

# What's Up With Clopyralid in Compost?

By BRUCE KIDD, *Dow AgroSciences*

(Editor's Note: Paul Diegnau, CGCS, Keller Golf Course, forwarded this article to Brian Horgan's new turf website [www.turf.umn.edu](http://www.turf.umn.edu) and we felt it was worth reproducing in Hole Notes. Recently, an issue has surfaced regarding the herbicide Clopyralid (Confront) and composting on the West Coast. Below is a copy of an e-mail from Bruce Kidd of Dow AgroSciences to Mr. Larry Stowell of Pace Consulting. Mr. Kidd may be reached at Dow AgroSciences, 39962 Via Espana, Murrieta, CA 92562 or by e-mail at [bekidd@dow.com](mailto:bekidd@dow.com).)

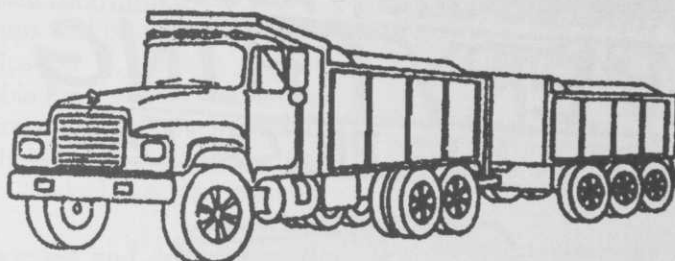
You may have heard about a developing issue concerning detection of the herbicide active ingredient, clopyralid, in compost. Clopyralid is manufactured by Dow AgroSciences and contained in several products including Confront, Lontrel, Transline, Millenium and more. Here's what's going on:

**Clopyralid is active via foliar and root uptake on a narrow spectrum of broadleaf plants.** The half-life of clopyralid in soils varies widely depending on soil type, temperature and biological activity. Microbial activity is essential to degrade clopyralid in soils. Turf clippings treated with clopyralid may contain ungraded residues of the herbicide. Recycled into the turf, clopyralid may then remain available to control weeds like clover and dandelion. When treated clippings are recycled into landfills, and greenwaste is processed into compost, the degradation pathways for clopyralid are disrupted. Specific microbes present in the soil

that degrade clopyralid are either not present or are killed during the composting process. The result is that trace amounts of clopyralid may pass through the composting system and be present in the finished product. When this is compost used in vegetable gardens, traces of clopyralid as low as 10 ppb have been observed to caused injury to a few susceptible garden vegetables such as tomatoes and beans. While there have been no reports of vegetable injury yet in California, several instances were reported in Washington state. This has led to calls from the compost injury to restrict the use of clopyralid-containing herbicides to protect the integrity of compost.

The problem of clopyralid persistence in compost is currently under extensive scientific review by Dow AgroSciences, University researchers and the compost industry. Unfortunately, news of the problem has also been picked up by the media, resulting in the appearance of numerous inflammatory articles online and in the editorial pages of newspapers such as the LA Times. While much of the reporting has been fair, numerous inaccuracies have been perpetuated and the perception of a widespread problem has escalated significantly. Last week, Washington State cancelled the use of clopyralid on residential lawns, but allowed its continued use on golf courses and other turf areas where clippings

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## Clopyralid—

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are not collected for recycling. I don't want to predict what will happen in California, but it is quite likely that a similar action will be taken here as the state acts proactively to prevent the problem from occurring.

In general, the compost industry has behaved very responsibly as the problem came to light, and continues to work with Dow to determine appropriate solutions. The question of what's in compost is a very sensitive matter, due to the many unknown components that enter the urban recycling stream and become part of the composting process. Heavy metals, plant and human pathogens, and various "biosolids" ( a euphemism for human and animal waste) all have to be dealt with at levels far higher than a few parts per billion. A great many compromises have to be made in order that the greater good of recycling be achieved.

If you or your customers have questions about this issue, please feel free to contact me. I can refer you to Dow's regulatory group if more information is required. Here are a few facts I'd like to leave you with:

\* This is not a human health issue, nor a groundwater or environmental contamination issue. Clopyralid in compost is an issue solely due to the phenomenal activity of clopyralid at extremely low rates on highly sensitive plants species, some of which are weeds, and some of which happen to be common garden vegetables.

\* For clopyralid to be an issue in compost, turf clippings must first be collected and sent to a compost facility. The vast majority of golf courses, and most parks, do not collect and recycle their clippings, but instead mulch them back into the turf, where clopyralid can continue to do the job it was placed there to do.

### FACTS ABOUT CLOPYRALID

\* To the best of our knowledge, there has not yet been a single report of plant injury due to clopyralid residues in compost in California.

\* Clopyralid residues have been detected at 11 ppb one time in unfinished greenwaste from Miramar landfill in San Diego County, but repeated tests did not find any additional detection of clopyralid.

\* Recent tests by the City of Los Angeles on its greenwaste did show a positive reading for traces of clopyralid.

\* Once compost is added to the soil, the degradation process for clopyralid presumably continues until harmless levels are achieved.

\* When used for weed control in turf, clopyralid is used at lower rates, less frequently, and with greater safety to the turf and to the applicator than other broadleaf weed control products.

For more information, you might also want to log in on the web site of the California Integrated Waste Management Board, [www.cawmb.ca.gov](http://www.cawmb.ca.gov) and follow the links.

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