used in variable amounts on horse pastures, hay and grain fields, golf courses, right-of-ways, and lawns. In fine turf establishment, seeding with straw is a common practice. After the grass germinates, the straw is often sent to a composting facility or is mulched in place. As a result, any herbicide residue will either contaminate the compost or the soil.

Warning labels on herbicide products are ineffective in preventing the contamination of composting feedstocks and compost. People do not consistently read or follow the label. Even if herbicide applicators are provided with clear and accurate instructions on the product's warning label, there is still a long chain of communication that must be followed from application personnel to land owners, harvesters of plant residuals, brokers, processors, distributors, resellers, retail customers (farmers), haulers, and finally compost facilities in order to prevent contaminated feedstocks from being received. It is virtually impossible to ensure that the integrity of this chain of communication will be maintained. Instructions on labels often appear complicated, they may not be read completely, or if they are, are not fully understood or not followed accurately. Though some applicators might follow instructions correctly, there are usually others downstream who receive treated residues and may be unaware of the initial labeling requirements. Others may be aware of labeling requirements but choose to ignore them. There are too many loopholes in the chain through which contaminated residuals can sneak through into composting facilities.

In farm use, the information on the use in a field often does not get communicated to the hay buyer. The hay buyer may sell the hay to a dairy or horse owner without communicating the use of the herbicide-related restrictions. The farmer may not communicate the information to the hauler, who brings the manure to a composter. In urban/suburban use, the applicator may not tell the home or business owner, who may then set the grass at the curb for collection.

Before Picloram or similar pyridine and pyrimidine carboxylic acid herbicides are re-registered, we believe several important safeguards must be put in place to protect the integrity of our nations ability to recycle large amounts of organic matter, a goal we know the EPA shares.

1. The US EPA should develop standards for maximum persistence that must be met in order for an herbicide to receive approval.

A standardized testing protocol should be based on data such as:

- how long the herbicide persists and at what concentrations
- what plants are susceptible and at what concentrations
- the dose-response relationship
- the no observed adverse effect level (NOAEL)

The only way to ensure that persistent herbicides are kept out of compost sites and compost is to require testing for compostability and persistence in compost and to reject the registration of any herbicide found to persist in compost at phytotoxic levels. The details of the testing protocols and research needed should be developed and agreed upon by the US EPA, independent research scientists, and the compost industry.

2. Herbicide manufacturers must be required to show that the product degrades during the compost process so there is no residual phytotoxicity to plants in the compost product.



In order to show this manufacturers must provide the results of third party peer-reviewed research that demonstrates no adverse impacts of herbicides on plant growth following the compost process. The length of time needed for completion of the composting process varies significantly based on technology used, attention to process management and the factors that govern decomposition, and end markets which in some cases call for immature compost that is not fully stabilized. The compost industry should provide input as to the appropriate time and methods required for the testing protocol to insure the safety of compost.

3. Testing for Picloram must be available widely.

Currently the ability to test for Picloram at the minute levels at which it can have an impact is extremely limited. There is research and development underway to develop more reliable and available test methods.<sup>6</sup> The test methods should be capable of consistently and reliably determining the concentration of the persistent herbicide in expected matrices and feedstocks. The test methods must detect limits known to impact sensitive garden plants. Commercial labs should be required to show proof of proficiency for extraction and analytical procedures developed.

We note that EPA's own Environmental Fate and Ground Water Branch recommended against reregistering picloram in 1995 due to the herbicide's persistence in soil, mobility in water, toxicity, threat to aquatic and terrestrial plants and animals, and high calculated risk quotient. This recommendation was not followed in the Reregistration Eligibility Decision<sup>1</sup>. With this new recognition of the downstream impacts of Picloram through the collection and processing of organic residuals, it is time to follow that recommendation.

The US EPA should not approve the registration of Picloram and other herbicides that persist in compost at concentrations that are toxic to plants and crops. The environmental and financial risk to the multi-billion dollar compost industry is too great to do anything less than change the registration process and so that herbicides cannot persist in compost at phytotoxic levels. If this action is not taken, environmental damage and financial losses will continue to escalate for composters, the compost industry, home gardeners, and industries that use compost including commercial agriculture, horticulture, and landscaping.

The US Composting Council (USCC), a 501(c)6 Trade and Professional Association, is the only national organization in the United States who's mission is the development, expansion and promotion of the composting industry. The USCC achieves this mission by encouraging, supporting and performing compost related research, promoting best management practices, establishing standards, educating professionals and the public about the benefits of composting and compost utilization, enhancing compost product quality, and developing training materials for composters and markets for compost products. The USCC has over 800 member companies, including private and municipal

compost producers, equipment manufacturers, product suppliers, academic institutions, public agencies, nonprofit groups and consulting/engineering firms.

The USCC looks forward to working with the EPA to achieve our mutual goal of maximizing the recycling of wasted organic resources and helping to reduce the nation's waste stream to near zero. Insisting the herbicides available to farmers and land caretakers cannot persist to the point that they devalue the compost manufactured from these organic resources is a critical piece of achieving this goal.

Respectfully submitted,



Lori Scozzafava  
Executive Director

---

<sup>1</sup> Cox, Caroline, 1998, Journal of Pesticide Reform, Spring 1998, Vol.18, No. 1

<sup>2</sup> CFR Title 40, Chapter I, Subchapter E, Part 180, Subpart C, Section 180.292 downloaded 2-13-14 from <http://www.law.cornell.edu/cfr/text/40/180.292>

<sup>3</sup> Michel, Frederick, and Douglas Doohan, 2003, Clopyralid and Other Pesticides in Composts, OSU Extension Factsheet AEX-714-03

<sup>4</sup> Recycled Organics Unit, 2007, Persistent Herbicides Risk Management Program, 2<sup>nd</sup> Ed, Research Report and Recommended Action Plan.

<sup>5</sup> Sullivan, Dan, 2013, Killer Compost Update: Herbicide Damage Still a Major Problem, Mother Earth News, February/March 2013

<sup>6</sup> Coker, Craig, 2014, Testing For Persistent Herbicides In Feedstocks And Compost, BioCycle January 2014, Vol. 55, No. 1, p. 31