Compass[™] Fungicide, a strobilurin fungicide, delivers disease protection through a revolutionary mode of action. Offering broad-spectrum control, Compass effectively controls anthracnose, pink snow mold and many other diseases at low-use rates. Plus, Compass provides excellent turf safety. Use Compass in a tank mix for increased broad spectrum control and improved turfgrass quality.

Chipco[®] Signature[™] Fungicide provides proven control for cool-season *Pytbium* root rot and includes recommendations for anthracnose control on its label. In trials

conducted at Cornell University, Chipco Signature was applied to *Pythium*-inoculated turf from late September to early October, at 14- and 21-day intervals. According to Dr. Eric Nelson, plant



pathologist at Cornell, "Chipco Signature is actually one of the better materials we have tested for cool-season *Pythium* root-rot control." And Chipco Signature tank mixes also provide effective control against basal rot anthracnose (see sidebar story).

Whatever your program, Chipco Signature will improve it.

While fall programs for cool-season diseases vary by region and disease pressure, studies prove that, regardless of the tank-mix combination, adding Chipco Signature (at the 4-ounce rate) improves turf vigor and

Popular Tankmixes 266T + Chipco Signature

26GT + chlorothalonil + Chipco Signature 26GT + chlorothalonil + PCNB + Chipco Signature ProStar 70WP + Chipco Signature

quality as turf transitions out of winter (see data charts that follow). And, applying Chipco Signature will lessen the phytotoxic effects associated with PCNB usage, including root damage and turf browning.



26GT + Daconil Ultrex[®] 82.5 + Terraclor[®] 75WP 4+3.6+4

26GT + Signature 80 + Terraclor 75WP 4+4+4



Anthracnose: Chipco Signature for Basal Rot Prevention

Basal rot anthracnose is difficult to detect and thrives on weakened turf, making plant health a necessity for disease prevention.

Chipco Signature's ability to improve turf health is unmatched, and its label's recommendations for anthracnose control make Chipco Signature an ideal partner in a fall snow mold tank mix for basal rot prevention. Follow-up applications of Chipco Signature in early spring allow turf to recover faster from winter stress, making it less susceptible to basal rot infection.



Kris Givens, superintendent at Whitford C.C. in Exton, PA, has used Bayer Environmental Science products to develop a successful basal rot prevention program.

"We applied a Signature and Daconil®" combination, and it definitely seems to have helped the overall plant health," says Givens. "Every month, starting in March, we applied the combination. As of mid-May, we had not seen any signs of basal rot. We plan to continue the Chipco Signature applications up through November."



Untreated

- Heritage[®] 50WG 0.4 oz/M + Daconil WS6F 5.5 fl oz/M+ Medallion® 50WP 0.33 oz/M
- 26GT 2SC 4.0 fl oz/M + Chipco Signature 80WG 4.0 oz/M + Turfcide® 400 4SC 8.0 fl oz/M



- Heritage 50WG 0.4 oz/M + Daconil WS6F 5.5 fl oz/M+ Medallion 50WP 0.33 oz/M
- 26GT 2SC 4.0 fl oz/M + Chipco Signature 80WG 4.0 oz/M + Turfcide 400 4SC 8.0 fl oz/M

(BAYER) Bayer Environmental Science

For more information on customizing a winter decline program for your turfgrass, contact your Bayer Environmental Science sales representative. Call 1-800-331-2867 or visit wwwBayerProCentral.com.

chipco'

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University of Wisconsin

Creeping bentgrass/ Annual bluegrass

Application: Heritage+Daconil+Medallion on 11/17/2001

26GT and Turfcide 400 on 11/17/2001

Chipco Signature on 10/31 and 11/17/2001

University of Wisconsin

Heritage+Daconil+Medallion

26GT and Turfcide 400 on 11/17/2001

Chipco Signature on

11/02 and 11/17/2001

Creeping bentgrass

Application:

on 11/17/2001

EAV01F35

EAV01F33

Cultural Practices for Winter Decline Management

While fungicide applications are an important component of any disease prevention program, other strategies also should be adopted to avoid disease outbreak over the winter. Any effort at preventing winter decline should include the following cultural practices:

- Avoid heavy nitrogen applications in late fall.
- Mow grass during late fall to reduce canopy buildup.
- Prevent large drifts of snow through the use of snow fences and landscape plantings.
- Improve drainage, increase aeration and improve sunlight exposure where feasible.
- Reduce compaction by restricting walking and snow sports on important turf areas.
- Repair snow mold damage by raking affected patches and lightly fertilizing in early spring.

BA09006618

"If you think you're only going to succeed if you always say 'yes,' then you need to change your thinking."

FRED ABOOD CHAIRMAN, SCORE



Continued from page 68

Take note: Many people underestimate how much time a task will take or misjudge how they spent their days, the experts stress. Do a self-study for one week. Take detailed notes of what tasks you did and how much time each took. You may be surprised at what you discover. You may be alarmed to find how much time you spend opening mail, talking with colleagues or doing low-value jobs. You may also learn that you are more productive at certain times of the day. This can be helpful for scheduling your time.

Don't do it all

Once your daily planner is organized, try not to fill it up too quickly. Don't sabotage yourself by overscheduling your time — if you already have too many things on your plate before the day even begins, you'll have no time for

unexpected things that always pop up. It is also essential that managers learn how to say no. Elliott accepts nearly every request thrown his way because he doesn't want to upset anyone. He also truly enjoys each of the activities he does. But trying to do it all (and do it well) is often just a failure to delegate, the experts say.

"If you think you're only going to succeed if you always say 'yes,' then you need to change your thinking," says Fred Abood, chairman of the Atlanta chapter of SCORE, a nonprofit organization that counsels small businesses. "There are appropriate times to say 'no.' If you are saying 'yes' all the time, you are probably taking on things your subordinates should be doing."

If you want it done right, you have to do it yourself, right? The experts say no. In fact, they say ideally your staff would carry out all routine tasks, leaving you to handle just the strategic work necessary to grow the business. Of course, this isn't always plausible, but it's a good goal.

If you can't decide what to delegate and what to hold on to, try looking at tasks as dollar signs. Ask yourself what tasks can be done less expensively (but as efficiently) by someone else.

"No one can ever do it as well as you," Stack says. "You have to use a different standard when you look at the work someone else does. Does the value of that result require the work of someone who gets \$25 an hour or can it be done by someone who can do it 80 percent as well as you [who also makes less]?" Another difficult task is learning to accept that someone else on your staff may actually be better suited to do a particular job because of his or her experience or skill set, according to the experts. Transferring responsibility for certain jobs develops your staff members and will increase their job satisfaction.

Remember: Once you've let a task go, really let it go. Don't look over someone else's shoulder — it will upset the worker, and it's not a productive use of your time.

Yes, delegation does take time in training and coaching. But it's worth it, the experts say. In the long run, having skilled workers who can share your burden will actually save you time.

"It's easier to dive in and tackle the to-do list than to step back and think about which things can be delegated," says Donna Genett, author of *If You Want It Done Right, You Don't Have To Do It Yourself* (Quill Driver Books). "But managers need to step back and look at the big picture of everything that's on their plates. Keep only those things that involve too much risk or expertise. Anything beyond that can and should be delegated."

Delegating is essential, of course, but just be sure you don't give away your role as leader. Also, be sure to keep the most important tasks, especially the strategic ones, in your control.

Good results

In the end, all that really matters is if you are happy with your balance between work and home. If not, try to make a few changes. Of course, this is a business where cutting back is often easier said than done.

"Balancing work and home is something I'm still working on mastering," says Tim Cunningham, superintendent of Weymouth Valley Country Clubs-Meadow Course in Medina, Ohio. "When the bug bites you and you get addicted to this business, sometimes you will go to all lengths to accomplish the goals for each season and your personal goals.

"The problem is, you must realize that work is not everything, your time away from the golf course is very important, and the people special to you are very important. Don't let your job run your life. You have to learn to get away and keep some of your sanity."

Mollenkamp is a free-lance writer from Winsor Heights, Iowa.

Real-Life Solutions

Hold Stead

Bonded fiber matrix product provides cost-effective way to achieve quick germination and control erosion at Patriot Hills GC

BY JASON SCHMADERER

Problem

Covering seeded slopes with loose straw or hydromulch would have been ineffective in controlling erosion because of the slope lengths and gradients at Patriot Hills GC.

Solution

A mechanically bonded fiber matrix provided a costeffective way to achieve quick germination and control erosion, according to the superintendent. ust as lakes, wetlands or other water hazards add to the challenge for golfers, they also test the skills of golf course builders. Unless bare soil is protected from erosion by storm water, snow melt or irrigation runoff during construction, sediment could wash off site and pollute other bodies of water farther downstream. The steeper and longer the slopes and the more erodible the soils, the greater this threat is.

In addition to having an impact on water quality, such sediment pollution could also violate construction permits and run the risk of costly fines or a shut down of the project. The construction permits are part of the National Pollutant Discharge Elimination System (NPDES) program, established by the federal Clean Water Act. The NPDES program now requires a permit for any construction activity that disturbs one acre or more of land. Previously, these permits were required only when construction activities disturbed five or more acres. State and local government can require even more stringent provisions. Ultimately, an NPDES permit requires the project owner to prepare an erosion and sediment control plan to protect water quality from storm-water runoff that leaves the site during construction.

Controlling erosion to prevent wind and water from dislodging soil particles is the first line of defense against off-site transport of The fiber match allowed turl to grow up through it and conform closely to humps, dips and other surface irregularities.

sediment. It's also the key to minimizing costs of sediment control, which is designed to remove sediment from storm water before the runoff is discharged from the site.

Problem

It was against this background that Turco Golf Builders in Suffern, N.Y., began construction of Patriot Hills GC in Stony Point, N.Y., in the summer 2001. The 18-hole municipal course recently opened. In addition to attracting local Rockland County golfers, the course is convenient to the New York metropolitan area and northern New Jersey.

The irrigated bentgrass fairways traverse 6,600 yards of hilly terrain and are surrounded by Kentucky bluegrass primary roughs and fescue-buffalograss secondary roughs. Elsewhere, numerous rock walls, exposed during construction, accent the landscape, which offers views of the Hudson River in several locations.

"There's a lot of elevation change throughout the course," says Joe Smyth, certified superintendent of Patriot Hills. "On four holes, it changes 100 feet or more from tee to green. The degree of slope is 3:1 or steeper on at least half of the fairways and even steeper on the roughs. Some of the slopes are as long as 150 yards. Erosion was a major concern in building the course." The easily dispersible clay particles in the clay-loam soils added to this concern. So did the water features — a pond on one hole and a total of about four acres of wetlands on two other holes. In all, about 20 acres of slopes on fairways, roughs and areas around greens, tees and bunkers at Patriot Hills called for measures to limit sediment loss because of runoff.

Solution

When it comes to controlling erosion, grass and other vegetation are naturals. Leaves and stems absorb the energy and soften the erosive impact of raindrops and reduce the amount of runoff by intercepting it. Meanwhile, the root systems anchor the soil.

Because of the slope lengths and gradients at Patriot Hills, covering seeded slopes with loose straw or hydromulch would have been ineffective in controlling erosion. On a previous golf course construction project, Smyth had installed sod to establish a quick, permanent protective cover. But for this project, costs of sod exceeded the erosion-control budget. Rolled-erosion control blankets were not an option because they also exceeded the budget.

So Smyth examined a less-costly approach, one he had never used. He tested a few spray-on erosion control products. He opted for an advanced mechanically bonded fiber matrix, Conwed Fibers 3000 M-BFM. Smyth said it provided a costeffective way to achieve quick germination and control erosion.

Dick Grant, whose company Chesapeake Turf LLC did the seeding and erosion control work on the project, said the fiber matrix allowed turf to grow up through it and conform closely to humps, dips and other surface irregularities for maximum soil protection.

In addition to a chemical bonding of wood fiber and soil particles, the crimped and interlocking wood fibers of Conwed Fibers 3000 M-BFM create a mechanical bond for enhanced erosion control. These fibers absorb the impact energy of rain drops and retain up to 15 times their weight in water. That reduces stormwater runoff and transfers more moisture to the



A test showed that an application of the fiber matrix material reduced erosion by almost 100 percent compared to bare, untreated soil.

Balance pH, Test Water to Ensure Water Quality

Sediment pollution isn't the only thing that has an impact on water quality. *Golfdom* asked two veteran irrigation consultants and members of the American Society of Irrigation Consultants – Jim Barrett and Dave Davis – to provide tips on how superintendents can improve water quality on their golf courses.

"Balancing water pH and controlling algae in lake irrigation water are two things superintendents can do to improve water quality and make maintenance of existing turf easier," says Davis, adding that acid treatment of lake water is one method of pH control. He also says that ozonation of lake water helps control algae, which keeps sprinkler heads clean.

"In some cases, simple blending of poorer quality water with better quality water is all that is needed," Davis says.

Barrett stresses that superintendents should have their courses' water sources tested regularly by a qualified lab. He adds that acid injectors and sulfur burners can be used to treat chemical imbalances.

seed bed, improving germination and turf establishment.

The Conwed Fibers product doesn't need a lot of time to cure and is effective almost immediately after application.

A series of trials at San Diego State University confirms the effectiveness of the product in controlling erosion. In one test, which simulated a 10-year storm event, a fully cured 3,000-pound-per-acre application of the M-BFM reduced erosion by nearly 100 percent compared to bare, untreated soil. In three consecutive simulated 50-year storm events, a fully cured 3,500-pound-per-acre application of the product also reduced erosion by nearly 100 percent. When applied at the minimum rate of 3,000 pounds per acre and allowed to cure for only two hours before it was subjected to a simulated 10-year storm event, the product reduced erosion by 98 percent.

Outlook

Last year, Chesapeake Turf completed seeding and erosion control between August and November. The M-BFM was applied with seed and fertilizer at an average rate of 3,800 pounds per acre, covering about 1 acre to 1.5 acres a day. A hot, dry summer and fairly normal fall weather was followed by above-average rainfall the rest of the seeding period, Smyth reports. The weather included several storms in which 1 inch or more of rain fell within about two hours.

"The Conwed product performed well, and there was little runoff from the storms," he says. "As expected, the seed germinated in about five to six days and produced a good, uniform stand."

The product also prevented seeds in the roughs from washing onto the fairways and the sand traps. "The M-BFM is a nice alternative for controlling erosion if you don't have the budget for sod," Smyth says.

Editor's note: This article was written by Jason Schmaderer, who formerly worked for Swanson Russell Associations, a marketing and communications firm in Lincoln, Neb., that represents Conwed Fibers, a division of Profile Products LLC.

Research Highlights Future Nematode Treatments

BY BILLY CROW

lant-parasitic nematodes are microscopic worms that feed on plants. Most nematodes that damage turfgrasses feed on roots. The majority of golf courses in Florida have problems with one or more species of nematodes. With the phase-



or more species of nematodes. With the phaseout of Nemacur scheduled for 2007, there's a great need to identify new ways to manage

nematode problems on golf course turf. At the University of Florida, we are attacking this problem from several angles.

New nematicides: The phaseouts of methyl bromide and organophosphate nematicides (like Nemacur) have opened up markets for new nematode-management products. This has led to several major chemical companies to restart their nematicide programs, as well as some smaller companies starting their own research into new control options. Over the past couple of years, we've evaluated several new active ingredients for activity against turfgrass nematodes in greenhouse and field studies. While it's too early to tell if any of these chemistries will be available for golf course use soon, the fact that effort has shifted in that direction is promising.

New uses for existing nematicides: Finding ways to use existing chemistries on turf is attractive for a couple of reasons. These products have a track record and known efficacy, so there is less risk to the company. It is also cheaper to get a label for an existing chemistry on a new crop than to get a completely new chemistry labeled.

For example, Curfew Soil Fumigant is a new product for golf courses from Dow AgroSciences, but the active ingredient has been used for preplant nematode control on agricultural crops for 50 years. Curfew Soil Fumigant is now labeled for golf course applications in Florida and South Carolina, and labels in other Southeastern states are pending. Currently, Curfew Soil Fumigant can only be used on tees, fairways, driving ranges and roughs. However, putting green applications may be available as soon as next spring.

In our studies, Curfew Soil Fumigant has been the most consistently effective product we have tested against sting nematode, the most destructive turfgrass nematode. It also has efficacy against mole crickets and possibly some other turfgrass pests. However, Curfew Soil Fumigant's activity against certain other nematodes, such as lance nematode, is not as great.

Biological control: We are working on several strategies in this area. The bacteria *Candidatus Pasteuria usgae* was recently described as a parasite of sting nematodes by Robin Giblin-Davis of

the University of Florida. But there are also other species of *Pasteuria* that live off of other turfgrass nematode species. *Candidatus Pasteuria usgae* was shown to suppress sting nematodes in field tests below damaging levels. We are now trying to find practical ways to inoculate this bacteria into noninfested turf and cause nematode suppression on a commercial basis.

In other projects, we're seeing if beneficial nematodes might be used to manage plant-parasitic nematodes on turf in Florida. We are also testing several commercially available bacterial and fungal products to see if they might suppress plant-parasitic nematodes or reduce the impact of nematode damage on turf.

Alternative nematicides: We have tested more than 20 products over the last several years derived from plants and microbial fermentation. While many of these appear to be ineffective, one is really showing some promise. This is a material that is a formulated mustard-bran. As this material decomposes, it releases a nematicidal fumigant that is moved into the soil with irrigation water. Applied as a topical treatment to turf, this mustard-bran product has been shown to reduce populations of several nematode species and to promote healthy turf on a consistent basis. A commercially available mustard-bran product may soon be on the market.

So superintendents of golf courses with nematode problems do not need to enroll in hotel management classes yet. We should have some acceptable alternatives to Nemacur identified within the next four years.

Crow is an extension specialist in landscape nematology at the University of Florida's Nematode Assay Laboratory.



On course at the **2003** U.S. OPEN

Kevin West First Superin<u>tendent</u>

> Olympia Fields Country Club Olympia Fields, Illinois

Dave Ward

erintenden

According to Dave Ward, superintendent at Olympia Fields—*the number 24 ranked course by Golf Digest,* installation of the Rain Bird[®] Cirrus[®] Central Control System paid dividends last year alone when the course didn't see one decent rain from June through September.

"Having a control system do exactly what you want really benefits you during a drought. The course looks very healthy and green. The greens and the roughs are thriving. Having full coverage in your roughs really makes a difference in appearance."

Kevin West, first superintendent at Olympia Fields, says the system's flexibility is a key advantage.

"It's easier to micro-manage irrigation on the entire course, because the Rain Bird system is so flexible. We don't need to shut down entire areas or blanket water because zones don't get too wet or too dry. We only apply the amount of water needed, no more, no less."

The decision to install centralized control demonstrates that Olympia Fields shares Rain Bird's commitment to *The Intelligent Use of Water.*"

For information about how all Rain Bird Golf irrigation products work to manage and conserve water, click on **www.rainbird.com/golf**. For a hands-on demonstration, contact your Rain Bird Golf Distributor.



WEAPONS OF MASS DESTRUCTION (if you're a nematode)



The Idea Factory

Ever wonder where course accessory companies get their ideas?

They often get their most profitable ideas from you

BY FRANK H. ANDORKA JR. Managing Editor



ohn Kelly, director of marketing for Standard Golf, recently flipped through his catalog when a product on page 60 caught his eye. He smiled when he looked at the Drag Brush (Part No. 52000) because it reminded him of

the superintendent who brought the idea to Standard: Paul Panek, who worked at a course in Iowa at the time (Kelly believes he is now retired).

Kelly says the Drag Brush was revolutionary when it first entered the market in 1980. It replaced the metal drag mat used at the time and did a more effective job at working topdressing into the greens while eliminating the damage the metal mat caused. It was also used to stand up runners prior to mowing, which helped control thatch. Its success is evident in the fact that the product is still going strong after 23 years.

"It's been one of the most successful products we've ever marketed that came from a superintendent," Kelly says. "It was the perfect example of how superintendents will tell you what accessories they need — if only you're willing to listen to them."

From beginning to end, superintendents provide valuable insights for accessory manufacturers that help them make crucial business decisions. Some, like Panek, provide actual product ideas. Others serve as unofficial advisors to companies trying to fill a niche or improve existing products. Finally, before the products hit the shelves, superintendents are asked to use their courses as test sites to make sure the accessories work as planned before they're sold.

Through each stage of the process, it's the ideas of superintendents that push the ideas forward.

Where the ideas come from

Shirley Anderson, sales manager at Bayco Golf Products, says superintendents provide many of the new ideas for her company.

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"I would say at least 50 percent of our new product ideas come from people who are out in the field taking care of courses on a daily basis," Anderson says. "Sometimes they call us directly. Others contact our distributors. We love to hear from them."

When Bayco receives an idea, it makes a prototype and sends it to the superintendent to test, Anderson says. As hard as it is to believe, Anderson says Bayco has never turned down an idea.

"You can never tell how many people need a product until you go into production," Anderson says. "Once you make it once — the hard way — you figure out what you have to do to make it affordable. If one superintendent needs it, chances are there are others who will buy it." That's why Great Lakes Golf Products periodically surveys superintendents to find out what's missing from the company's portfolio, says Matt Morse, president and owner of

"We'd be foolish not to get our end-users involved," Morse says. "They have a huge impact on what we do."

the company.

Morse says Great Lakes doesn't have anything as formal as an advisory board because it costs too much. But he does have a closely held group of superintendents in his hometown of Milwaukee whom he visits when he has a product idea.

Superintendents call Great Lakes with product ideas three or four times a year, Morse says. Some of the products are too cost-prohibitive to bring to market, but he remembers one call that led to one of the company's most successful products.

"We got a call from a superintendent who was making his own tee markers from tree limbs on his course," Morse says. "The problem was that the natural markers didn't hold up well, and he was constantly having to do extra maintenance to keep them looking nice.

"So he asked if we could mold something for him that would look natural but be more durable," he adds. "We did, and now our log tee marker is one of our most popular items."

How long does it take?

Steve Garske, president of Par Aide, says it can take anywhere from two months to more than a year from the time the company gets an idea until the company brings it to market.

"If we have to do some tooling to make a product, that takes time," Garske says. "If there's no retooling, we can generally get something done more quickly."

Garske says Par Aide has three criteria to decide whether to bring a product to market:

it has to be functional;

 it has to either improve the ease with which superintendents do their jobs or improve the quality of work they do; and

• it helps superintendents provide an even better playing experience for their customers.

"We don't do things just to make money," Garske says. "We do things because it's going to make a difference in superintendents' lives."

Garske says it can cost up to \$100,000 to create a product over a year and bring it to market, but he says he doesn't always worry about financial payback in the short term.

"[On] some products, you don't get a payback, and we understand that," Garske says. " Our attitude is that if you can do something that makes [superintendents' lives] easier, it helps the rest of your line, and you do it because you need to do it."

Testing, testing ...

Once the prototypes of products are ready to go, each company relies on a group of superintendents to test the products for any flaws. Kelly says Standard Golf has nearly eight sites around the country at the moment.

"Every product needs to be tested, and we have a group of superintendents we like to work with," Kelly says. "You have to have them in different parts of the country."

Morse agrees that testing is critical. "You want to make sure everything works for as broad a spectrum of superintendents as possible."

Given how important superintendents are to the process across the board, Garske says it's important to build trust with customers.

"That's one of the best reasons to go to trade shows, field days and local association gatherings," he says. "We need to be in touch with our customers and find out what they need. If we get new product ideas from them, that's a great bonus. We hope the relationship is an exchange of ideas between accessory manufacturers and superintendents and is beneficial to everyone."

"You can never tell how many people need a product until you go into production."

SHIRLEY ANDERSON BAYCO GOLF PRODUCTS