

# LAWN CARE INDUSTRY

## Degree day = D-Day for turf pests

**A leading entomologist says turf managers, with some simple temperature calculations, can anticipate insect problems.**

■ Can you plot the timing of your turf insecticide applications while reading the morning newspaper?

Yes. And it may help you control turf-damaging pests better than you do now, particularly if you get off your keester and balance your morning forecasting with representative lawn inspections, too.

The process, explained by Dr. Dave Shetler at the Ohio Turfgrass Conference, can translate into less insect damage to clients' lawns, fewer customer complaints and, hopefully, fewer service calls.



**Shetlar: Knowing degree days can reduce service calls**

Temperature is the key.

The life cycles of all insects are, in one way or another, linked to temperature.

That's what you'll be plotting from the morning paper, temperature, more specifically a measurement of temperature known as *degree days* (DDs). Certain turf pests become active during the course of a growing season when certain DDs are reached.

What you want to do is add up DDs as the season progresses, then inspect representative lawns as a particular turf pest's DD range arrives. If the number of pests—as determined by your inspections—reach a threshold you consider to be turf damaging, then it's time to use a control.

But how do we figure DDs?

Actually, there are several methods and all but one are somewhat sophisticated, says Shetler, a landscape entomologist at Ohio State University. Fortunately, the simple way of figuring DDs is accurate enough to predict outbreaks of most turf insect pests.

Shetler says he starts with a base of 50°F. Few insects develop below that temperature. He begins DD calculations on March 1 in

Ohio. (The further south you are, the earlier you should start calculating DDs.)

You can chart DDs in the morning over a cup of coffee in front of a newspaper, or get the previous day's high and low temperatures from the television or radio. Add the day's high and low and then divide the total by two. This gives you a crude average, but

### DEGREE-DAYS FOR SOD WEBWORMS AND WHITE GRUBS

Target pest	Base 50° F
Larger sod webworm (1st generation)	1050-1950
Larger sod webworm (2nd generation)	2600-3010
Bluegrass sod webworm (1st generation)	1250-1920
Bluegrass sod webworm (2nd generation)	2550-3010
Cranberry girdler	1700-2750
Northern masked chafer (1st adults)	898-905
Northern masked chafer (90% adults)	1377-1579
Southern masked chafer (1st adults)	1000-1109
Southern masked chafer (90% adults)	1526-1679
Japanese beetle (1st adults)	1050-1180
Japanese beetle (90% adults)	1590-1925

Source: Dr. Shetlar

### HOW TO FIGURE DDs FOR 7 DAYS

Day	1	2	3	4	5	6	7
Max. temp.	70	75	60	55	65	75	82
Min. temp.	40	45	40	35	45	50	54
Avg. temp.	55	60	50	45	55	63	68
Avg.-base	5	10	0	-5	5	13	18
DD (base 50°F)	5	10	0	0	5	13	18
Cumulative DD	5	15	15	15	20	33	51

Source: Dr. Shetlar

### ELSEWHERE

**Do-it-yourself people risks?, p. 74**

**On written contracts, p. 78**

**Composting: not a hobby, p. 80**

**Pre-paying for jump start, p. 82**

it's close enough. From this average, subtract 50°F, the threshold temperature.

If the remaining number is a positive number, it means insects have developed correspondingly. Record this number and add them daily as they accumulate. These are DDs, and the number will grow as spring settles in and summer approaches. If, for a certain day, you get a negative number, record a "0."

Shetler says temperature is an excellent

prediction tool because it's based on the biology of the insects, but it's not the total answer.

"Even though we have these degree-day models, some insects don't follow our idea of degree-day," says Shetler. "They may need other environmental requirements for them to become active."

For example, during the summer of 1988, which was unusually warm and dry, the DD model predicted the outbreak of masked chafer adults in the first week of

June. Instead, they didn't peak until the first week of July, immediately after one of the season's first rainfalls.

Shetler suggests that turf managers take the degree-day concept and meld it with their own observations and inspections. Then, he says, they should be able to develop application strategies that target specific insect pests when treatments will be most effective.

—Ron Hall

## Do-it-yourselfers: they're the risk

**This open letter to LM readers says everybody should play by the same rules: Either we all have to post and pre-notify or nobody should.**

■ To the editor:

LCOs have been successful in identifying themselves as "The Source" for information and expertise on home lawn care. In fact, a number of retailers are now introducing a four- or five-step program, which is just a copy of a basic professional lawn care program.

Because of this leadership position, the LCO also receives the "brunt" of, or is the target of, most of the anti-fertilizer and anti-pesticide crusade.

The LCO is required to post lawns following fertilizer and pesticide applications in some locales. Elsewhere, pre-notification is also required.

The LCO is responsible for identifying the products used in their respective programs. Instructions along with *dos* and *don'ts* are provided to the homeowner when applications are made. In many instances, Material Safety Data Sheets are given to the homeowner.

At the same time (generally unknown to the consumer) the LCO is constantly monitoring, measuring and calibrating to insure precise application rates, noting wind direction and velocities so that materials are applied accurately and precisely. Applicators use proper personal protective equipment while making applications and legally dispose of empty bags or containers.

Meanwhile, the homeowner can go to the retail outlet, purchase the products he or she thinks they need, go home and

apply these products with little or no concern (or thought) given any of the above restrictions or precautions. In most cases, they do not have to post or pre-notify while using the same products (chemistry) as the LCO!

If posting and/or pre-notification is required by the professional, does it make any sense to look the other way for homeowner applications? Seems to me that *everyone* making fertilizer and pesticide applications should be required to post or pre-notify, or *no one* should be required to post or pre-notify. I have never met an LCO who was opposed to abiding by these requirements. He simply wants and deserves the same considerations the homeowner applicator currently enjoys.

Actually, posting is really the easy part of the job. The real difference is much greater and should be the reason why homeowners hire lawn care professionals. Briefly, LCOs:

1) are properly trained/certified. They can correctly identify or diagnose the pest in question so that the proper product selection can be made. Further, the application is made at the right time and with equipment which has been correctly calibrated—no mess and no waste for the homeowner.

2) save time for the homeowner and negate the need for application equipment purchases and maintenance. The homeowner doesn't even sharpen the mower blade as recommended, let alone own and maintain the necessary application equipment.

3) handle problems as problems develop. Re-treatments are provided, generally at no charge. This is important because the homeowner has to make another purchase and sometimes ends up with partially filled bags which, after sitting in the garage for a few months, are thrown out with the garbage. Other times, in an effort to empty the bag, the material is applied at two and three times the recommended rate.

4) provide sound advice with mowing, watering and other cultural practices that better enable the homeowner to have a good-looking lawn.

To LCOs, I would say: "It is time to speak out or up for what you are really doing: providing a necessary service at a fair price in a professional (i.e. environmentally sound) manner."

To lawmakers: "Gather all evidence and base your long-range thinking on scientific fact."

—Ron Mau

Howard Johnson's Enterprises  
Milwaukee, Wisc.

## The beat of a different drummer?

**Developers of alternative lawn care programs say the message to clients should be agronomic, not anti-chemical.**

■ When the first winter storm blunders up the Sycamore-rimmed Wabash River Valley like a tired wet dog, it can bring curtains of wet, thumb-sized snowflakes. Or, just as likely, freezing rain.

That's when Route 25 in west central Indiana turns grim and dangerous.

Through summer and autumn, this