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Note the respirators on bench, ready for use.

ten remove the objections. Some employees will retain a bad attitude and continue to resist.

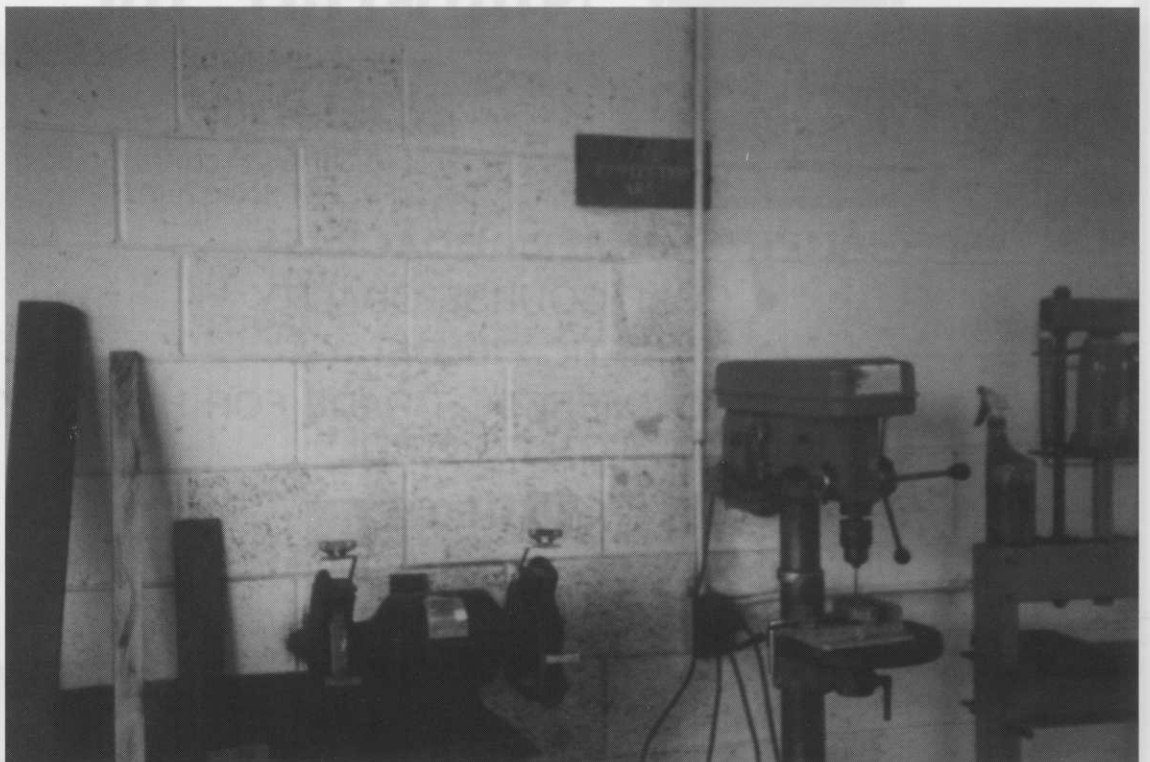
This is not all bad. People with this type of attitude are often disruptive to the efficiency and productivity of a department but they will single themselves out with their attitudes and be easier to iden-

tify and deal with. Remember, the regulatory agencies state specifically that you may have a greater degree of safety regulation and stricter rules than the agencies' guidelines. They also tell you and the employee that compliance with these policies set forth by the employer carry the weight of the law.

Regular meetings are conducted in the golf course maintenance department at this club.

Employees are encouraged to be creative and imaginative in all areas of the operation. When discussing safety issues, some employees will have constructive suggestions that really make a difference.

*Machinery requiring eye protection is grouped and posted. The sign should probably be cleaned.*



**'How can any of you possibly object to something that is for your own good. The man is telling you that he doesn't want you to get hurt!'**

One employee recently made a perspicuous observation. "How can any of you (fellow employees) possibly object to something that is for your own good. The man is telling you that he doesn't want you to get hurt!"

Following that comment, a moment of silence prevailed. When I continued with the meeting, I closed the safety segment saying, "I can't think of anything to say that would better illustrate the objec-

tives of our safety program than what you have just heard."

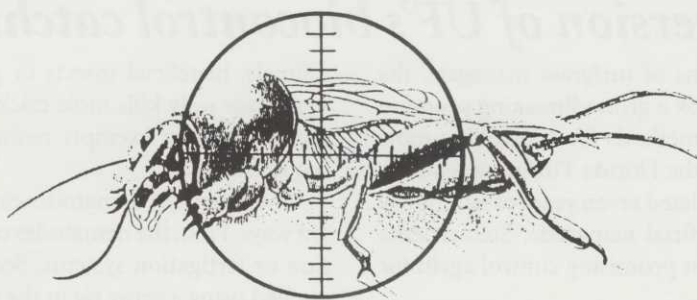
Getting started requires nothing more than setting a date for the first meeting and doing it.

A basic agenda of four or five items will generate enough discussion to fuel conversation for a half hour. Employees should be encouraged to voice their concerns and superintendents should follow up with management to assure that em-

ployees' concerns are adequately communicated. Some companies reward employees for reporting unsafe conditions or dangerous machinery.

Remember, the objective of a safety program is to prevent injury to employees. Pursuit of this objective will result in fewer accidents, less time loss due to injuries, lower workers' compensation premiums and, ultimately, a better overall operation.

## An Un-Welcome Sight!



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# Sunniland

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## We are favoring more use of the environmentally safer products.

➔ (From page 37)

### Map in fall

Fall - Mapping is done on existing damage from mole crickets.

Early Spring - Begin looking for damage; control hot spots with Orthene.

Late Spring/Early Summer - Soap flush suspect areas; use Triumph 4E to control nymphs on greens and tee tops, use Oftanol on green banks and tee banks, alternate Nemacur and Oftanol on fairways and roughs yearly.

Summer/Early Fall - Use Mocap 10G and Orthene for control in infested areas.

*Chris Hoder*

*Grenelefe Golf & Tennis Resort*

*Haines City*

One thing is readily apparent in these testimonials. It seems that no one product is the answer by itself but rather a wide array of different chemicals works best. Formulations and techniques are being used at specific times in this life

cycles of the mole cricket. The results show that we are favoring more use of the environmentally safer products whenever possible.

The facts speak of the excellent job Florida Superintendents are doing of putting into action the theory of integrated pest control management. And when theories are put into real-life situations, we all reap the benefits. For you see mole cricket control in Florida is in a constant state of evolution of research and applied theories and it is the results of these theories put into practice that furthers the educational process so important in uncovering better solutions.

Our own commitments of time, money and energy to the different research projects on mole cricket control is proof that we are today and have been in the recent past striving to get the upper hand on this ugliest of Florida pests. The new biological controls we have been looking at in the laboratory are now be-

ing expanded in greater numbers in the field. Only time will tell if these efforts are our keys to a better tomorrow or if we continue our search.



## Commercial version of UF's biocontrol catching on

In response to the concerns of turfgrass managers, the University of Florida undertook a groundbreaking program designed to identify the best methods for controlling mole crickets. With the support of the Florida Turfgrass Association, the UF researchers completed seven years of laboratory and field testing on the beneficial nematode, *Steinernema scapterisci*, which was the most promising control agent for mole crickets.

The beneficial nematode contains a bacterium that is lethal to mole crickets. Once the nematode enters the body cavity of the mole cricket, it releases the bacteria. The bacterium multiplies rapidly and kills the mole cricket within 24-48 hours. The beneficial nematode then feeds on the bacteria, reproduces and starts the entire cycle again. In fact, the nematode is capable of reproducing itself up to 80,000 times from a single mole cricket.

Like other biological controls, the nematode takes a little longer to work than traditional chemical treatments. However, the nematode is capable of living in the soil for 13 weeks even without finding a mole cricket host. If the nematode finds a host and reproduces, then the nematode offspring will kill additional mole crickets. This long-term effectiveness provides a much better chance of controlling mole cricket populations.

Also, the nematode is incapable of harming vertebrate

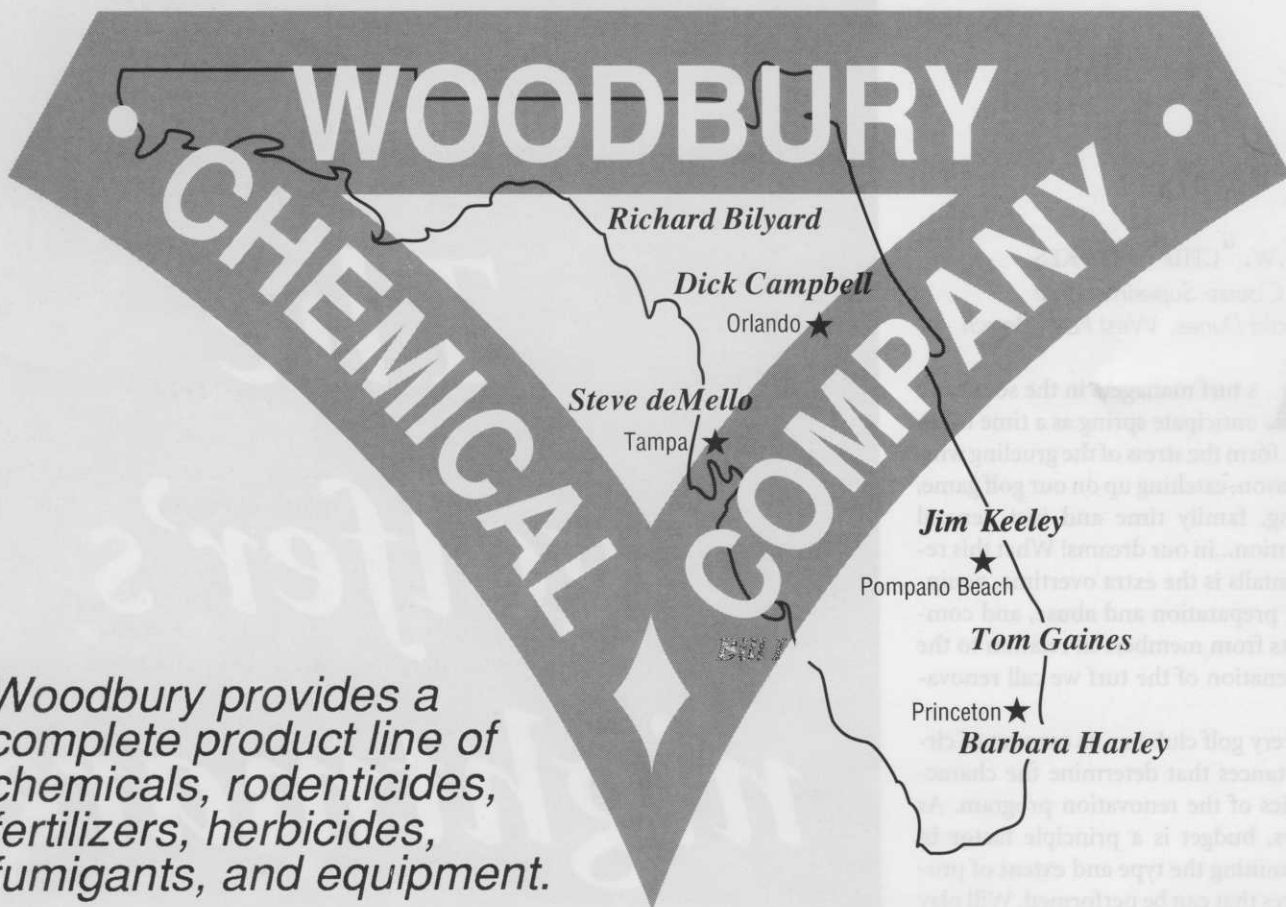
animals, beneficial insects or grasses. In fact, because the nematode only kills mole crickets, the Environmental Protection Agency exempts nematodes from its registration requirements.

The beneficial nematodes can be applied in several different ways. First, the nematodes can be applied through irrigation or fertigation systems. Second, the nematodes can be applied using a spray rig in the traditional pesticide application method. In either case, the nematodes are mixed with water at a rate of approximately 50 gallons per acre. The nematodes are applied to the moist soil surface and then watered into the soil.

In 1991, the UF researchers, along with the UF Office of Technology and Licensing began working with a group of graduate students to form a company to commercialize the nematodes. When the University of Florida received a patent on the nematode in November (US patent number 5,165,930), this new company became the exclusive licensee of the nematode technology.

To date the nematode has been applied to nearly 60 golf courses, 20 cattle pastures, and several county school systems, sod farms, municipalities and athletic fields. Turfgrass managers throughout the state have found the nematode to be an effective, environmentally safe method of controlling mole crickets.

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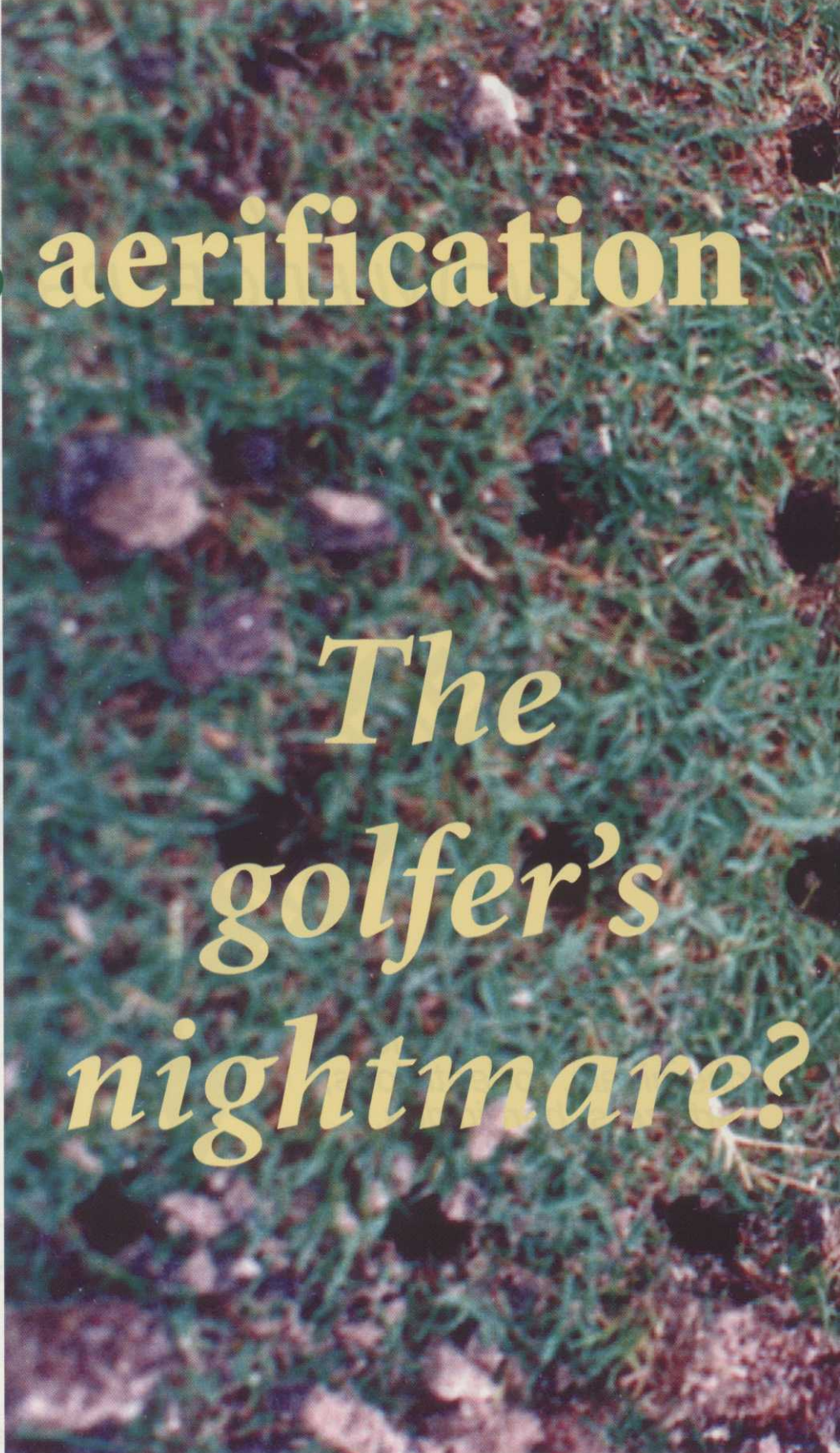
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# Greens aerification

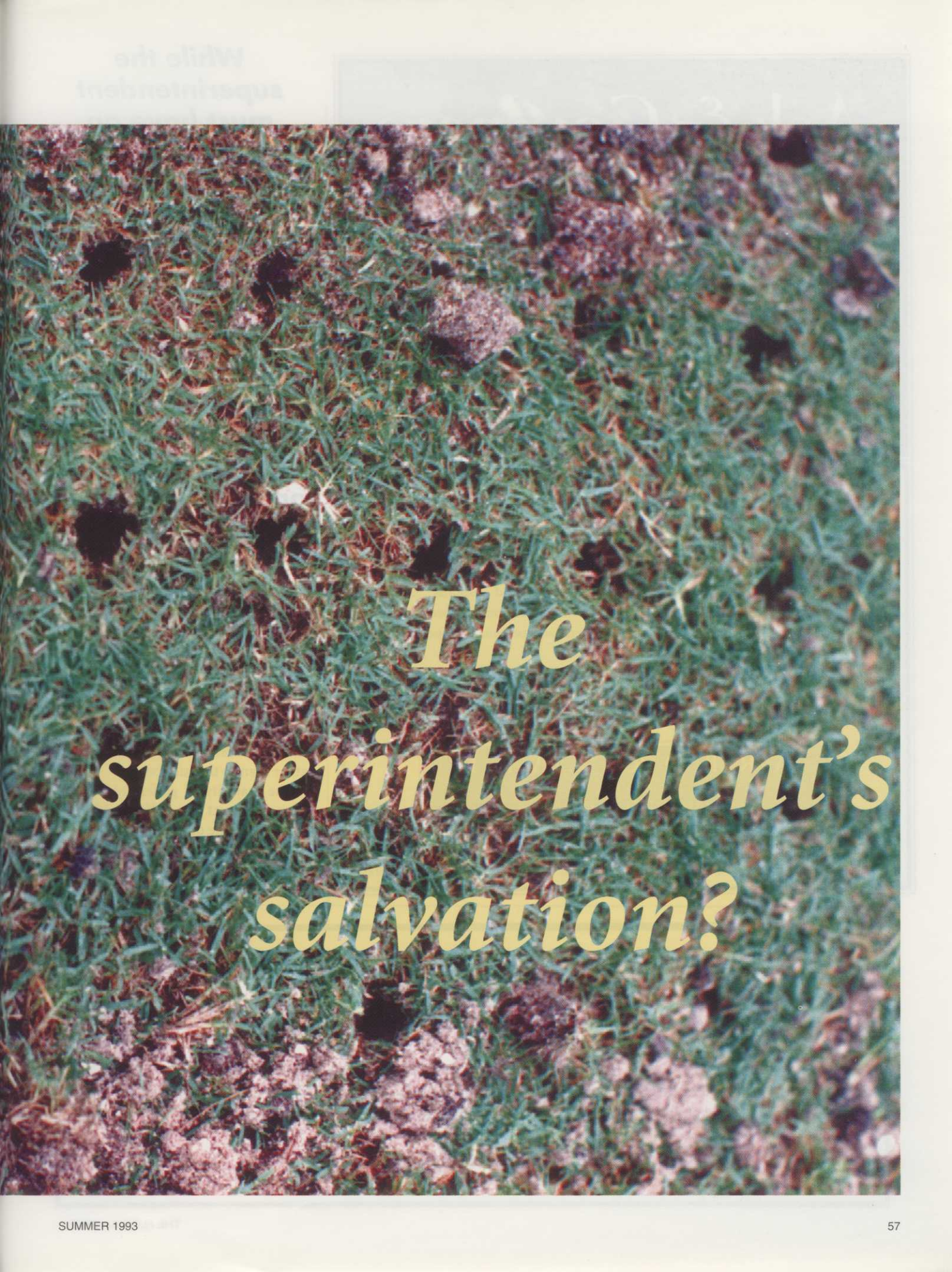
BY F.W. "CHIP" FOWKES  
*Golf Course Superintendent  
Emerald Dunes, West Palm Beach*

**A**s turf managers in the south, we anticipate spring as a time to recover from the stress of the grueling winter season, catching up on our golf game, fishing, family time and just general relaxation...in our dreams! What this really entails is the extra overtime, equipment preparation and abuse, and complaints from members in relation to the rejuvenation of the turf we call renovation.

Every golf club has its own set of circumstances that determine the characteristics of the renovation program. As always, budget is a principle factor in determining the type and extent of procedures that can be performed. Will play continue while renovation is commencing or is the course closed for certain procedures, specific times or the entire summer? To make these decisions, the turf manager, general manager, golf pro and committee must determine at what level the lost revenue and playing time directly related to the disruption of the playing surface is offset by the benefits realized by the renovation process.



*The  
golfer's  
nightmare?*



*The  
superintendent's  
salvation?*



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**While the superintendent must have an understanding of and appreciation for the short run impact to the club, his job is to represent the case for the long-term positive effects of these procedures for the upcoming season and ongoing life of the golf course.**

While the superintendent must have an understanding of and appreciation for the short run impact to the club, his job is to represent the case for the long-term positive effects of these procedures for the upcoming season and ongoing life of the golf course. It is easy to see that loss of revenue and playing time due to poor turf condition is much more significant when it occurs in the busy winter months rather than in the summer.

The majority of golfers today have come to expect the golf course being "torn up" in the off season and accept it as temporary inconvenience. An efficiently renovated course recovers quickly



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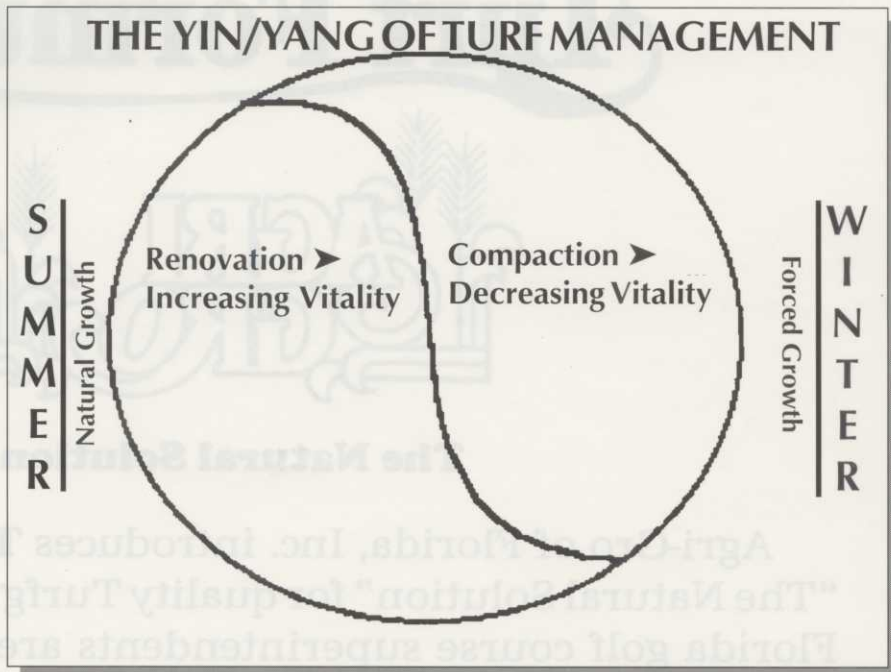
and exhibits immediate positive results. In the winter, damaged or weak turf recovers slowly due to the shortened photoperiod and lower temperatures.

If unusually harsh weather persists, extended tournament conditions are required, or turf is damaged from uncontrollable events; unrenovated turf will probably not recover until well after the seasonal player has returned home. On a private course, the member may reconsider his renewal or at least question the quality of his investment. The seasonal daily fee player will probably not return and certainly will not provide the essential "word of mouth" advertising necessary for increased revenue in the future.

With these financial repercussions of the impact of renovation understood by all involved, it remains to outline the agronomic practices that can be employed to restore the desired vitality to the turf.

**Forced growth vs. natural growth**

Each club has its own standard of turf quality and, hopefully, a budget that is



capable of supporting this goal. The successful turf manager will be able to maintain this standard with consistency, mini-

mizing the peaks and valleys in relation to playability and aesthetic value. An ag-



*Make sure that slicing and verticutting blades are straight with good bearings. Aerifiers should be properly timed so the tines enter and exit the soil cleanly.*