

# Diazinon in Texas waste water prompts education blitz

*From the 'it could happen in your town' department, a report that shows how much homeowners need the help of trained professionals.*

by TERRY McIVER,  
Editor-in-chief

**FORT WORTH, TEXAS—** Homeowners here who over-apply diazinon to combat fire ants have put this city's waste water supply in non-compliance with EPA-approved threshold levels.

The city water department and extension personnel have beefed up an education campaign to stop the abusive application and disposal practices among residents.

Focus groups, phone calls, flip-charts, and direct mail campaigns have all been used to survey the public and warn them of the contamination. The Environmental Protection Agency has held off on leveling \$25,000/day fines, thanks to the city's efforts to solve the problem.

Advocates of organic lawn and garden products are calling for a ban on the pesticide, while others want to spend \$80 million to upgrade the city's water treatment plant.

## Go through it like water

Dottie Woodson, horticulturist with the Tarrant County Cooperative Extension, says homeowner focus groups and phone surveys have shown a high level of misunderstanding of proper pesticide application and disposal practices.

"They were asked, 'How often do you use diazinon?' Some said every two weeks, some said monthly," says Woodson, who adds that people admitted to using diazinon once a week to kill fire ants, a serious insect pest problem in the South and Southwest.

Mary Gugliuzza, public education specialist for the Fort Worth Water Department, says the surveys and focus groups with Fort Worth residents revealed that 16 percent of them apply pesticides at least every two weeks.

"At least 36 percent are applying it on a monthly basis," says Gugliuzza. "People read the label directions, but they don't believe them."

"One of the things learned in the focus groups

**DON'T pour pesticides down the drain.**

When you pour pesticides down sinks, tubs, toilets, or storm drains, they end up in Oklahoma's lakes, ponds, rivers, and streams.

- Read pesticide container labels and follow application directions to the letter.
- Buy only the amount you need.
- Use pesticides sparingly.
- Rinse containers and equipment outside and away from drains.
- Give unwanted pesticides to someone else for their use.
- And NEVER pour pesticides down sinks, tubs, toilets, or outdoor storm drains.

To learn more about environmentally friendly pesticide use and alternative methods of pest control, call your County OSU Extension office.

Oklahoma Clean! OSU

Distributed by Oklahoma State University Division of Agricultural Sciences and Natural Resources Oklahoma Cooperative Extension Service

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Oklahoma's Cooperative Extension used this poster to teach the public proper pesticide disposal practices.

was a lot of people pour [diazinon] down the sewer, in their toilet or down their kitchen sink," says Woodson. "They don't understand that it goes through the sanitary sewer.

"One of the target things we've come up with is a handbook called the *Arrest/Pest Handbook*," says Woodson. "It explains the benefits of earth-kind gardening. It will be on display in a flip chart where pesticides are sold. They want to make it into a pocket guide. The salespeople can use this to answer questions."

Guidelines for residents include:

- ▶ don't apply products before rain storms;
- ▶ don't water your lawn to the point of run-off after you've applied products;
- ▶ don't get half the chemical on your driveway and street;

## Diazinon's history

—first synthesized by Geigy in 1951. The product's toxicity was reduced significantly since the 1970s due to changes in the inert ingredients used in the formulation.

—Reregistration of diazinon in 1993 cost \$28 million.

—The product has been banned from use on golf courses and sod farms since 1983 due to bird kills.

—Companies making most of the diazinon prod-

ucts in the U.S.: Ciba; Makhteshim (Israel) and Nippon Kayaku (Japan).

—Advantages: a relatively low acute mammalian toxicity. Diazinon is non-carcinogenic, non-mutagenic, non-teratogenic, is not a reproductive toxin and does not cause delayed neurotoxicity.

—A broad-spectrum insecticide, diazinon is economical and effective at low rates.



The fire ant is a relentless marauder. Swarms have been known to attack newborn calves.

▶ don't used them unless necessary.

Gugliuzza says a "Clean Water Badge" campaign is being developed with the Boy Scouts, Girl Scouts and Camp Fire Girls.

### Long term challenge

Public misuse of pesticides is nothing new to Fort Worth. As far back as 1989, the problem has see-sawed between various degrees of severity. In that year, pesticide levels in waste water

were too high in 10 out of 12 months. By 1994, the city's non-compliance improved to two months, but was back up to five in 1995, when there was a cutback in education programs.

Another Texas town, Greenville, solved its recent non-compliance problem with an aggressive campaign to correct abuses in chemical disposal. In all, up to 23 cities in Texas are out of compliance.

### One solution: don't buy it!

Mike Merchant, extension entomology specialist with the Fort Worth Cooperative Extension, says the successful educational program in Greenville, Texas "went so far as to encourage people not to buy diazinon, to use other alternatives.

"At one point in the beginning of the campaign," says Merchant, "they required every pesticide purchase to be accompanied with a flyer explaining why

the city was having problems with that particular pesticide, and encouraging people to use alternatives. When [the campaign] started being successful, they backed off on that; they don't actually require that now. But people in that community are as aware as any community about the problems the city has with diazinon."

Merchant says the EPA is sympathetic to the city's plight.

"Nobody wants to hurt the city, and cost it lots of money," explains Merchant. "[The EPA] sees they're making a lot of progress with their public education campaign."

Government standards on pesticide levels are "very tough right now," says Merchant, and new testing methods are more rigorous.

"In 1990 they implemented a bio-monitoring standard. They put macro-invertebrates, like fish, minnows and water fleas in water

**Merchant:**  
*Government standards 'very tough.'*



[that contained pesticide]. If [the invertebrates] lived, they don't have to do any further testing. But if they can't reproduce, or if they die, the

city has to go back and do further testing. The bio-monitoring was developed to quickly screen clean water and to raise a red flag if there was anything that might be harmful to macro-invertebrates or any kind of aquatic life."

According to Merchant, the EPA considers water to be contaminated at .35 parts per billion. "That's about 9 ounces of diazinon concentrate in 100 million gallons of water," says Merchant. "That's about the amount of water Fort Worth processes in a day."

**LCOs: 'We told you so'**

The small victory for professional applicators is evident. The professional turf care segment of the green industry has long maintained that homeowner misuse of pesticides is far worse than any misuse by a trained applicator.

"We had a focus group of lawn care professionals come in to talk to us, and they knew exactly what the problem was," recalls Woodson. "Customers come to them and say, 'you have to put down more diazinon because we still have fire ants.' Of course, the lawn care operators refuse, because they want to obey the law."

**Teach your customers**

Professional applicators in the state have been urged to help educate the public about IPM and proper product usage; obey the law themselves and apply products

**Thirty-six percent of people surveyed said they apply diazinon monthly.**

only when needed; and use Integrated Pest Management (IPM) techniques in their work.

"Every pest control operator we contacted, every land-

scaper, every nurseryman, are all willing to help educate the public," says Woodson.

"We are proceeding with our public education efforts, trying to educate the public

on the alternatives to pesticides, and that they should only use them as a last resort," says Gugliuzza. "And when you do use them, read and follow label directions." □

## TG-CL to absorb Barefoot

ServiceMaster, Downers Grove, Ill., announced on Dec. 5, 1996, it had made an offer to buy Barefoot Inc., based in Worthington, Ohio.

When the transaction is complete, Barefoot operations will be merged with those of TruGreen-ChemLawn, the nation's largest lawn care company and a subsidiary of SM.

SM has offered Barefoot stockholders \$16 per share in either cash or an equivalent amount of SM shares, about \$230 million.

The boards of directors of both companies have agreed to the transaction. Still it requires approvals from the Securities and Exchange Commission, from Hart-Scott-Rodino anti-trust, and the completion of a final due diligence by SM. Few people, however, expect problems.

"We are excited about combining the nation's two largest lawn care companies with the objectives of creating expanded market opportunity, economies of scale,

and productivity improvements," said SM Chief Executive Officer Carlos H. Cantu.

"The experience we have had in successfully assimilating a number of other companies in recent years will help us accomplish these objectives."

Cantu added: "We also look forward to offering Barefoot's 500,000 customers the additional high-quality services that are currently enjoyed by the 6 million customers of the ServiceMaster Quality Service Network."

Patrick Norton, Barefoot Chief Executive Officer said, "Barefoot is joining with the nation's largest lawn care company and one of the leading service companies in the country. ServiceMaster has a reputation for outstanding customer service,

with an emphasis on training and developing people."

Barefoot is the nation's second largest lawn care

company with 500,000 customers in 103 markets. It has 53 company-owned operations, 50 franchises and had revenues of \$125 million in 1996.

TruGreen-ChemLawn is the nation's largest lawn care company, serving 2.5 million customers

through 260 locations. It reported sales of \$630 million last year.

TruGreen-ChemLawn is one of seven companies making up ServiceMaster Consumer Services, Memphis, Tenn. ServiceMaster, which does business in the U.S. and in 30 other countries, had revenues of \$4.5 billion last year. □



**Barefoot CEO Patrick Norton joined Barefoot in 1979 and became president in 1985.**