Chlorpyrifos re-assessment continues to move forward

By ANDREW OVERBECK

With the initial public comment period completed, it is now up to the Environmental Protection Agency (EPA) to decide what use restrictions, if any, to place on the widely-used organophosphate chlorpyrifos. In the coming months, the EPA will evaluate the comments it has received from end users, industry, and environmental groups and then will release a revised risk assessment that will likely include proposed mitigation measures.

As a group, golf course superintendents have been vigilant in their support of chlorpyrifos, known to them as Dursban and an effective method to combat cutworms and other pests. Many do not want to see Dursban go the way of Diazinon, which was banned from use on golf courses in the late 1980s.

"Diazinon was the first choice and when it was banned, superintendents turned to Dursban," said Terry Buchen, president of Terry Buchen Golf Agronomy International in Williamsburg, Va.

"We have had significantly more comments sent in with chlorpyrifos than on other compounds that have gone through the process," said Tim Mantisco, manager of government and public affairs at Dow AgroSciences. "A good amount of these have been from superintendents ... the Golf Course Superintendents Association of America (GCSAA) has done a good job to get the word out about how the process worked and what was at stake. We have had great user-group response."

Through its government relations department, the GCSAA has been instrumental in getting the word out. "We are waging an intensive war," said Carrie Riordan GCSAA government relations manager. "We sent out e-mails to our 600-person government relations network and all of our 101 chapters and their ..."

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New courses

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Saying that "market forces, economic forces and the highest and best uses of property dictate what developers will do," Singer said: "There are a lot of 18-hole facilities now. You might see more alternative facilities of all different types and configurations.

"What should be done is highly localized. But, certainly, all types of facilities that cater to all different levels of skill, ability, time commitment, willingness to participate, etc. have to be considered as part of that equation."

Because of the onslaught of new 18-hole facilities, Singer said a number of nine-holers that have been expanding to 18 the last few years.

Construction was "equally distributed regionally" around the country, Singer said, basically proportionate to population.

LaFoy thought golf course development has also received a boost because of positive feelings among the public concerning the industry's sensitivity to the environment.

"I give superintendents and architects a lot of credit," he said. "One thing we've done that is telling, in the Northeast in particular, is showing we can build environmentally friendly and safe golf courses."

Another change will not come easy.

"It is one of our primary insecticides. I am familiar with it and I have never looked into using anything else because I have always had good results," said Carl Tegetmeyer, superintendent at Holiday Hills Resort and Country Club in Branson, Mo.

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No-mow grass

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After the other half, that would be great," said Mangum.

According to Neff, it may be possible to dial in exactly the amount of growth you want. "These grasses need to grow, or you will never be able to propagate them," said Neff. "There are promoters that determine where and when the gene is expressed, so you might be able to hook up this gene with a different promoter and regulate its expression with the application of chemicals."

Cutting down on growth, however, may not mean a drastic reduction in the frequency of mowing.

"To a large extent, mowing is done not only to combat top growth, but to make the turf look tidier. You may be able to get away with mowing only four times a year, but in between that, the turf is going to look pretty ratty," said Dr. Doug Brede, research director for Jacklin Seed.

The future

Neff and his colleagues are working on transferring the gene to rice plants and expect that it will be five to 10 years before a modified turf variety is available on the market. Among his concerns are human and animal safety, disease resistance, regulatory issues and marketability. The risks of hybridization with native plant species will also be studied in the coming years.

"We will be looking at how the gene works in a number of different plant species, including trees and grasses," said Neff. "Once we have accomplished that, we hope to attract a private biotech company that is interested in pursuing this further and actually moving it into the varieties of grass that people would be using. Then we can get into product-driven research."

Turf scientists, meanwhile, remain cautiously optimistic. "Until they get some of these things out of the lab and see what they look like in practice, I am not going to invest my money in it just yet," Brede said.

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