



# TURF

## REPORTS

PRESENTED BY **ENVU**

**envu**<sup>™</sup>



## TURF REPORTS PRESENTED BY ENVU



**H**ello!

We'd like to introduce ourselves, but you probably already know us.

That's because Envu (pronounced "in view") is a new vision for a company that's built atop the towering foundations laid by Bayer Environmental Science.

Our purpose? To advance healthy environments for everyone, everywhere. That's why we've brought along all the great products you depend on (over 180 trusted and well-known brands) as well as the visionary people you trust.

We're a partner that will work alongside you to advance your business by collaborating to come up with innovative solutions that will work for you today and well into the future.

Densicor, a DMI fungicide built to tackle the toughest diseases across golf courses, is a perfect example of the type of products we will strive to continue to bring to market.

This broad-spectrum solution offers both preventative and curative control for up to 28 days of the most challenging cool- and warm-season turf diseases, including dollar spot, brown patch, anthracnose, gray leaf spot, Microdochium patch, fairy ring and mini ring. In fact, it controls 14 different cool- and warm-season diseases.

Plus, it features all the qualities you need in a great fairway fungicide while also delivering powerful efficacy for greens applications:

- You can take advantage of a single, ultra-low use rate (0.196 fl oz/1000 sq ft or 8.5 fl oz/acre).
- One bottle treats six acres resulting in less time spent measuring, loading, and rinsing.
- Unlike many DMIs, which can lose their broad-spectrum appeal due to negative growth regulation and phytotoxicity when the weather heats up, Densicor delivers excellent cool- and warm-season turf safety under any environmental condition with or without plant growth regulators. This feature allows it to be applied up to three times per year on greens, tees and fairways with no concerns, including in the heat of the summer.
- Best of all it's affordable. Especially now, since you can stock up and save big on it along with Tetrino™ and all the latest innovations and agronomic solutions from Envu now through December 5th, 2022, during our Fall Solutions program.

There are a lot more exciting solutions like Densicor in store for the future, as well.

As our CEO, Gilles Galliou says, "as an independent industry leader with a laser focus on environmental science, we'll work together with customers and partners across diverse market segments to deliver world-class innovations that protect the spaces society and nature share today and in the future."

No wonder we can't wait to solve problems and develop new solutions together with you.

Find out more at [www.us.envu.com](http://www.us.envu.com)

ALWAYS READ AND FOLLOW LABEL INSTRUCTIONS.

Environmental Science U.S. Inc., 5000 CentreGreen Way, Suite 400, Cary, NC 27513.

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# DISEASE CONTROL: It's a regional thing

**F**or the second straight year, *Golf Course Industry* partnered with Envu for a “Turf Reports” examining how the industry controls disease. For the second straight year, one region exceeds others in devoting

time and resources to thwart potential threats.

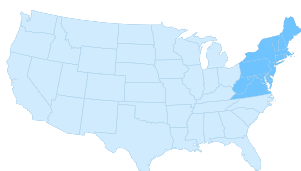
Superintendents in the Northeast spray and spend more to control disease, according to the numbers on the following pages.

How did we arrive at the numbers you're preparing to study?

*Golf Course Industry* collaborated with Signet Research, a New Jersey-based independent research firm, on a 20-question survey sent to a list of subscribers holding the title of superintendent, director of agronomy or assistant superintendent. The survey was distributed

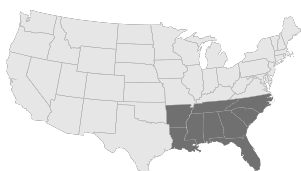
three times from Sept. 7 to Sept. 22. Results are based on 274 completed returns with a confidence level of 95 percent and sampling tolerance of approximately +/- 5.9 percent. Envu also sponsored the insect control report in the September issue.

## Where is your course located



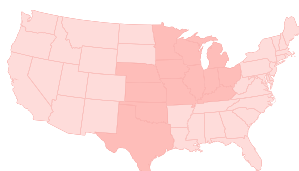
NORTHEAST

**24%**



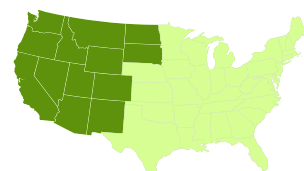
SOUTHEAST

**21%**



CENTRAL

**32%**



WEST

**16%**



CANADA AND ELSEWHERE

**7%**

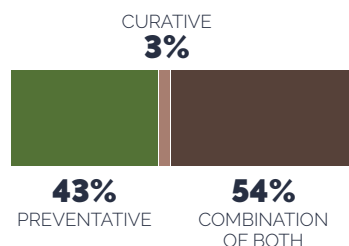
## Disease pressure in your region

	ALL	NORTHEAST	SOUTHEAST	CENTRAL	WEST
1 (NONE)	<b>1%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>7%</b>
2	<b>12%</b>	<b>1%</b>	<b>14%</b>	<b>8%</b>	<b>32%</b>
3	<b>56%</b>	<b>60%</b>	<b>47%</b>	<b>64%</b>	<b>50%</b>
4	<b>23%</b>	<b>31%</b>	<b>24%</b>	<b>24%</b>	<b>9%</b>
5 (SEVERE)	<b>8%</b>	<b>8%</b>	<b>15%</b>	<b>4%</b>	<b>2%</b>

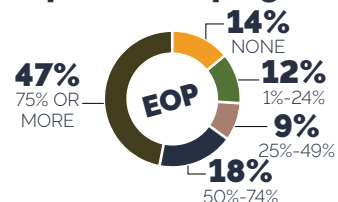
## Importance of fungicides to controlling disease

1 (DON'T USE)	2	3	4	5 (EXTREMELY IMPORTANT)
<b>1%</b>	<b>3%</b>	<b>17%</b>	<b>17%</b>	<b>62%</b>

## Description of disease control program



## Percentage of fungicides purchased as part of EOP program





# NORTHEAST

## FROM PRIVATE TO PUBLIC

**A**t this time last year, Andy Fries was still tending to a 100-acre private course where annual rounds hovered around 15,000 to 20,000. He was almost a decade and a half into his run there, felt comfortable and recognized every rhythm. But his three daughters — the youngest 9, the oldest 17 — were worth more time at home, and he moved seven miles down the road to Tashua Knolls in Trumbull, Connecticut, a 27-hole public facility that covers more than 250 acres and handled almost 70,000 rounds last year.

As is so often the case among courses in close proximity, the growing environs are “pretty similar,” Fries says, but there are plenty of little differences, especially among diseases.

“I hadn’t dealt with anthracnose in

many years at my other place,” Fries says, “but it crept up on me once or twice, and by the time I dialed up the chemicals, I could keep it in check. I dealt with summer patch at my old place, and I didn’t see any out here, as bad as the weather was.”

Another difference is what Fries works with in the plant protectant shed. He used to opt for mostly post-patents, but was greeted with shelves of name-brand products early-ordered last year by his predecessor. “I just had to relearn the rates and what they were best on,” he says. “I relied a lot on salesmen and colleagues” — including a prior Tashua Knoll superintendent who worked there for more than 16 years and who shared how he handled summer patch, anthracnose and other diseases. “Moving forward, I will continue to use name-brand stuff on

my greens and tees. I have 30 acres of fairways — I used to have 12 — so I will use some post-patents. I’ve had no negative things with post-patents, I’ve always had good success with them. I just have a budget now that to be extra-safe, I can rotate stuff a lot better.”

And, of course, there is the challenge of all those golfers. Fries, who turned 52 this year, sprayed in the dark for the first time just this season. “The volume of play and the earlier tee times have totally changed my thought process in terms of what products I put down and at what rates,” he says. “I tend to spray at the higher rates. It gives me that window so if I can’t get out the next week, it buys me the next six to seven days.

“You just have to be more efficient. You have to think further ahead.”

— Matt LaWell

**55.6**

**Acreage of turf treated with fungicides**

**5.9**

**Fungicides in greens rotation**

**4.4**

**Fungicides in fairways rotation**

**\$92,900**

**Fungicide budget**

### Top three potential disease concerns on greens

1. DOLLAR SPOT
2. ANTHRACNOSE
3. *PYTHIUM* ROOT ROT

### Top three potential disease concerns on fairways

1. DOLLAR SPOT
2. BROWN PATCH
3. *PYTHIUM* BLIGHT

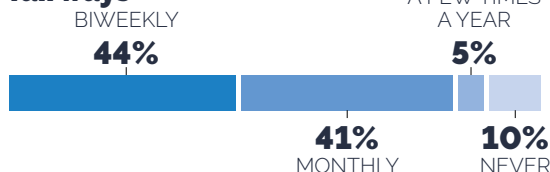
### Areas of course treated with fungicides

GREENS	<b>100%</b>
TEES	<b>94%</b>
APPROACHES/ COLLARS	<b>94%</b>
FAIRWAYS	<b>89%</b>
BUNKER FACES	<b>33%</b>
ROUGH	<b>30%</b>

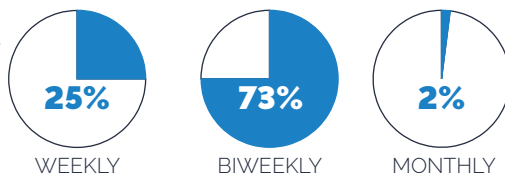
### Months applying at least one fungicide

JANUARY <b>2%</b>	FEBRUARY <b>0%</b>	MARCH <b>28%</b>	APRIL <b>80%</b>
MAY <b>98%</b>	JUNE <b>100%</b>	JULY <b>100%</b>	AUGUST <b>100%</b>
SEPTEMBER <b>98%</b>	OCTOBER <b>89%</b>	NOVEMBER <b>64%</b>	DECEMBER <b>41%</b>

### Frequency of fungicides applied on fairways



### Frequency of fungicides applied on greens





# SUNSHINE DISEASE

**H**alf a century into his golf course maintenance career, John Lapikas still arrives by 4 a.m. most mornings. Yes, 4.

“Open up, make a couple pots of coffee, do the board,” says Lapikas, who started working in the industry in 1972 and at Mariner Sands Country Club in Stuart, Florida, in 2002. “My assistants come in and we have a couple cups of coffee and talk, and then we go from there.”

The early mornings provide Lapikas with time to drive the courses — Mariner Sands is home to a pair of 18-hole layouts designed by Tom Fazio and Frank Duane — and search for anything out of place, including disease. “You ride around every day, you can pretty much see if there’s something going wrong,” he says. “Seems to be our biggest problem lately has been Bermudagrass mites. Most of the diseases, with the temperature and the humidity and the cloud cover, you know when you’re going to get it so you either prevent it or you wait till you spot the first patch.”

Southeast Florida superintendents have plenty of diseases to combat. Lapikas normally has problems with *Rhizoctonia zae* during the summer and gray leaf spot the rest of the year.

“You get some dollar spot, but we can fertilize that out,” he says. “And it seems, on the greens, to be the patch diseases, brown patch. We have Celebration fairways so we seem to get a lot of gray leaf spot. ... It’s just kind of a year-round thing with the gray leaf spot. As soon as I see something, we spray all our fairways and tees.”

Lapikas and his team spray year-round for *Rhizoctonia zae* and fairy ring, and three times each year on those Celebration fairways. “We have 30 acres of fairways and 10 acres of tees on both courses, so spraying 80 acres takes a day and a half.”

Before returning to Florida 20 years ago, Lapikas worked 20 more years at a top course in Mississippi, where *Pythium* and brown patch were far more prominent — but the variety of diseases can’t touch what he sees in Florida.

— Matt LaWell

**26.9**

**Acres of turf treated with fungicides**

**5.1**

**Fungicides in greens rotation**

**1.4**

**Fungicides in fairways rotation**

**\$48,900**

**Fungicide budget**

**Top three potential disease concerns on greens**

1. *PYTHIUM* ROOT ROT
2. FAIRY RING
3. *PYTHIUM* BLIGHT

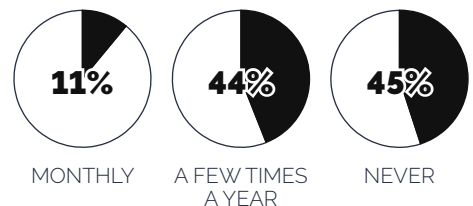
**Top three potential disease concerns on fairways**

1. DOLLAR SPOT
2. FAIRY RING
3. SPRING DEAD SPOT

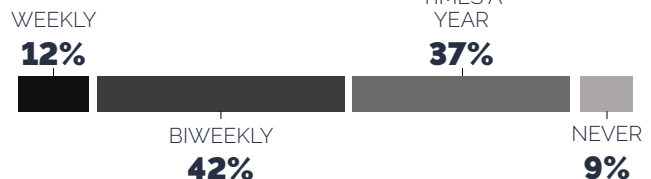
**Areas of course treated with fungicides**

GREENS	<b>100%</b>
TEES	<b>67%</b>
APPROACHES/ COLLARS	<b>55%</b>
FAIRWAYS	<b>39%</b>
BUNKER FACES	<b>2%</b>
ROUGH	<b>3%</b>

**Frequency of fungicides applied on fairways**

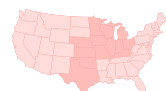


**Frequency of fungicides applied on greens**



**Months applying at least one fungicide**

JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
<b>52%</b>	<b>64%</b>	<b>88%</b>	<b>83%</b>	<b>74%</b>	<b>74%</b>
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
<b>78%</b>	<b>81%</b>	<b>83%</b>	<b>86%</b>	<b>81%</b>	<b>53%</b>



# CENTRAL

## NUMBER CRUNCHER

**F**or at least as long as humans are unable to control the weather, so much about golf course maintenance will still rely on feel and faith. But science is an increasingly bigger part of the job—and so are the statistics often produced by that science.

Chad Allen relies on those statistics, so much so that he reserves about 20 minutes every day to enter into one of his Excel spreadsheets “any type of measurable that would help me better make decisions when it comes to turf playability and turf health.” Allen is the golf course superintendent at The Club at Chatham Hills in Westfield, Indiana. He is very much a man of both faith in life and science on the course.

Allen has designed spreadsheets for clipping yield,

plant growth regulators, growth potential equation and volumetric water content for firmness and, of course, for a variety of diseases. At The Club at Chatham Hills, located about 25 miles north of downtown Indianapolis, Allen’s biggest and most prevalent challenge is dollar spot.

He says he has managed it thanks to moisture control and to just “getting out there and trying to knock the dew off certain areas, trying to not let the dew sit longer.”

“Dollar spot is very weather-dependent, but I’ve got some historical data on areas where we have seen *Pythium*—low areas, areas near catch basins,” says Allen, who uses the Smith-Kerns Dollar Spot Model. “Every day, I’ll input the highs and lows and humidity that happened during that day, and it’ll give me a percent probability using the Smith-Kerns Model. Using that information, we set a 20 percent threshold, so once we get above it, that is when I really start to look to apply preventatively. We do one application of early-season DMI, when soil temperatures reach 55 to 60 degrees for three consecutive days. It’s done wonders for us. It really knocks out any of that inoculum that’s carried over from last year that might be hiding down in the thatch or clippings that are still there.”

This season, Allen says, only one area of the course has endured any sort of dollar spot breakthrough—“and that was only because the irrigation heads got stuck on, so it did some extra watering over there. I really do attribute our ability to control dollar spot with that early-season DMI application.” And with charting all those numbers.

— Matt LaWell

### 28.7

Acreage of turf treated with fungicides

### 5.0

Fungicides in greens rotation

### 2.4

Fungicides in fairways rotation

### \$62,500

Fungicide budget

#### Top three potential disease concerns on greens

1. DOLLAR SPOT
2. ANTHRACNOSE
3. BROWN PATCH

#### Top three potential disease concerns on fairways

1. DOLLAR SPOT
2. BROWN PATCH
3. *PYTHIUM* BLIGHT

#### Months applying at least one fungicide

JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
7%	13%	29%	75%	95%	95%
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
93%	93%	99%	90%	63%	15%

Areas of course treated with fungicides

100%  
GREENS

78%  
TEES

71%  
APPROACHES/  
COLLARS

66%  
FAIRWAYS

13%  
BUNKER  
FACES

8%  
ROUGH

#### Frequency of fungicides applied on greens

WEEKLY  
12%

MONTHLY  
8%

BIWEEKLY  
23%

A FEW TIMES  
A YEAR  
20%

76%  
BIWEEKLY

4%  
A FEW TIMES A  
YEAR

29%  
MONTHLY

28%  
NEVER

#### Frequency of fungicides applied on fairways



# DIALING UP THE HEAT

**E**ven in the desert, Kenton Brunson handles the normal variety of diseases.

Now in his second season as director of agronomy at Phoenix Country Club, Brunson says his biggest disease pressure is probably take-all root rot, and with 22-year-old greens he sees some fairy ring. His biggest problem, though?

“Just the heat,” he says. “The heat with humidity, smoking either bentgrass greens or Bermuda greens or ryegrass. Especially on greens, it’s not like a pathogen or anything, but when you have heat and humidity, it’s really tough to manage turf, because it gets puffy and the greens get slow. I’m not losing sleep over disease pressure. I’m losing sleep

over the heat.”

Brunson treats the heat and humidity like another disease — albeit one over which he has very little control. Brunson worked under Shawn Emerson at Desert Mountain and still remembers Emerson instilling the wisdom that, direct quote here, “Grass doesn’t know what day it is.”

“And that’s a fact,” Brunson says. “A lot of guys lose turf on the weekends because they want to go home at 10 a.m. We use POGO every day during the summers, especially to try to be as even as we can. Because the Bermuda here, if you get too dry, it starts to get thin, and then if you get too wet, it starts to get thin. It’s kind of a happy medium.”

Brunson says there isn’t any one disease “that just kicks our butt every

year,” and that, all things considered, “Phoenix is actually a great place to grow grass, because there isn’t really a lot of disease pressure and you can be strategic and regimented. The only issues are the heat and transition — transition is very difficult. You got to grow it in in October, and then when you kill the ryegrass in the spring you got to grow all your Bermuda back. That’s the toughest thing, it’s just go, go, go all the time.

“I know guys in the desert who all they do is work. Their product is good, but how long could you go? I don’t know. Eventually, I think, you get tired of it. ... I don’t feel like that. I want to be the best.”

The heat is on.

— Matt LaWell

29.1

**Acreage of turf treated with fungicides**

3.9

**Fungicides in greens rotation**

1.3

**Fungicides in fairways rotation**

\$36,100

**Fungicide budget**

## Top three potential disease concerns on greens

1. PINK SNOW MOLD
2. ANTHRACNOSE
3. DOLLAR SPOT

## Top three potential disease concerns on fairways

1. DOLLAR SPOT
2. FAIRY RING
3. PINK SNOW MOLD

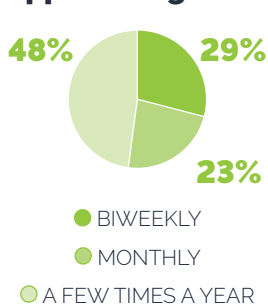
## Months applying at least one fungicide

JANUARY 43%	FEBRUARY 41%	MARCH 39%	APRIL 52%
MAY 50%	JUNE 59%	JULY 57%	AUGUST 55%
SEPTEMBER 59%	OCTOBER 59%	NOVEMBER 66%	DECEMBER 34%

## Areas of course treated with fungicides

GREENS	100%
TEES	55%
APPROACHES/ COLLARS	55%
FAIRWAYS	43%
BUNKER FACES	9%
ROUGH	7%

## Frequency of fungicides applied on greens



## Frequency of fungicides applied on fairways

