

The idea could be a blessing in disguise, a cost-cutting measure that consequently adds an important dimension to the game of golf. Or it could be an unnecessary move that opposes what most Americans value in the game. It depends on who you ask.

The idea is target golf. It involves reducing the fairway area on the course and increasing rough areas, which could include taller grass, sand traps and natural brush. The golfer is provided with a specific target at which to aim and the course is given a more natural look, such as those in Scotland. The American trend tends to be an extremely toned-down variation of the target courses found abroad.

Prompted by increasing maintenance costs and restrictions on water, the move involves, according to some architects, adding some integrity to the game that is present in courses in Scotland and England but absent from most American versions.

Jack Snyder, president of the American Society of Golf Course Architects, points out that while it is a recent movement in American course architecture, it is not a new idea.

"The trend, as far as I'm concerned, is going forward to the past," Snyder said. "It's really the way golf was played in Scotland and England. With the cost of maintenance going up, we have to find ways to reduce."

"For a variety of reasons, including maintenance costs, the integrity of the game and pure aesthetics, I think target golf will become a very important theme in golf course architecture," said Brian Silva of Cornish & Silva, Inc., Golf Course Architects, formerly an agronomist with the Northeast Green Section, USGA.

"We're still talking about beautifully maintained fairways, but just not as wide as in the past," he explained.

Just as the name implies, target golf makes the golfer concentrate on accuracy over power. As Silva sees it, the surface of the tees will be maintained with just as much intensity as they presently are, but the banks around them will be

rougher. At least 100 yards or more from the tee will be a fairway maintained just as nicely as possible, but not as wide as usual. About 30 to 40 feet from the greens will also be taller grass.

Much of the fairway restructuring will be accomplished through contour mowing. This step alone will not create the type of target courses Scotland is known for, but a more limited, Americanized version of the Scottish principle.

Architect Geoffrey Cornish believes this concept plays an important part in creating American target golf courses.

"We're doing it largely through contour mowing," Cornish said. "We're bringing the roughs into the fairways. I'm a great advocate of letting the grass grow taller, sometimes overseeding it," he says.

A common concern of opponents to the move is that, along with the change in course structure, the game will become more difficult. However, proponents contend that protection of the average golfer is considered.

According to Cornish, the concept behind contour mowing is to reduce the area of fairway turf to save maintenance money, and at the same time keep in mind the different ability levels of players.

The fairway is kept wide near the tee, where most high handicappers' balls land, and narrow where the long distance hitters and low handicappers place.

"We don't want to hurt the high handicappers," Cornish explained. "The longer one hits the ball, the more accurate he must be. That's our principle."

Ted Horton, superintendent at Westchester Country Club, said, "It puts a premium on accuracy rather than distance." Harder hitters may be discriminated against.

Silva points out, however, that with a 100 yard, wall-to-wall fairway, the golfer has nothing to aim at, no point on which to concentrate hitting or avoiding.

"I believe it helps the golfer when he stands on the tee to see where the ball should go," he said.

"It definitely makes the golf course more interesting," Cornish added.

Continued on page 22



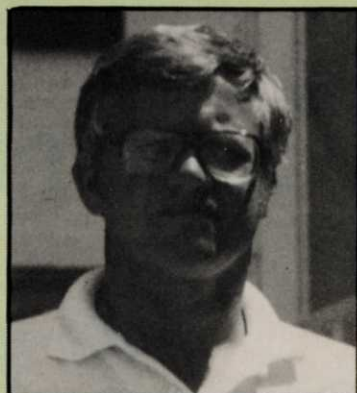
Jack Snyder



Geoffrey Cornish



Harry Eckhuff



Ted Horton

Jack Snyder believes this is a cost-cutting measure that is not only helpful but often necessary. "With the cost of maintenance going up, we have to find ways to reduce," he maintains.

According to Snyder, rough areas require less attention. Sprinkler systems, for example, can be modified to provide fairway areas with their usual amounts of water, but to reduce the water used on in-

termediate areas and roughs. Although the computerization of systems to perform in this modified way is itself an added expense, Snyder points out it may soon be necessary anyway due to frequent water shortages and restrictions on water consumption.

The target golf concept holds possibilities on some courses, but will it become a widespread trend to sweep American golf? Probably

not. Snyder points out not every course will be interested, and that it will gain more acceptance in private courses catering to better golfers.

"It certainly is happening on country club courses," Cornish agreed. But even an advocate of the idea, he explained that some public courses have shown a 10 to 20 percent drop after narrowing their fairway areas.

For Bill Lyons Jr. of family-operated Lyon's Den Golf Club, the results of such a transformation

Cut the Cost of Soil Management...

No other product can give you the results and still cut soil management costs like PENE-TURF Soil Treatment. PENE-TURF costs only about \$8 an acre to apply...you can treat **twice** the acreage at less than **half** the cost of similar products!

And what results! Golf course superintendents and professional turf managers across the nation are finding that PENE-TURF improves aeration...helps establish better rooting...eliminates wet **and** dry spots...helps curb erosion...and so much more.

Find out for yourself...write or call today for FREE information about PENE-TURF...the **best** solution for soil management.

Dealerships available in some areas.
Write or call today!



...use PENE-TURF.



110 1/2 East Wabash St. • Bluffton, IN 46714 • (219) 824-5384

Circle No. 121 on Reader Inquiry Card

"I like to see a course where most of the hazards are visible so the golfer knows what he is up against." Cadanelli.

would hardly be advantageous.

"We are strictly a public course. I have no members to pick up the tab. I depend on daily golf fees," he explained.

Most players of his course are amateurs or beginners. He feels that making the game more difficult for them would slow them up on the course, create lines waiting at the tees, make people dissatisfied and business would drop.

Bruce Cadanelli, superintendent at the Hollywood Golf Club, maintains similar apprehensions.

"You want the golf course to be enjoyable and to be played in a moderate amount of time," he said. A course requiring six hours to complete is not going to encourage new golfers to play or return to a course.

He contends that most American golfers play for social reasons, for enjoyment of being outdoors and the chance to occasionally play an exceptional round. "I don't know if they want a constant challenge" Cadanelli said.

Lyons gives his patrons what he feels they want.

"We mow as much as possible with a fairway mower. We mow our fairways extremely wide. The only difference between rough and fairway is about 1/4 inch, just

Continued on page 24

EASY COME. EASY GO. EASY MOW.

INTRODUCING OUR REELMASTER™ TRANSPORT FRAME.

Just hitch this Toro professional to your tractor and it's ready to keep you cutting. In more ways than one.

Because we engineered our Reelmaster Transport Frame to move from job to job as easily as it moves about the job.

We started with 7 reel mowers that hydraulically lift on command, in various combinations, to give you cutting widths of 6' 9" to 14' 4".



Plus, amazing maneuverability in tight spots as well as easy transportability down roads, over bridges,

through gateways, wherever you want up to 9.4 acres an hour of formal cutting. With an excellent quality of cut.

We put on high flotation tires to reduce marking of turf, create more stability on hillsides.

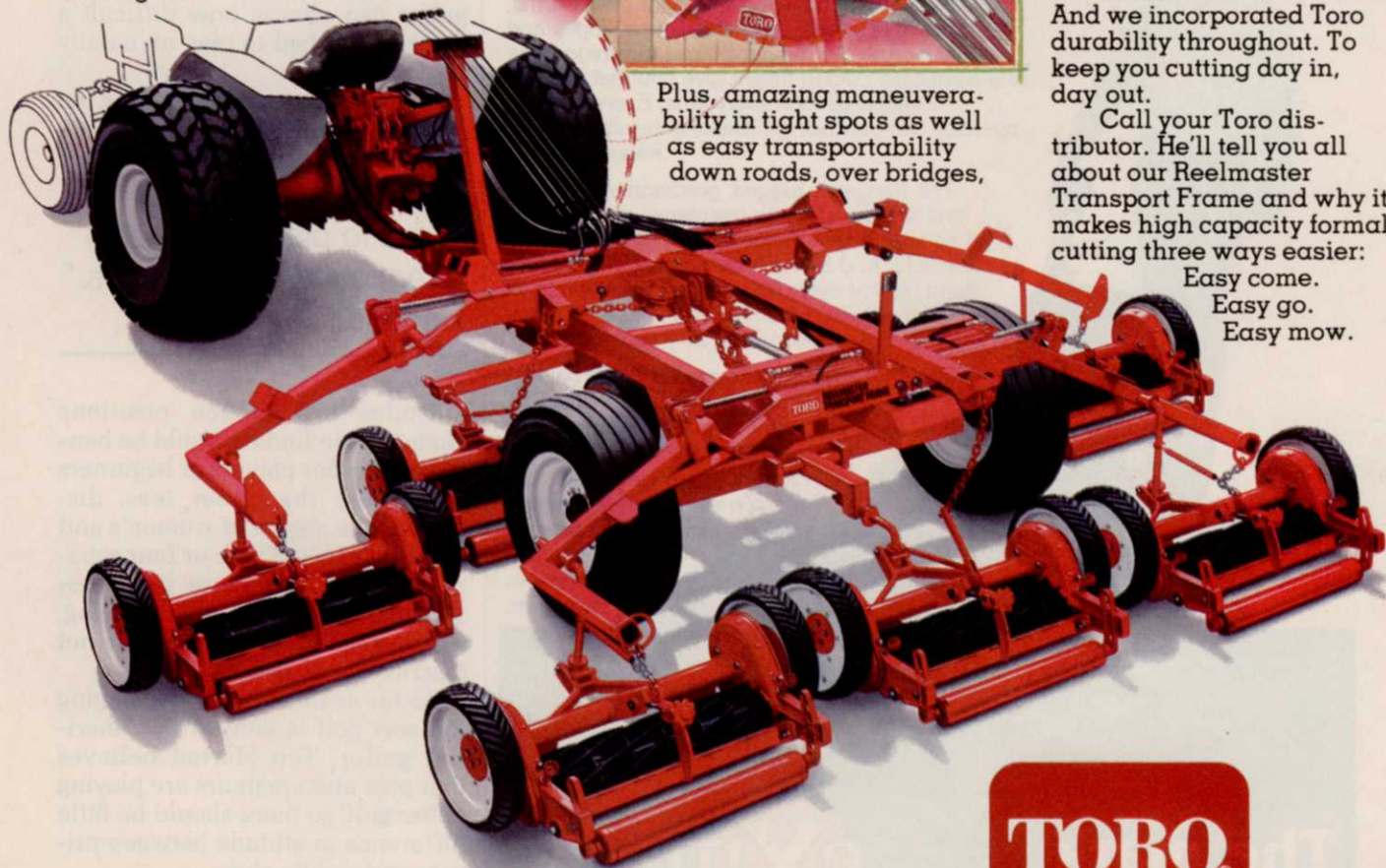
We built in adaptability. With an adjustable control tower for easy to reach lift controls. With adjustable hitch height to fit most turf tractors ranging upwards of 30 PTO HP and 3,000 lbs.

We made hitching a snap. With quick connect hydraulic couplers that free your tractor for other jobs.

We gave you a choice of three great mowers. Our Spartan 5 or 7 blade. Or our new Reelmaster 11 blade. And we incorporated Toro durability throughout. To keep you cutting day in, day out.

Call your Toro distributor. He'll tell you all about our Reelmaster Transport Frame and why it makes high capacity formal cutting three ways easier:

Easy come.
Easy go.
Easy mow.



**THE PROFESSIONALS
THAT KEEP YOU CUTTING.**

"Toro" is a registered trademark of The Toro Company, 8111 Lyndale Ave. So., Minneapolis, Minnesota 55420.

Circle No. 154 on Reader Inquiry Card

MAY 1983/WEEDS TREES & TURF 23

enough to get a change of color," Lyons said.

Public golfers aren't complaining. Lyons said that every year his business increases, not only from greens fees but from increased volume.

For golf professional Arnold Palmer, the idea of reduced fairway area is no problem. Although he foresees it happening on a number of courses, he also feels it can

discourage many golfers.

"I don't really mind. Target or restrictive golf is fine, but you have to consider all the people who aren't professionals," Palmer said.

As far as reduced maintenance costs, Lyons sees none. "I have to drag my mowers around anyway. There's no way I could justify decreased costs," he declared.

What Bruce Cadanelli sees in terms of maintenance is not so

much a cost reduction, but a change in quality. Having eliminated 1/3 of his fairway turf, dropping from 30 to 21 acres, he hasn't noticed any savings. What he believes may be happening, though, is that the money not spent on fairway turf may be spent elsewhere on the course in terms of better quality or improvements.

He maintains that strategy can be built into a course by design.

"I don't really favor target golf, per se, where a person has to hit a specific target and by missing it by a small amount is severely penalized. I don't think that person is likely to come back to that course.

"What I like to see in a course is a situation where most of the hazards are visible so the golfer knows what he's up against," Cadanelli explained.

He does advocate the type of strategic courses created by some degree of contour mowing. He also encourages multiple tees, so the golfer can choose how difficult a game he wished to play on a daily basis.

Brian Silva would like to see the

"A course requiring six hours to play is not going to encourage new golfers." Cadanelli.

attitudes toward tee positions changed. He finds it would be beneficial if older players or beginners would use the closer tees, discarding the stigma of women's and children's tees. Three or four separate tees would almost be necessary to the idea of contour mowing, so different types of players are not discriminated against.

As far as this direction changing the way golf is viewed by American golfer, Ted Horton believes that pros and amateurs are playing better golf; so there should be little difference in attitude between private and public clubs.

Bill Lyons maintains that his public golfers want the ball to sit on fairway turf like it was on a tee. They tend to scoop the ball.

Continued on page 26

Earn top marks in lawn care: Team with a Ranger



The Exmark Ranger commercial power mower earns top marks with optimum maneuverability and increased operator control. The Ranger provides excellent handling with tight power turns, variable speeds, and stability on slopes and hillsides. And the Ranger's close trimming edge and adjustable cutting height give you that expertly manicured look every time. Even a novice operator can produce professional results with the Ranger mower.

The Ranger is rugged, precision engineered and well-built for low maintenance operation, yet so simple that minor repairs can be done in the field. And Exmark distributors and dealers stand behind every Ranger with reliable follow-up service, a well-stocked supply of parts, and a personal interest in your satisfaction.

So buy the mower that's backed by rigorous testing, exacting production procedures, and company pride. You'll find the Ranger and all Exmark commercial turf care equipment are products you can have confidence in; to earn top marks in lawn care.

The mark of quality in professional lawn care.

eXmark RANGER

Circle No. 118 on Reader Inquiry Card

for the sporting life

Milwaukee's County Stadium, Chicago's Cominsky Park and Baltimore's Memorial Stadium, as well as many college and university stadiums. So, whether the sport is football, baseball, or soccer, A-34 BenSun® is the Kentucky Bluegrass of the pros.

Horse Racing ... Can anything be as punishing to turf grass? Imagine the slashing and tearing of thundering hoofs as they run for the wire. A-34 BenSun® is rugged enough to withstand this kind of beating and still recover quickly. That's why many race tracks across the country specify A-34 BenSun® Kentucky Bluegrass.



There was a time when the two most important things on a coach's mind, before the big game, were the condition of his players and the strategy behind his game plan. Today, however, most coaches have an additional consideration ... the playing field. Is the turf well-rooted? Firm? Safe? He demands a field that's in top condition — a field that won't interfere with his players' results or jeopardize his game plan's success.

Because your success is based on results, consider A-34 BenSun® when buying, selecting, or specifying a Kentucky Bluegrass. A-34 BenSun® is the hardy bluegrass that is providing better, safer playing fields, coast to coast, for some of the nation's leading stadiums, such as, San Francisco's Candlestick Park, Denver's Mile High Stadium,

Divots, spikes, electric carts, hot sun and short mowings. All of these are par for most courses.

That's why you need the one Kentucky Bluegrass that will go the distance on your tees and fairways ... A-34 BenSun®. A-34 offers excellent wear tolerance that will take short mowing down to 1/2 inch, so the ball rolls fast and lies well. So, don't leave your choice of Kentucky Bluegrass up to the toss ... When it comes to a tough bluegrass, one that can really take it ... score with A-34 BenSun® from Warren's ... the winningest bluegrass today.

Warren's

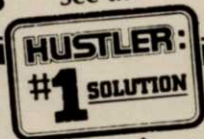
TURF NURSERY, INC.

Corporate Office:
7502 S. Main Street
Crystal Lake, Il. 60014
(815) 455-5100

Seed — Special Products Division
Cordelia & Chadbourne Roads
P.O. Box 459
Suisun City, Ca. 94585
(707)422-5100

FREE DEMONSTRATION On Your Own Turf!

See the



...and receive a
belt buckle FREE!

See for yourself how efficiently
the HUSTLER 261 cuts, sweeps,
vacuums and edges.

Experience for yourself
HUSTLER versatility, economy
and performance. Your
HUSTLER distributor will give
you a FREE demonstration of the
HUSTLER 261 on your own turf!
And, if you do it before June 30,
you'll receive a popular
HUSTLER Belt Buckle FREE!

The HUSTLER 261 beats the
competition in performance and
price because of famous
HUSTLER quality features,
backed by traditional Excel
reliability and design-mated
attachments that give year-
round versatility.

See the precision-cut, 60-inch,
3-Way rotary deck in action.
Watch the BAC-VAC grass
vacuum with new air sweep
feature and 16-bushel capacity
go through its paces. Ask about
the superb self-sharpening
edger! Other time-saving
attachments include grass
catcher/compactor, utility
scoop, dozer blade, V-blade
and rotary broom.

To set up your FREE
DEMONSTRATION of the
HUSTLER 261 or other
HUSTLER models, see your
nearest HUSTLER distributor
or call Toll Free
1-800-835-3260.

Excel Industries, Box 7000,
Hesston, Kansas 67062

EXI-9-383



FREE BUCKLE

New air sweep feature on
our BAC-VAC is adjustable
on the go to divert air flow
to a side opening for
sweeping sidewalks, or for
side-discharging clippings.

GS-075-07691



Exclusive coulters-type edger
delivers a professional trim.



The choice of the Pros.



Call toll free 1-800-835-3260

FREE BUCKLE WITH EVERY
DEMONSTRATION!

TARGET from page 24

"You've got to appeal to the people
you serve," he contends.

Most agree, however, that the
spread of the target trend will rely
largely on superintendents.

"A large part of it is the initiative
of the superintendent. They want
to get down to 20 acres of fairway
instead of 50. Everyone is after
them to reduce," Cornish said.

Silva adds, "As an agronomist, if
I suggest to a superintendent he
only mow in front of the tee twice a
week, he's the one who must listen
to the complaints of the golfers
who are used to having it another
way."

"I don't think superintendents
are afraid of strategic golf,"
Cadanelli offered. "I don't know if
the American golfer wants a chal-
lenge on a day to day basis."

He sums it up as a matter of de-
grees. "Scotland is one end of the
spectrum. They may be under-
maintained and are operating on
lower budgets. We are probably
overmaintained."

He would like to see some sort of
middle ground established, which
would reduce some maintenance
and still appeal to the average
golfer, which would make private
courses more accessible to every-
one. He points out that most super-
intendents could find some places
on their courses, far off in the dis-
tance where no ball usually lands,
to reduce care.

Jack Snyder would like to see a
lot more of the target concept, not
only through contour mowing but
by wild roughs and tricks as well.

"Architects haven't been able to
hide sand traps, for example, like
in Scotland," he said. "What was
called the 'rub of the green' has
been eliminated. Maybe we can
bring a little of that back within 5,
10, 20 years.

"On the other side, some archi-
tects say that the structure of golf
doesn't have to return to the past to
tighten the game."

Snyder hopes target golf will be-
come a theme new course designs
will take into account.

"I think all new courses will be
modified slightly with this concept
in mind, but not nearly as tight as
those private clubs that want to
employ it."

WTT

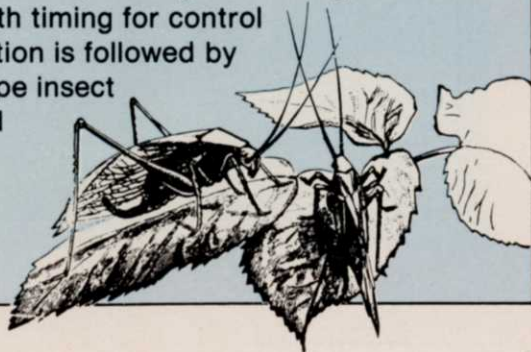
Insect Control Guide



WEEDS TREES & TURF



The INSECT CONTROL GUIDE will be updated and published each May. For this premier edition, the authors are Dr. Harry Niemczyk, professor of turfgrass entomology, Ohio State University, Wooster, and Dr. R. E. Partyka, director of horticulture, Chemscape, Columbus, Ohio. Photos were contributed by leading entomologists. The Guide was written with timing for control in mind. The turf section is followed by a section on landscape insect control, i.e. trees and ornamentals.



A useful approach to dealing with insect pests of turfgrasses is to consider them as they occur throughout the growing season. While insects are present in the turfgrass environment throughout the year, the key to preventing visible damage from them is knowing the optimal time to apply control measures. These times are keyed to vulnerable periods during the pests life cycle.

Depending on whether the preventive, predictive or curative approach to control is taken, controls for a certain pest may be directed at the different stages of that pest as they occur over the growing season. With the chinchbug, for example, preventive controls may be directed at the overwintering adult in early spring to prevent the laying of eggs, that lead to the damaging summer generation. The curative approach would be to wait until the eggs hatch and then treat for the young (nymphs) during early summer. Whatever the approach, knowing the life cycle of the insect and when the various stages occur, is essential.

The purpose of this guide is to point out some major pests to look out for in 1983 and cover some of

the controls that may be used during these times. No endorsement of named products is intended nor is criticism implied for those not mentioned.

LATE WINTER (MARCH)

A. Chinchbug and Bluegrass Billbug - Both of these insects overwinter as adults in the thatch but some move to sheltered sites near buildings or other protected locations. On warm days the insects begin moving about.

When summer damage from chinchbug and/or bluegrass billbug is expected, summer infestations can be prevented with an application of Dursban® (chlorpyrifos) 1 lb AI/Acre (active ingredient/acre) or diazinon 2.5 lb AI/Acre, made as soon as these insects begin to move about. In 1983 this could be as early as the first or second week of March.

B. Grubs - The larvae of this group of pests normally overwinter 6 inches or deeper in the soil. However, during the mild winter of '82-'83, many remained near the surface. This means early grub activity can be expected along with skunks and racoons who will tear up the turf searching for the grubs.

Application of Oftanol® (isofenphos) at 2 lb AI/Acre during March or when frost is gone from the ground, provides control of overwintered grubs as they return to the surface. There is limited confidence that such a treatment will provide adequate control of fall grub infestation. On the other hand, treatment at this time kills overwintering chinchbugs and billbugs and prevents infestation of these insects during the summer.

C. Mole Crickets - The biology of mole crickets varies considerably with the species and is still under study in many areas. Generally, these insects overwinter as adults deep in the soil, however some do overwinter as nymphs. Feeding activity resumes in March. Both adults and nymphs feed at night near the surface on turf roots, organic matter and other insects. During the day mole crickets return to permanent burrows.

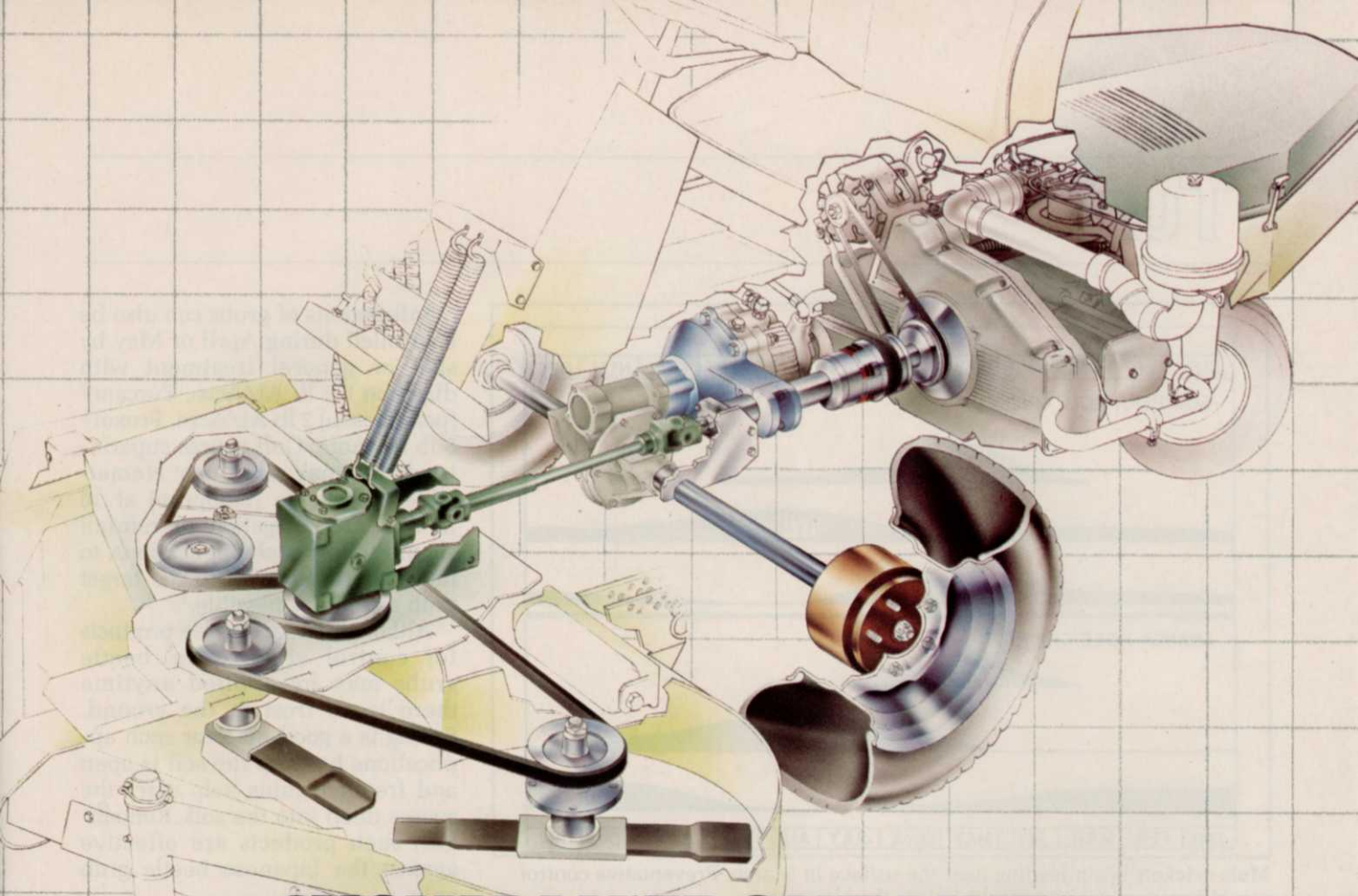
In years when feeding of overwintered mole crickets resumes earlier than normal, Oftanol® at 2 lb AI/Acre has been used with some success. Generally, such applications are better made during May.

D. Winter Grain Mite - This dark bodied, red-legged mite actively feeds on grass blades throughout the winter. Symptoms of injury are very similar to those from winter dessication. Damaged areas may also have a gray color appearing as though hit by a late frost.

When unacceptable damage from the winter grain mite is discovered in March, infestations can be readily controlled with a single application of liquid Dursban® 1 lb AI/Acre or diazinon 2.5 lb AI/Acre.

E. Black Turfgrass Ataenius - This golf course pest overwinters as an adult in the soil under debris in roughs or other protected areas. With the mild winter and expectations of a very early spring in 1983, a few may be seen flying about on warm afternoons in early March.

Continued on page 30



CUSHMAN[®] FRONT LINE: THE MOWER THAT'S OVERPOWERED THE COMPETITION.

You're looking at the biggest success story in mowing history. The Cushman Front Line.[™]

Just 3 years after it was introduced, the Front Line has been put to work on more parks, more campuses and more golf courses than all other mowers but one.

And in what really counts, the Front Line is second to none.

THE ONE-OF-A-KIND CUSHMAN POWER TRAIN.

It starts with the awesome 18-hp OMC gas engine.*

While other mower engines are built for constant speed use, our air-cooled engine was designed for the multi-speed work mowing demands—lugging power at low speeds, agility at faster speeds.

Move down the power train, and you'll appreciate one thing more—each major component was designed specifically for that engine.



Everything works together smoothly and efficiently.

ONE STEP AHEAD IN FEATURES.

However else you may judge a mower, the Front Line gives more than you might expect.

Long life engine parts. A torsion-reinforced deck. Traction assist. Optional antiscalp rollers. A

*Optional 4-cycle diesel engine with water separator available.

Circle No. 108 on Reader Inquiry Card

choice of 60" or 72" decks, side or rear discharge. And a full range of accessories for year 'round maintenance work.

For a free demonstration on your grounds, contact your Cushman dealer or call us toll-free at 1-800-228-4444.

Once you see it in action, the Front Line will overpower you, too.

THE CUSHMAN[®] FRONT LINE[™]

SECOND TO NONE.

CALL TOLL-FREE
800-228-4444

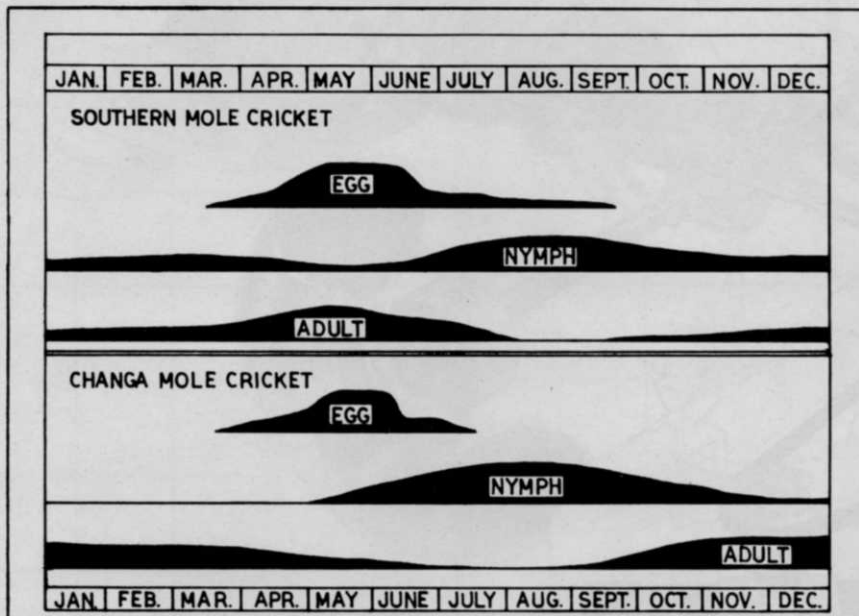
3135 Cushman, P.O. Box 82409
Lincoln, NE 68501

CUT-3-9073

© Outboard Marine Corporation, 1982. All rights reserved.

MAY 1983/WEEDS TREES & TURF 29

Turf



Mole crickets begin feeding near the surface in March. Preventative control would focus on stopping adults before they lay eggs.

Usually this activity begins when crocus starts blooming and intensifies as the bloom of red bud appears.

While an application of Oftanol® in March may be successful in preventing summer infestations of larvae, the probability of successes is increased by waiting until April. **F. Greenbug** — The only stage of the greenbug known to overwinter in northern states is the egg. Shiny black eggs deposited the previous fall may be found adhering to grass blades, fallen tree leaves or other debris.

Treatment for greenbug is not appropriate at this time.

G. Sod Webworm — The most common sod webworm species on northern turfgrasses overwinter as larvae in the thatch or upper inch of soil. Feeding does not resume until hibernation (dipause) is broken by early spring warmth.

Treatment for sod webworm is usually not appropriate at this time.

SPRING (APRIL-MAY)

A. Chinchbug and Billbug — As the warm days of May approach, movement of chinchbug and bill-

bug adults increases rapidly. Generally, egg laying begins during May but in 1983 this may occur a month early. Occasionally on warm afternoons, adult billbugs can be seen wandering about on sidewalks.

Generally, application of insecticides to prevent infestations of these two pests (mentioned above) should be completed by the first week in May; before significant number of eggs are laid. This time may vary as much as a week or more depending on the spring.

B. Grubs — Overwintered grubs return to the surface and begin feeding on turfgrass roots in April. Increased activity and damage from moles, skunks and racoons foraging on grubs can also be expected. Feeding by mammals and grubs continues thru May.

A single application of Oftanol® at 2 lb AI/Acre made during April has been successful in controlling overwintered grubs and preventing subsequent infestations during late summer. Application made during May may not provide immediate control, however, prevention of the late summer infestation may be expected.

Infestations of grubs can also be controlled during April or May by spot or general treatment with diazinon 5.5 lb AI/Acre, Turcam® (bendiocarb) 2 lb AI/Acre, Proxol® 8 lb AI/Acre. Golf course superintendents may also use Nematicide/Insecticide (ethoprop) at 10 lb AI/Acre. Irrigation or rainfall should follow such applications, to move the insecticide to the target grub as soon as possible.

Although milky disease products for control of Japanese beetle grubs may be applied anytime there is no frost in the ground. Spring is a good time for such applications because the soil is open and frequent rains help carry the spores deep into the soil. Remember, such products are effective against the Japanese beetle grub only.

C. Mole Crickets — Mature adult mole crickets emerge from the soil in May and engage in mating and dispersal flights. Eggs are laid in chambers hollowed out in the upper 6 inches of soil.

Though some variation in results has been experienced, application of Oftanol® at 2 lb AI/Acre during this time has been generally successful in preventing summer damage. Irrigation following treatment is advisable.

D. Black Turfgrass Ataenius — Adults of the black turfgrass ataeus can be seen flying about in April and are often found in the clipping catchers after early mowing of golf course greens. These adults begin egg laying in early May, or about the time Vanhoutte spiraea first comes into bloom.

Application of Oftanol® during April or May has successfully prevented larval infestations during the summer. Diazinon at 5.5 lb AI/Acre applied to fairways when Vanhoutte spiraea first comes into bloom, kills egg-laying adults and also prevents the development of summer larval infestations.

E. Sod Webworm — Overwintered larvae of the sod webworm

Continued on page 32