

NEW APPROACHES TO WEED PROBLEMS WITH CONFRONT* AND GALLERY*

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Most all professional turf managers in Michigan use herbicides to control broadleaf weeds. Until recently there were only a few methods available, those being the conventional 2,4-D containing postemergence herbicides and several preemergence herbicides that would pick up oxalis and spurge. DowElanco has added two new, unique products for the broadleaf weed control market.

The first new herbicide is CONFRONT, a combination of Triclopyr and Clopyralid, both in the amine form. Triclopyr's activity is excellent on hard-to-control weeds such as wild violet, oxalis and ground ivy, while Clopyralid, a new compound in the turf industry, performs well on clover, dandelion, plantain and thistle.

To better understand the product CONFRONT, I will explain a bit of it's historical background. In 1986, the National Cancer Institute published and printed the "Kansas Farm Worker" study in the Journal of the American Medical Association. The study claimed to link non-Hodgkins lymphoma, a rare type of cancer, with elevated use of phenoxy herbicides, including 2,4-D. Although the study was conducted by the National Cancer Institute, the results were believed by the Lawn Care Industry and independent experts to be overstated. However, the political ramifications still existed. The Lawn Care Industry was divided on the issue in terms of how much respect to give the study, and its credibility.

The issue was based on lawn care applicators' continuous use of phenoxy herbicides throughout the season. The National Cancer Institute's study indicated a correlation between the use of phenoxy herbicides in excess of 20 days or more per year and the increase in non-Hodgkins lymphoma. The industry was very concerned, and at that time there were no clear alternative products for broadleaf weed control in turf. The Dow Chemical Company and the 2,4-D Industry Task Force managed to disseminate positive information from experts who reviewed the study and rejected the conclusions released by the National Cancer Institute.

In 1987, university researchers initiated studies to find alternative broadleaf herbicide materials. The primary

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objectives were to find a non-issue intensive herbicide with acceptable efficacy. The combination of Triclopyr and Clopyralid in CONFRONT performed extremely well. This combination would provide the turf industry with an option where 2,4-D/phenoxy herbicides may be unacceptable for any reason.

In 1988, the controversy was substantially calmed. The new scientific reviews favored 2,4-D and agreed that the study results released by the National Cancer Institute were overstated. Although the Lawn Care Industry was at first divided over the controversy, with further education everyone has become more comfortable with the issue, and the use of phenoxy herbicides has stabilized.

CONFRONT received federal registration in April, 1989. Registration was completed in under six months, which is record time for product registration within Dow. CONFRONT exceeded many of the original objectives with consistent weed control, broad spectrum, fast legume knockdown, and high unit activity. Labeled rates specify one to two pints per acre, as compared to most other herbicides at three to four pints per acre.

DowElanco's main objective is to generate trial usage by turf managers in sensitive states where an alternative herbicide is needed. We also want to develop comfort with product efficacy. Sensitive accounts might be schools, hospitals, government buildings, universities, parks/recreational areas, and certain residential areas that you currently service. We want to assure you of DowElanco's continued commitment to 2,4-D. Customers may think that because DowElanco has developed a product alternative, we no longer support 2,4-D. This is simply not true; DowElanco has been the mainstay in supporting phenoxy herbicides, including 2,4-D in the U.S., and we will continue to support them actively. Scientifically, 2,4-D has been given a clean bill of health, and it is probably the most thoroughly researched pesticide in the world today.

To date, there has not been a conclusive link to non-Hodgkins lymphoma and human exposure to 2,4-D. DowElanco along with the Industry Task Force will continue to review new studies when available. CONFRONT is basically an alternative broadleaf herbicide for the professional turf manager to desires to use a non-phenoxy approach.

Now let's switch gears a bit, and discuss another approach for the control of broadleaf weeds. As I stated earlier, several preemergence annual grass herbicides have been effective in controlling oxalis and spurge. But what about the other broadleaf weeds?

GALLERY is a new selective preemergence herbicide for the control of over 40 broadleaf weeds, with suppression of eight annual grasses. Isoxaben, the active ingredient in GALLERY, is the only material available that will control this vast number of

weeds preemergently. GALLERY is a dry flowable formulation which is applied onto the turf, becoming soil active after rainfall or irrigation. The treatment is stable on the soil for up to 21 days, but effectiveness will be improved by additional precipitation. GALLERY is absorbed by the weed roots and is translocated to the stems and leaves, disrupting development. Susceptible weeds simply do not emerge. Labeled rates range from 0.5 to 1.0 lb a.i./acre. GALLERY is also labeled for use on landscape and container grown ornamentals, groundcovers, nursery stock, non-bearing fruit/nut crops and vineyards, and also noncropland areas.

Environmental tolerances are extensively researched for new products entering the market. GALLERY is highly unlikely to be an issue in ground water, due to the low water solubility and high soil adsorption of Isoxaben. GALLERY also carries a caution statement (LD50>10,000 (Rat)).

GALLERY is a preventative approach to broadleaf weed control in contrast to the typical curative treatments. Applications can be applied in fall or early spring, prior to weed seed germination. If existing broadleaf weeds are present, a postemergence broadleaf herbicide can be tank-mixed to eradicate the area. This pre/post combination is extremely effective for season-long control. GALLERY can also be tank-mixed with preemergence herbicides to increase annual grass control.

A number of Michigan Lawn Care and Landscape firms are currently testing GALLERY in highly visible "callback" areas to increase customer satisfaction and retention. Turf areas that are hard to treat and mow are also excellent sites to use GALLERY. Cost is the main factor involved in choosing a product for broadleaf weed control. GALLERY is dramatically more expensive than treating with postemergence herbicides, but you have to remember the number of applications it takes each season to achieve effective postemergence control. GALLERY is a new approach to reducing applications each season while providing a "clean" looking turf site.