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There's an armed struggle going on out there. Man versus machine. In this case, it's operators just like you battling it out with old-fashioned "pistol grip" type steering. But now there's a way for you to gain the upper hand. T-bar steering exclusively from Toro. Toro's patented T-bar

A Breakthough There's an armed struggle going on out there. Man versus machine. In this

BALLION DRIVE

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mower, stop and ask the operator how it performs. We expect you'll want to contact your local Toro distributor for a thorough demonstration. At which time you'll The professionals see firsthand just how important arms control that keep you cutting.

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LANDSCAPE MANAGEMENT Formerly WEEDS TREES & TURF



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In this age of valuable plant materials, the transplanting process must be done correctly. If it's not, the company stands to lose money.

76 IT'S A JUNGLE OUT THERE

It's sometimes hard to understand insurance talk, since agents generally don't understand the industry. But these tips could make your next conversation more intelligible and your next purchase more intelligent.

82 HOW FAST IS TOO FAST?

Yes, you can grow too fast. As a matter of fact, you might be growing too fast right now. Here are some questions you can answer to tell you exactly how fast you're growing. If it's not, the company stands to lose money.

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On the cover: Mulkern Landscaping Co. doing it Hawaiian Style.

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NEWS/TRENDS by the Editorial Staff

More students on the horizon

Jules Janick, Ph.D., predicts that current low horticultural enrollments at universities will swing around in less than a decade.

Janick, outgoing president of the American Society of Horticultural Science, notes that figures also show that consumers are willing to pay more for landscape horticulture, and predicts that trend will continue.

"I'm optimistic but cautious," Janick told the A.S.H.S. membership at its annual meeting. "The success of Floridians to create a horticultural paradise over sand and alligators has been an inspiration to all of us. Whatever the future brings, I guarantee excitement."

A one-handed killer

Latest concern of the National Arborist Association is the onehanded use of small chain saws while pruning or trimming trees. "If ever there was the opportunity for a serious injury, this is it," says N.A.A. executive secretary Bob Felix.

"Accidents don't happen, they are caused," Felix told attendees at the ALCA/PGMS Green Team show. "No matter what you are doing, you can have unsafe situations. For moral and practical reasons, every employer has an obligation to make every employee work safer. You can't use safety training programs enough."

Felix also revealed that the American National Standards Association has written new standards and safety practices, which will be released soon, and that employers should make every effort to follow them.

Possible new bio-control

A newly-discovered parasite might be used to control grub populations in the future, leading to less pesticide use on turf and crops.

According to a report from the Connecticut Experiment Station Newsletter provided by LM advisor Marty Petrovic, the parasite's name is Ovavesicula popilliae. A spore is secreted by O. popilliae that is harmful to Japanese beetle grubs.

"Since it apparently attacks only Japanese beetles, it may have arrived here with the beetles about 1910," said the newsletter. "We are now determining if we can use it to help control Japanese beetles, and thereby reduce the amount of pesticide applied to the soil."

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"One of my employees ran the mower into the lake. My wife totalled our new Volvo. And my daughter just dyed her hair purple. But what really concerns me is Pythium."

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GREEN INDUSTRY NEWS

Two new products for fire ant infestations

Two new products for control of the dangerous fire ant hit the market last summer, Logic fire ant bait from PBI/Gordon and Affirm fire ant bait from Merck.

INSECTS

Fire ants, named for the burning sensation of their stings, are a growing problem across the southern part of the United States. They are potentially fatal to about one percent of the population. Invaders from Brazil, fire ants have spread over 270 million acres since their first appearance 50 years ago in Mobile, Ala.

Logic's active ingredient is fenoxycarb, an insect growth regulator. Test results show that newly-hatched winged female fire ants are completely sterile because of the effects of Logic, a granular bait. These young queens are the ants that could potentially mate and start new colonies. Logic also stops the development of the fire ant brood, preventing young larvae from becoming adult worker ants.

Logic is available to landscape managers through PBI/Gordon, Kansas City, Mo. (phone 816-421-4070).

Affirm is a bait derived from a natural soil microorganism. When worker ants feed it to fire ant queens, Affirm stops them from laying eggs. It is also toxic to the workers. Active



ingredient is abamectin.

Affirm is marketed more toward the homeowner market, though it is available to the landscape manager through the Rigo Company, Buckner, Ky. (502-222-1456) and Security Lawn & Garden Products, Ft. Valley, Ga. (912-825-5511).

"The product received kind of a late start last year," says George Gosen, director of agricultural products for MSD Agvet, a division of Merck. "We expect a lot more use of the compound in 1988 and beyond."

INSECTS

Insects become opportunists when attacking plants, trees

Weak, improperly-cared-for trees and other plants are the most likely targets of insect infestations, says Dave Nielsen, Ph.D. at Ohio State University's Agricultural Research and De-



Neilson

velopment Center in Wooster.

Nielsen told landscape managers at the Pro Show in Dallas that getting rid of these pests could be a problem, but not just because of resilient bugs.

He cited concerns about liabilities associated with using pesticides in landscape management, the availability and cost of liability insurance, and government restrictions on chemical use in the marketplace. Much of this can be avoided, he says, by properly caring for the tree from the beginning, "contributing to natural resistance."

Important among the contributors are site quality, superior planting stock and systemic tree health care. "Work with architects for proper planting sites," he suggests.

To match a tree to a site, he makes these considerations: exposure, drainage, traffic, fruiting, form, space and soil type.

Adequate supplies of clean air, moisture and sunlight above ground, and water, oxygen and nutrients below ground are essential. He suggests aerifying to a depth of 16 to 18 inches to keep a sufficient oxygen supply near the roots.

"The most important part of tree health care is the client," he adds.



Fire ant queen surrounded by workers.

ASSOCIATIONS

Ciba-Geigy donates \$50,000 to GCSAA

A \$50,000 contribution to the Golf Course Superintendents Association of America has been received from Ciba-Geigy.

The Robert Trent Jones Sr. Endowment Fund, established by the GCSAA last August, makes scholarships available to outstanding students in collegiate turfgrass management programs across the country. The fund encourages future leaders among golf course superintendents.

"We're pleased and excited about the opportunity to make a significant contribution to the endowment fund," says Bill Liles, director of Ciba-Geigy's Turf and Ornamental Department. "Furthering turf research through scholarships is an excellent example of industry, education and the GCSAA working together." Work closely with the client to gain an understanding of the tree's needs. He also believes in charging for a tree survey or inventory (this is a business, after all).

Trees and their caretakers have to deal with a myriad of insects. Nielsen says a healthy plant will go a long way toward reducing the need for major tree repair and pesticide applications: quality plants, not pest control.

ATHLETIC TURF

Artificial turf injuries appear to be on the rise

Artificial turf is hurting athletes, say an overwhelming number of college athletic directors. The athletic directors, from schools in the National Collegiate Athletic Association (NCAA), cited increased injuries to knees, ankles and elbows as the main reason they preferred natural fields.

Of the 177 who responded, almost 68 percent opposed synthetic surfaces. That included some Division 1A schools which currently have artificial fields. Only 23 percent support artificial turf, while the others are undecided.

BASF Corporation Fibers Division sponsored the survey. Respondents averaged more than 21 years experience in coaching and athletic administration.

More than half of the respondents, 53.1 percent, see a trend back to natural fields.

Comments from respondents characterized artificial surfaces as "too hard," "abrasive," with no give. Besides knee, ankle and elbow injuries, burns and contusions also topped the list.

An athletic director at a Division 1AA school in Illinois agrees "totally with our players and coaches that the injury situation is considerably worse when we play on artificial turf. If the players and coaches have their way, we will soon have all natural fields again."

Several coaches, however, favored synthetic turf. One service academy official said, "The main problem is footwear, not the turf." A Division III administrator said, "Our players learned to fall and run appropriately on the artificial surface."

Despite the controversy, some schools take a pragmatic approach to the matter. "Our coaches want to practice on natural grass," one administrator reported, "but play games on artificial."

For more information on athletic field safety and care, reprints of "Sidelined" and "Hard Knocks" from continued on page 12

SHORT CUTS

WELL-READ...Maria Cinque, horticultural extension agent for Long Island, N.Y., is becoming somewhat famous along the eastern seaboard. Cinque, since last April, has been writing a weekly column in the Sunday editions of Newsday. She also writes for the New York editions of the same newspaper. The papers have a combined circulation of more than one million readers. "These columns give the general public a constant in horticultural information," Cinque says.

IMPRESSIVE PRESS...Robert Dedman of the Club Corp. of America recently received national attention, along with William Kubley of Landscapes Unlimited. Dedman, who founded Club Corp., was written up in the Dec. 14th issue of Forbes magazine. "Even before it turns profitable, a Dedman club can be a cash machine," Forbes said. Kubly, owner of Landscapes Unlimited of Lincoln, Neb., received a write-up in Inc. magazine for being the 441st fastest-growing entrepreneur in the country. Minors Lawn Care of Fort Worth, Tex. was No. 446 and Suburban Landscape of Davenport, Ia. was No. 447 on Inc.'s list of the top 500.

A WORLD RECORD...Briggs & Stratton, the world's leading manufacturer of small gasoline engines, has made the Guinness Book of World Records. The first product ever produced by the company from 1920 to 1923, a buckboard-like car called the Flyer, was named the most inexpensive mass-produced road car in history. The nationally-syndicated television show "Guinness Book of World Records," which was scheduled to air in mid-January, was to highlight the car. The Flyer sold for \$145 to \$225, according to George Thompson III of Briggs & Stratton. Only about 2,000 of the Flyers were manufactured, though.

RESTLESS NATIVES...ANVIL (Association for the use of Native Vegetation in Landscapes) received time on the Voice of America. Roger Lemke of LaFayette Home Nursery near Chicago invited a reporter to see the prairie growing in his yard. "I had to be careful," Lemke says. "I had to make sure I referred to aggressive weeds instead of Eurasian weeds."

GETTING INTO CONDITION...Seed companies no longer clean turfseed. But that doesn't mean you'll see a lot of weeds in the next lawn you seed. To get around (or, is it cooperate with?) the EPA, seed companies now refer to seed cleaning as conditioning. But, says Jerry Pepin, Ph.D., of Pickseed West, the seed still meets quality standards.

Keep your fairways looking great.

Several coact or however, in main printedic built from corvice academy official and. "The main problem is fortunes, not the tark" A Division II adapteristicator sold. "Our players between to fail and run appropriation on the writheld author."

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