



ANOTHER TURN FOR THE BETTER

Ransomes out-maneuvers the competition. Again. With the new T-3100 Bobcat (our idea of a great machine). Hydrostatic drive eliminates bothersome clutching and shifting. Just effortless forward and reverse control from a single foot pedal. And a three-wheel ride means precise turns for close trim work. If you think all this makes the T-3100 expensive, forget it. It's the most affordable commercial rider in its class.

The new T-3100 Bobcat from Ransomes.
Where else would you turn for great ideas?

For more great ideas, turn to your Ransomes distributor. Or, call Ransomes, Inc., One Bob Cat Lane, Johnson Creek, WI 53038, (414) 699-2000.

RANSOMES

BOB-CAT®

WHERE GREAT IDEAS START

Circle No. 273 on Reader Inquiry Card

wanted visitors instead of apprehending them is the best way to approach the problem.

"We've tried a few times to press charges against vandals but always found that it was too difficult to pursue," says Ken Debusscher, of Wabeek Country Club, a private, 18-hole course in Bloomfield, Mich., about 25 miles north of Detroit. Debusscher has caught kids riding mopeds on the course but says that "my hands are tied" as far as what action he can take.

"We've found that if you tick them off they'll come back and do some real damage," he says. "I try to be as nice as I can so they have no reason to return. Granted: it's a fine line where you can be a real jerk about it, but I try to straddle it."

Debusscher repairs moped tire track damage on greens by replacing the turf with bentgrass sod purchased from a local nursery. If none is available, a swath is taken from an obscure spot on a nearby practice chipping green.

Three years ago Ed Wojtkiewicz, superintendent at Cleveland Metro-parks' Manakiki Golf Course, had an incident where gas and peroxide were poured all over a green. He made a

strong effort to find out who was responsible, having park rangers go door to door at surrounding residences asking for information.

"We never did find out who was

Many superintendents stressed that "scaring off" unwanted visitors instead of apprehending them is best way to approach the problem.

responsible," says Wojtkiewicz, "but we did see a drop in the number of incidents after that. We're pretty sure whoever did it got the message that we weren't going to tolerate stuff like that."

To repair gasoline or peroxide damage, Wojtkiewicz recommends cutting the turf low, top dressing, re-seeding it and waiting for it to grow out. "Oil-based damage is the real

problem," he says. "There's nothing you can do about it until it leaches out. Eventually gasoline will evaporate, but oil will sit there all year."

Never-ending war

If you think you have problems, talk to a superintendent of a course within a major metropolitan area, such as Brooklyn, N.Y. Only "Russian border guards armed with machine guns" could stem the tide of vandalism there, says a superintendent requesting anonymity.

"This is the Vietnam of golf," he exclaims. His 18-hole public course has more than 6,000 families, football and baseball fields as neighbors and hosts some 80,000 rounds of golf annually.

"There is so much vandalism here that for all intent and purposes it's impossible to fight against it. They knock down fences quicker than we can put them back up."

To repair motorcycle tire damage to greens, his most common problem, he brushes away the debris, top-dresses and reseeds. Sod may be used during the growing season, but otherwise is rarely considered because "if the kids see something they can just pull right up they'll destroy it."

The course employees and patrolling park rangers constitute security personnel, though neither have the power to arrest. "The police here are pretty well jammed up trying to deal with the more serious crime. Chasing kids on motorcycles isn't a high priority," he says. It was decided not to light the course because it is too expensive and "they would just shoot them out with BB guns anyway."

The most serious incident occurred two years ago when a stolen car was abandoned and burned on a green, causing \$8,000 damage. Tees and ball washers also take a beating. The superintendent at this course keeps many ball washers on hand particularly around the Independence Day holiday, when they have a tendency to explode.

"A lot of them get blown up that weekend," he says. "I try to put out the older ones at that time." At \$200 apiece, he says he easily goes through \$1,000 worth a summer. "We try to buy ones that don't explode so easily," he adds.

Interestingly, the superintendent says golfers complain more about having to use a temporary green than they do about a vandalized one.

"Our philosophy is that nothing of value can be left out overnight. Not a flag, a chain, nothing," he says. "We could easily spend \$2 million a year repairing things, but then we wouldn't be in business." **LM**

"With a Wells Cargo Behind... You Never Look Back"



28 FT. WELLS CARGO EXPRESS WAGON

ALL YOUR GEAR...

SECURE, ORGANIZED AND READY TO ROLL

We can say, "We build the best". Our specifications sheets will back that up. But why else should you consider Wells Cargo? How about:

- Factory Service Facilities - GA, IN, TX, UT.
- US Wide Dealer & Service Network.
- A Product Designed & Built for 15 Yrs. Hard Service, and More.
- Second-to-None 3 Yr. Warranty Coverage.
- Full Line Ball-Hitch Units 6" - 32" and Up.
- Full Line Fifth Wheel Units 20' - 40' and Up.

CATALOGS
SPECIFICATIONS

CALL

1-800-348-7553
SAY YOU SAW IT IN
LANDSCAPE MGT.

 **WELLS CARGO**

**SINCE
1954**

WELLS CARGO, INC. P.O. BOX 728-837 ELKHART, IN 46515

Circle No. 174 on Reader Inquiry Card

"Hey Bill,
Look at this photo RGB sent
me... It shows what happened
when Lawn-Plex® was applied
with MSMA!"

"Wow, look at that green!
I've heard great things about
Lawn-Plex. I'll use it in my
next MSMA tank mix.
No more brown lawns
for me!"



MSMA without Lawn-Plex® Unretouched Photo Taken 6/30/87 MSMA tank mixed with Lawn-Plex®
On Bermudagrass

Tired of getting burned? Lawn-Plex® fully chelated micronutrients provide a cost effective way to reduce stress and burn on lawns, fairways...all fine turfgrass. Similar results can be obtained by adding Agri-Plex® to ACCLAIM® tank mixes. Acclaim® is a registered trademark of Hoechst AG



Unequaled Micronutrient Technology

RGB
LABORATORIES INC.

Circle No. 157 on Reader Inquiry Card

Contact your local RGB Distributor or call:

1531 Charlotte St., Kansas City, MO 64108 (816) 474-3342

STARTING MOWERS AND STORING SNOWTHROWERS

It's time to put away your snowthrowers and get your mowers ready. A couple hours of work now will make sure each is ready when you are.

There's nothing more frustrating than wasting a sunny spring day to start an unresponsive lawn mower for the first cutting of the season... unless it's bundling up on the first morning of the first big snow and not being able to start your snowthrower.

Early spring is the perfect time to circumvent both problems. Prepare your mowers for use on the same spring day you prep your snowthrowers for storage, and you'll en-

sure easy-starting equipment.

The most important consideration is fresh gasoline. "The number one problem recognized by outdoor power equipment service centers is gas left in machines during long periods of non-use, or old gas (gas left in a can for more than a season) used to fill the machine at the beginning of a new season," says Bert Thompson, Pro-Line marketing manager for the Toro Company.

"Because gas becomes stale and

breaks down after a period of time, it can gum up and literally shellac the inside of a carburetor. Therefore, you should empty the gas tank at the end of the season, and fill the machine with fresh gas at the beginning of a season.

At the beginning

Before performing mechanical maintenance on any equipment, avoid accidentally starting the engine by detaching the spark plug high tension



To completely drain your snowthrower of gas, first empty the fuel tank according to the instructions in your operator's manual. Then, start the engine and let it run until it stops.

NATURAL ORGANIC

Milorganite®

FERTILIZER

America's Number One Natural Organic Fertilizer

- Many of the finest parks and grounds in America are fertilized with Milorganite.
- Non-burning, cost-effective, turf fertilizer.
- Rich in organic iron — 4% minimum guaranteed.
- 90% Water Insoluble Nitrogen (W.I.N.), slow release nitrogen promotes vigorous growth.
- Supplies humus and improves water holding capacity of soils.
- The golf course choice.

Circle No. 144 on Reader Inquiry Card

FREE LITERATURE

Mail in the coupon below for further information
or call 414-225-2222.

Please send me further information

- Milorganite's Specialty Fertilizer Program
- Milorganite's Iron — Technical Bulletin

LM-A

NAME _____

ADDRESS _____

CITY _____

STATE _____

ZIP _____

PHONE # _____

DUCKBILL DUCKBILL DUCKBILL TREE SUPPORT SYSTEMS



Cross section of earth

Duckbill Tree Support Kits are designed for professionals. They're completely pre-assembled for ease and speed of installation, and each includes everything needed to support one tree. They're strong, permanent anchoring systems, and they save time and money for you.

Complete systems for all sizes of trees and types of installation . . . for above-grade or below-grade anchoring. Call today for complete information on Duckbill . . . all you need to know about tree supports. Foresight Products Inc., 6430 East 49th Drive, Commerce City, Colorado 80022. Phone (303) 286-8955 or **1-800-325-5360** FAX (303) 287-3866.

**FORESIGHT
PRODUCTS INC.**

U.S. Patent numbers 4,044,513 and 4,096,673 and other international patents. Additional patents pending.

Booth 1008 at the LI Show

Circle No. 129 on Reader Inquiry Card

wire.

If you have let your mower sit since the last time it was used way back last fall, you'll need to start with a thorough cleaning. Tip the machine on its side and remove any dirt or grass clippings by spraying the housing with a garden hose. Scrape out any grass that water will not remove with a wooden scraper. Touch up areas on the top and underside of the deck with paint to prevent rust or corrosion from forming.

This is also a good time to check the blade fastener and blade for general

After making sure the crankcase has been completely drained, refill it with the recommended oil to the proper level. Take care not to overfill the crankcase as engine damage or starting difficulty may result.

Also, lubricate and grease other mower parts as recommended in the operator's manual. Replenish battery liquid in batteries that need fluid, and charge for the specified charging time before using.

Finally, refill a completely empty gas tank with fresh gas for the season.

If you have let your mowers sit since the last time you used them, you'll need to start by thoroughly cleaning them. Tip the machine on it's side and remove any dirt or grass clippings by spraying the housing with a garden hose. Scrape out any grass that the water will not remove with a wooden scraper.

condition and sharpness. If the blade needs servicing, follow the blade maintenance procedure in the operator's manual, making sure the blade is balanced before re-installing and is properly tightened according to the manufacturer's specifications. Rotary lawn mower blades should always be sharpened only on one side, generally on the upper surface.

With the machine right-side-up, use a rag and appropriate cleaning solvent to clean dirt, grime and grass clippings from the external parts of the engine, shrouding and engine housing. Special attention should be given to the cylinder head fins and blower housing to make sure they are completely clean for proper air cooling.

Also service the spark plug. With the cylinder head clean to ensure that foreign matter does not fall into the cylinder, remove the spark plug and check for proper gap, replacing it if necessary with one recommended by the manufacturer.

Although it should be cleaned throughout the season, the air cleaner on a mower, rider, or tractor becomes dirty by the fall. Wash foam-type air cleaner elements in a solution of liquid soap detergent and warm water. After drying and saturating it with oil, squeeze excess oil out of the element and reassemble. Simply replace paper-type filters.

Check and tighten all nuts, bolts, and screws that may have been loosened from vibration. If any part is damaged, repair or replace it.

The snowthrower

The most important step for prepping outdoor power equipment for storage is to empty the gas tank. To completely drain your snowthrower of gas, first empty the fuel tank according to the instructions in your operator's manual. Then, start the engine and let it run until it stops.

All snowthrowers are by nature shaken around a lot. Thompson recommends inspecting for loose drive coupling and other parts which can later cause expensive problems.

Thompson says you should lubricate the control linkage and other moving parts of the snowthrower before storage. The crankcase oil should be changed prior to each season, using winter-weight oil (10W, 10W30, or 5W20). Run the engine just before changing the oil because warm oil flows better and carries away more contaminants than cold oil.

You'll want to remove the battery before long periods of storage. Finally, Toro suggests covering the snowthrowers to protect them from dust and dirt and storing them in a clean, dry place.

"Your outdoor power equipment sits idle a majority of the time," says Thompson. "But when it's needed, you need to be able to depend on its immediate performance. That's why, in addition to regular maintenance, your best bet for preventing problems is to buy a quality product from a reputable dealer. A little care combined with a well-built machine will give you years of satisfying performance."

LM

INTRODUCING ONE TOUGH, VERSATILE MACHINE



Today It's A Mower, Tomorrow A Snowthrower.

It's the commercial machine that converts easily to handle your year-round maintenance needs.

Which means a mower easily becomes a power brush, a snowthrower, or any of a number of machines, with attachments available from Cub Cadet. You'll need only one machine—our rugged Power Unit can handle it all.

Built For Durability, Versatility, and Muscle.

- Your choice of three powerful electric start Vanguard engines: 8.5 HP single cylinder OHV, and 12.5 or 15 HP twin cylinder OHV
- Beltless final wheel drive for sure-footed power, even on wet turf

- Planetary transmission, with five speed ranges in forward and reverse
- No-clutch, no-stop, forward-to-reverse shifting for easy movement around trees and shrubs
- Standard electric PTO switch, ammeter and hourmeter
- A separate steering clutch on each wheel for effortless turning
- Automotive-style U-joint to power attachments for quick conversion to other functions

Cub Cadet

Power Equipment

CUB CADET COMMERCIAL MOWERS

P.O. Box 360930, Cleveland, Ohio 44136
Circle No. 110 on Reader Inquiry Card

- Your choice of three cutting decks: 32", 38" or 46"
- An optional 6-bushel bagger
- An optional steerable sulky

The Tough Machine That's Right For You—Right Now!

When you buy a Cub Cadet Commercial Mower during this introductory period, you'll take advantage of the special dealer financing that's available for a limited time only.

Circle the readers service number and a Cub Cadet representative will process your response and speed Dealer and Pricing information immediately your way.

**Try A Tough, Versatile Cub Cadet
Commercial Mower—You'll
Appreciate The Difference.**

IMPROVING ROUTING EFFICIENCY

One of the easiest ways to lose money is to send crews out in a haphazard fashion. Routing should be fully planned ahead of time.

by Ed Wandtke

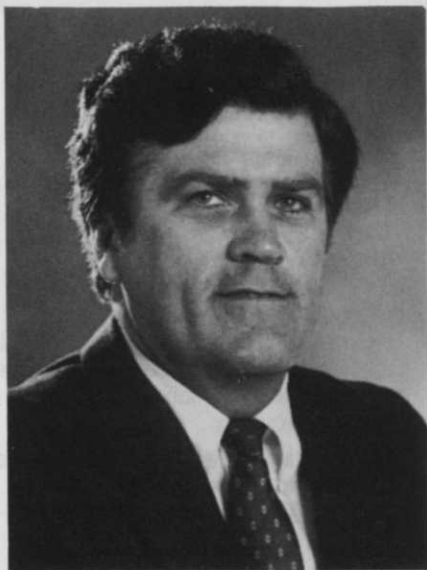
One of the best ways to control costs also happens to be one of the most overlooked aspects of doing business in the green industry: routing efficiency.

Routing is frequently delegated to an individual technician, serviceman or to a mowing crew chief. But the astute businessman needs to ask himself if this is the right person. What other options would provide better cost control, and how can your routing efficiency be improved?

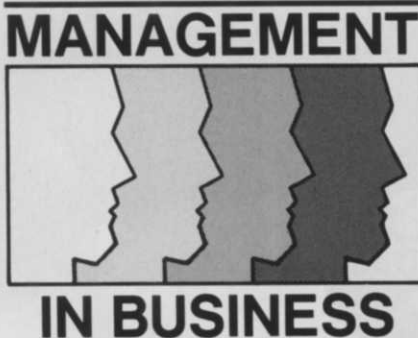
Routing is the sequential servicing of customers on a given route. The traditional rule when developing a routing schedule has been to service commercial accounts in the morning and residential accounts later in the day, if time is available. But frequently a residential customer dictates the day and/or time that they want to be serviced. In many instances they insist you call ahead.

Who's in charge?

Routing should be done by an individ-



Ed Wandtke is a senior consultant with All-Green Management Associates in Columbus, Ohio. He focuses on operations and financial questions.



ual who understands the priority of your accounts. And though it's important that this person has an understanding of the layout of your service area, the actual deliverer of service rarely is the ideal person for route planning.

Some companies currently use a routing coordinator who sets the sequence of work to be performed each day, thereby allowing service personnel to concentrate on the customer. While this may seem to be a significant additional cost for some companies, you may be surprised how much time and payroll expense can be saved. I have seen this concept work for a company with as few as 10 service routes as well as for companies with more than 25 service personnel.

The routing manager usually has the additional benefit of knowing when work is completed each day. Therefore, if you're able to communicate to your service personnel, more work can be assigned to an individual or crew that finishes early. In addition, if you have customers who must be pre-notified, your office can call to confirm the service while your crew is enroute to the site. Such efficiency is sure to be noticed.

Figuring in growth

As your company grows, the need for an organized approach to servicing customers is critical to cost control. The rapid addition of new customers

each year doesn't necessarily make your present routing plans obsolete. Customers signed up during the off-season should become the core of a grid network to be completed after new customers are added. It then becomes the routing person's responsibility to efficiently integrate new accounts into the daily production activity.

Many companies buy a grid map of their service area, identify the exact location of their customers, and map out what looks like a specific, efficient route. I have found that this system only works part of the time. A better approach for developing your routes is to buy a mylar (clear) film cover for the grid map and trace your customer locations on it.

Some companies need to narrow their service area in order to improve efficiency. Though saying "no" to that one account outside of a reasonable service area is difficult, it's more important to have stabilized routing. You need to bite the bullet and concentrate on solidifying the geographical area in which you will work.

The customer's eyes

Some of the computer software recently introduced to the lawn care industry features routing packages. Many of these systems are worth looking into. They are capable of saving you a significant amount of money, usually many times the cost of the software. Whether you choose to do the routing manually or with a computer, make sure that adequate room is left for inserting additional customers as opportunities arise.

To evaluate your company's delivery efficiency, look at your operation from a customer's point of view. Have someone in your company evaluate service delivery for your current customers.

Effective routing will save you money, but only if someone oversees the system. That's the route to improved profitability in 1989 and beyond.

LM

Look at it this way.

Is there really any other choice in grub control?

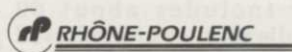
CHIPCO® SEVIN® brand SL carbaryl insecticide consistently demonstrates effective control of the most damaging species of white grubs. Plus control of 29 other destructive turf pests—including sod webworms, chinch bugs and bluegrass billbugs. It even provides dependable control of more than 86 insects known to attack trees, shrubs and ornamentals. And CHIPCO® SEVIN® brand SL carbaryl insecticide gives you all this control at a cost of only about one dollar per 1,000 sq. ft. But the advantages don't stop there. CHIPCO® SEVIN® brand SL carbaryl insecticide is ideal for control of nuisance pests such



as ants, fleas, ticks and mosquitoes that thrive around the perimeters of your course. And it's easy to apply. There's no need for special protective clothing, no odor, and play can be resumed as soon as the spray has dried. CHIPCO® SEVIN® brand SL carbaryl insecticide is low in toxicity to fish, and other formulations of SEVIN® brand are used for control of pests on household pets, poultry and some game birds. When you add it all up, is there really any other choice in grub control?

Chipco Sevin SL

Brand Carbaryl Insecticide



As with any crop protection chemical, always read and follow instructions on the label. CHIPCO is a registered trademark of Rhone-Poulenc. © 1989 Rhone-Poulenc Ag Company
CHIPCO SEVIN is a registered trademark of Rhone-Poulenc for carbaryl insecticide.

Circle No. 160 on Reader Inquiry Card

VERTI-DRAIN®

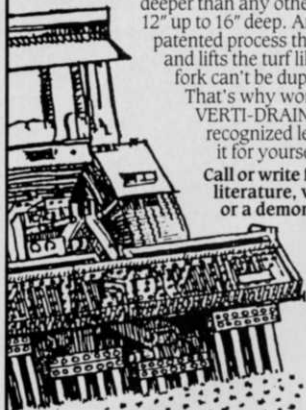
Works like a pitchfork, only better!

It's amazing how simple the principle is and how well it restores severely compacted turf. Greens, fairways, sports fields—anywhere you want to promote better root structure.

Our deep tine aerators go deeper than any others—10", 12" up to 16" deep. And our patented process that shatters and lifts the turf like a pitchfork can't be duplicated.

That's why world-wide VERTI-DRAIN is the recognized leader. See it for yourself.

Call or write for our free literature, videotape or a demonstration near you.



VERTI-DRAIN®

415 Washington Avenue, Scranton, PA 18503

717-961-6120

Circle No. 173 on Reader Inquiry Card

WHEN PERFORMANCE COUNTS, COUNT ON CONWED FIBERS!

Performance Proven Hydraulic Mulching and Erosion Control Products for over 25 years.

- **Hydro Mulch®** Fiber Mulch—100% virgin wood fibers engineered for superior machine and on-the-ground performance.
- **Hydro Mulch®** 2000 Fiber Mulch—With premixed tackifier to reduce "wash outs".
- **HiLoading™** Fiber Mulch—Reduces operating costs by covering more square footage per tankload.
- **Erosion Control Netting**—Holds straw in place and performs like an erosion control blanket at a fraction of the cost.

**CONWED
FIBERS**

Hickory, NC 28601
(704) 327-6670

Hydro Mulch® and Conwed® are registered trademarks of Leucadia, Inc.

Circle No. 175 on Reader Inquiry Card

JOB TALK

Inerts: the other ingredients

In any pesticide product, whether insecticide, herbicide, fungicide or rodenticide, there are two categories of ingredients. The first category includes active ingredients, the particular chemicals with active pesticidal capabilities. The second category includes inert ingredients, added to the formulation to help the active ingredient do its job, or to serve as a carrier.

The Environmental Protection Agency (EPA) defines inerts as "anything that is intentionally added to the pesticide product which is not pesticidally active." Inerts are used to increase the effectiveness of the active ingredients. For example, surfactants make herbicides stick to leaf surfaces better. In some cases, the inert ingredient is an emulsifier that helps keep the active ingredient in a liquid solution so that it can be spray applied.

Altogether, about 1,200 inert ingredients are used in pesticide formulations in the United States. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) contains regulations governing both active and inert ingredients. Currently, FIFRA requires that manufacturers conduct a full array of animal toxicological tests on the active ingredients in order to register a product. The tests are made to determine acute toxicity, the potential to cause birth defects, cancer and similar concerns.

According to Tom Hoogheem, environmental issues manager for Monsanto Agricultural Company, pressure has been put on the EPA to address this issue. "At present, only acute toxicity testing is required for inert ingredients," says Hoogheem. "That is prompting some people to ask questions concerning inert ingredients, since both product user and the general public could be exposed to the inerts as well as to the active ingredient."

As a result, EPA published a policy statement in the Federal Register on April 22, 1987. The agency's approach has been to classify the entire list of inert ingredients into four categories based on the chemical's known toxicity.

The first category includes some 50 chemicals, inerts of known toxicological concern. The second category includes about 60 inert ingredients that are believed potentially toxic because of their structural similarity to the substances in the first

category. About 800 inerts whose toxicity is unknown are placed in the third category.

Substances were included in this group if there was no basis for listing them on any of the other three lists. The surfactant for Roundup is in this category. The fourth category includes approximately 300 inert ingredients of minimal concerns, such as cookie crumbs, corn cobs and water,

The EPA requires registrants of many chemical products containing an inert ingredient to amend their EPA registration, adding the toxic inert ingredient to labels.

the carrier in Roundup, as well as other substances generally recognized as safe.

The first and second categories are obviously the ones that EPA gives the highest priority for additional testing. Any manufacturer with pesticide products on the market that include any of the ingredients in the first or second list will be asked to either find a substitute or agree to do substantially more toxicological testing.

The EPA is now requiring registrants of any product that contains an inert ingredient from the first category to amend their EPA registration and add the toxic inert ingredient to their labels. Additional exposure data, and in some cases, additional toxicity data may be required of many of these inerts. In addition, no new registrations involving these materials will be granted by EPA until further information can be provided.

This much activity is expected to raise the visibility of the question, "What are inerts and are they safe?" The issue of the toxicology of inert ingredients in pesticides deserves attention. The industry press will surely cover the topic, and even the public media will pay attention.

(Roundup uses water as a carrier, and the surfactant should not be of any concern.)

LM