

Old pesticide law now being applied to California courses

Recommendations in writing required before applications

California golf course superintendents are being subjected to a 16-year-old pesticide law that until now has been applied only to agriculture.

Since 1975, California golf courses have been required to have written recommendations for all agricultural-use pesticide applications. However, the local agriculture commissioners have not enforced this section of the code. City, county and state government agencies have had exemptions from needing written recommendations.

In 1989, however, a new law removed that exemption. All agriculture use pesticide applications — including golf courses — were affected.

Now, golf courses must have a written recommendation from an agricultural "pest control adviser"

Genetically engineered pesticides win conditional OK

The U.S. Environmental Protection Agency has given a conditional pesticide registration to two pesticides derived from biological organisms that have been genetically engineered using recombinant DNA techniques.

Both products, the M-One Plus Bioinsecticide and the MVP Bioinsecticide, are manufactured by Mycogen Corp. of San Diego, Calif. They will be used to control beetle and caterpillar pests.

Each pesticide consists of *Pseudomonas fluorescens* genetically engineered to contain a different delta endotoxin (toxic protein crystal) of *Bacillus thuringiensis* (B.t.) The genetically engineered micro-organisms produce the delta endotoxin crystal during growth in a fermenter under controlled conditions.

Subsequently, the *Pseudomonas fluorescens* organisms are killed, resulting in B.t. toxin crystal encapsulated by the dead *Pseudomonas fluorescens*. The dead *Pseudomonas fluorescens* serves to protect the B.t. endotoxin against ultraviolet light and therefore to lengthen the effective life of the B.t. toxin.

To be effective, the targeted insects must eat foliage which has been sprayed with the pesticides. The insects stop eating shortly after ingesting the toxin, and death usually occurs one to five days later. The pesticides work by paralyzing the gut of the insect.

EPA believes M-One Plus and MVP will not pose an unreasonable risk to humans, birds, mammals or other non-target vertebrates.

(PCA) before applying an agricultural pesticide. Only a PCA can write a recommendation

"Recommendation" means the giving of any instruction or advice on any agricultural use as to any particular application on any particular piece of property.

Each recommendation must contain, when applicable:

1. Owner or operator of the property of site to be treated.

2. Location of the site to be treated. The location doesn't need to include the township, section and range. It can be any description understand-

able by the adviser, grower and applicator.

3. Commodity, crop, animal or site to be treated.

4. Total acreage or units to be treated.

5. Identification of the pest or pests to be controlled by their recognized common name.

6. Name of each pesticide or device recommended, or description of the method recommended.

7. Dosage rate per acre, or other unit, dilution rate, and volume per acre.

8. Suggested schedule, time or

conditions, and label restrictions on use or disposition of crop or crop by-products.

9. Safety interval and posting requirements, if established, for the pesticide or combination of pesticides recommended.

10. Warning of the possibility of damages by the applications from hazards known to exist.

11. The criteria used to determine the need for the recommendation.

12. Certification that alternatives and mitigation measures that would substantially lessen any significant

adverse impact on the environment have been considered and, if feasible, adopted.

13. Signature and address of the person making the recommendation, date, and name of employers, if any, he represents.

PCAs must have licenses. A PCA is defined as one who provides recommendations concerning any agriculture use; one who offers himself as an "authority" on any agricultural use, one who acts as a general adviser on any agricultural use who solicits services or sales outside a fixed place of business.

Some big names have already started arriving for the 1992 PGA

Hosting one of golf's four major championships is a huge job. Just ask Superintendent Tom Van De Walle of St. Louis' Bellerive Country Club — site of the 1992 PGA Championship.

"I came here in 1986 with the major responsibility of getting Bellerive ready for the PGA," says Van De Walle. "Six years sounds like a lot of time, but we've rebuilt greens, tees, bunkers, fairways — even redesigned some holes entirely — and we still have a lot left to do.

"John Deere has played a big role in our success. We mow greens with the John Deere 22s, fairways with a 5-reel 3325 Turf Mower and tees and intermediate rough with a 3-reel 856 Reel Mounted Mower. The condition of the course has improved dramatically since we started using these mowers.

"We've converted almost all our fairways and tees to zoysia — a grass that's great to play on but tough to mow. The John Deere 3325 and 856 are the only mowers we've found that can handle it. Their cutting units stay true and don't let the turf get puffy. Plus, the single lever lift on the 3325 improves our fairways by allowing us to cross-cut more easily. In fact, the 3325 has done so well, we plan to buy another one next year."

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Tom Van De Walle of St. Louis' Bellerive Country Club is using a fleet of John Deere reel mowers to help him prepare for the 1992 PGA Championship.



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