RYAN® INTRODUCES THE

Lawnaire IV

The self-propelled walk-behind aerator that does a professional job on home lawns and smaller turf areas.

- Equipped with 30-3/4” coring tines providing an aeration pattern of 9 holes per square foot.
- Penetration up to 2 3/4”.
- Two weight options provided for increased downward pressure - a 38 lb. steel bar and/or steel drum that holds 55 lbs. of water.

Lawnaire IV Specifications

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For more information call your Ryan Sales, Service and Parts Dealer today.

Or call toll-free 1-800-228-4444

Lawnaire IV Specifications

- Convenient lift handle for raising and lowering transport wheels which provide added maneuverability.
- Covers up to 21,000 square feet per hour.
- Tine wheel shaft and water drum shaft are equipped with two grease fittings and protected by felt seals to keep out dirt.
- 3 h.p. industrial engine with rotary stop switch for easy shut-off.
- Fuel tank holds two quarts.

Designed for the professional who wants to provide quality core-type aerification at a high rate of speed, the new Lawnaire IV is the most dependable walk-behind roll-type aerator on the market.

More and more homeowners are asking for lawn aeration to break down thatch and improve turf quality. The Lawnaire IV offers lawn care professionals and rental outlets a core aerator that pays for itself in just weeks.

For more information call your Ryan Sales, Service and Parts Dealer today.

Or call toll-free 1-800-228-4444

OUR REPUTATION IS BUILT TO LAST

Cushman-Ryan, OMC Lincoln
P.O. Box 82409 #2710
Lincoln, Nebraska 68501-9971

Tine Replacement Part #522361

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A lucky landscape manager's tree on Christmas morning.
Wooing the pro cutters
An expanding Iron Country responds to the growth and increasing sophistication of today's grounds manager.

by Ron Hall, associate editor


Budding invents the lawnmower.

Thanks, Mr. Budding (155 years late); the world hasn't looked at grass quite the same since. Your invention revolutionizes lawns. Allows golf courses. Popularizes sports fields. The mower: the keystone of today's turfgrass industry.

A new year approaches and we at WEEDS TREES & TURF expand our Iron Country coverage (see July '85 WT&T). The industry is moving that fast.

Iron Country?
Editors of WT&T visited manufacturers in Wisconsin, North Carolina, Mississippi, and Kansas this past summer and fall. We even went back to where it all started—England—to gauge professional cutting and see where it's headed.

Only two years after Budding invents the lawn mower in 1830, J.R. & A. Ransome, Ipswich, England, begins making them.

"We have measured our work and we are getting a tremendous move to greater mechanization," says R. Guy Catchpole at the 100-acre Ransomes site just west of Ipswich. About 1,100 people assemble commercial "grass machinery" (that's what the British call it) and agricultural equipment here. Ransomes exports to more than 100 countries. Mowing machinery surpasses agriculture now for Ransomes.

"It's going to get bigger by leaps and bounds," Catchpole says. The U.S. market—which Ransomes broke into with the purchase of Wisconsin Marine several years ago—provides the challenge. The opportunity too.

Catchpole feels there are two major trends in the cutting industry.

• Greater mechanization leading to more cost effectiveness for grounds managers.

• The versatility of mowers to cut varying heights of grass.

"The whole operation now is cost effectiveness," says Catchpole. "Users ask, 'How much does it cost to cut an acre of grass? What's the payback period?'"

The market for commercial mowers looks strong through 1986, Ransomes officials say. The company just installed a pair of Japanese-produced, computerized Higata "machining centers" in its Ipswich plant at a cost of $1.5 million. Look for new products from Ransomes at the giant IOG show in Windsor next fall.

A busy market
There's new energy at Yazoo Manufacturing, Jackson, Miss. A new building, new production lines, and a new 42-inch, front-cut hydrostatic mower.

"We're building the best product now that we've ever built," says Howard Day, longtime vice president of marketing. The fortunes of Yazoo began rising again with the purchase of the company by Southern businessman Robert M. Herin several years ago.

Yazoo is no newcomer. In 1945 it introduced its Big Wheel mower. In 1959 it helped pioneer the front-cut mower so familiar with professional groundsmen today.

Now there might be 20 companies manufacturing out-front mowers. Although the basic design hasn't changed all that much, manufacturers continue to strive for added durability, versatility, and safety.

Exmark of Beatrice, Neb., for instance, recently announced the rede-
You're responsible for a course worth millions. Sod webworms should be the least of your worries.

What's it going to be this year? The usual sod webworms, billbugs, chinchbugs and grubs? Or perhaps nasty surprises like armyworms or cutworms? As if this time of year isn't busy enough without insect problems, that's when they hit you.

SEVIN® brand SL carbaryl insecticide hits them back. Hard. Without clogged nozzles or tank-mix problems. Without corroding equipment. And without protective gloves or masks.

As a water-based sprayable formulation, SEVIN® brand SL is easy to handle, mix and dispose of. So with the time available for application, you spend more time spraying. Less time re-filling.

Tried, tested, trusted

SEVIN® brand SL carbaryl liquid effectively controls over 25 common turf insects, including sod webworms, white grubs, chinchbugs, billbugs, crickets, even ants, ticks and fleas.

SEVIN® brand carbaryl kills insects on contact as well as by ingestion. So you get extended residual action whether pests are feeding or not. And SEVIN® brand carbaryl gives you the peace of mind that comes from knowing it's used for insect control on pets, poultry and even some game birds.

So it's ideal for insect control in golf courses, parks, and other recreational turf areas used by people.

In fact, you can put greens, fairways and other golf course areas treated with SEVIN® brand SL back into play as soon as the spray is dry. You keep more turf area in use. And to the people who play your course, that's important.

Dependable SEVIN® brand

SEVIN® brand carbaryl is biodegradable in the environment. And there's no harsh odor to annoy players.

SEVIN® brand carbaryl insecticide is registered not just for turf but also trees, shrubs, and flowers. So you don't need to keep track of a large inventory of different insecticides.

Ask your turf chemicals supplier about SEVIN® brand SL carbaryl insecticide. It can help put your pest problems into perspective.

From the turf care group at Union Carbide
Excel's powerful Hustler 400 with 34-hp gas engine

Gravely shows Pro-36 intermediate mower

John Deere's new diesel-powered F935

Bunton's Multi-Trac handles many implements

Jacobsen's HR-15 can cut 16-foot swath

Exmark announces redesign of 48-inch Ranger

sign of both its 36- and 48-inch Ranger commercial mowers. Both now come with new blade engagement devices that stop moving blades almost immediately. Also, electrical safety devices will not allow engine startup if blades are engaged on the Exmark products.

And versatility has long been associated with Gravely products, initially two- and four-wheel tractors, more recently mowers. Three different engines—the 11-hp Honda, an 11-hp Briggs & Stratton, or a 16-hp B&S—are available on Gravely Pro Series mowers. Attachments manufactured on Gravely's spit-and-polish assembly lines still fit tractors produced decades ago.

More versatility

"The landscape contracting market is expanding in numbers and in the education of the people using the equipment," says Gravely's Lee Bouldin. "And they want equipment to do more things."

The newest product in the Gravely stable is a 36-inch intermediate commercial mower which offers rear or side discharge and the option of a bagger.

And, some front-mowing machinery grows larger. Jacobsen's HR-15 mowing tractor cuts a 16-foot swath with its three 72-inch rotary decks. Individual hydraulic lift controls allow the operator to hydraulically raise or lower the decks for cutting medians, parkways, around obstacles, and through narrow areas. This grass-cutting bully is powered by a 74-hp continued on page 30
There's only one way to get quality greens core aeration. With a Greensaire® II aerator from Ryan. Since its introduction, the Greensaire® II from Ryan has set the standard for greens aeration all around the world.

In fact, wherever a demand for the finest-quality greens core aeration exists, you'll find a Greensaire II hard at work . . . day after day, year after year.

Here's why:
• Up and down motion cuts clean vertical holes up to 3" deep. Leaves a smooth playing surface for continuous play.
• 24" swath; 36 cores per square foot.

- Up to 6,800 square feet per hour.
- Optional core processor lets you aerate and top dress in one simple step.
- Rugged dependability: 8-hp cast iron engine; a cast iron housing containing precision machined aerating components.
- Greensaire 16 offers same thorough aeration in a more economical size (16" swath; 36 cores per square foot; 4,000 square feet per hour).

When you want to do it right, do it with a Greensaire.

For a free demonstration call your Ryan dealer today. Or, for more information, write: 2139 Cushman, P.O. Box 82409, Lincoln, NE 68501. Or, call toll-free: 1-800-228-4444.
Now! A Sprayable Turf Green-up

Let us send you a sample of FeRROMEC™ so you can see with your own eyes how fast it changes weak-looking dull grass into vibrant, deep-green, healthy-looking grass.

Everett Mealman
President
PBI/Gordon Corporation

As a professional golf course superintendent or groundskeeper, you will immediately recognize the significance of what I am about to say...

...We at PBI/Gordon have been quietly testing our patented Ferromec under a wide variety of growing conditions, and the results are conclusive!...

Ferromec will not only deliver rapid and dramatic color responses in turf as a result of foliar intake, but will also deliver a therapeutic dose of iron to the turf through root absorption.

It means that now you can have deep, vibrant, healthy green turf without an unwanted overdose of fertilizer which could lead to all sorts of problems and exposure to disease.

No wonder we are so eager to get a sample of Ferromec in your hands. But, meantime, we urge you to take a minute or so to better understand why iron is such an elusive material, and how

PBI/Gordon has managed to harness it for you.

Ferrous Iron is Very Fragile.
As you know, the basic problem of supplying iron to turfgrass is its fragility in the Ferrous state. Only Ferrous iron can be utilized by a plant and, ironically, almost as soon as Ferrous Sulphate is applied it turns to the non-usable Ferric state. Once oxidized, the reversal with organic matter acting as a reducing agent is so slow there is a question if it would ever occur.

And thus it is that scientists devised chelating, which is intended to fix the iron molecule in the Ferrous state. If chelating is properly done, it is effective.

Half of this green at Hodge Park Golf Course in Kansas City was sprayed with Ferromec...
Iron that Produces Within 24 Hours

This is the molecular structure of Ferromec. Note that ferrous sulphate is bonded to a urea molecule and will remain stable. Ferromec utilizes a recombinant urea process to achieve the unique composition. It is classified as an organometallic compound.

But it is very expensive and so slow to release that it could be many weeks before a treatment of chelated iron could produce a significant color change in the grass.

Ferromec Works Right Now!

At PBI/Gordon we have a patented process of bonding a Ferrous iron molecule to a molecule of urea, which stabilizes the iron in a Ferrous state. Notice the diagram above of the Urea/Ferrous sulphate molecule which is called Ferromec.

Ferromec can be mixed with liquid fertilizer and Super Trimec® broadleaf herbicide, and it will not harm the equipment. The Ferromec is almost immediately assimilated so the color change occurs very rapidly. The Ferromec which reaches the ground is taken up by the root system because the grass has such a voracious appetite for the nitrogen content of Ferromec.

Neal Howell Can Answer Your Questions about Iron in Turf

Iron is definitely established as an essential micronutrient required by all plants. Yet, the amount required can vary dramatically depending on the pH of the soil, the composition of the fertilizer that is being used and the plant that is being fed.

To help you better understand how to use iron in your turf program, we have brought Neal Howell into the PBI/Gordon organization as Director of Technical Services of Soil Supplements. He is a leading authority on iron and is as near as your telephone when you have questions.

You'll like Neal. He's a real Iron-man whose roots go back to the Iron Knights of the "Hell on Wheels" gang of the 2nd Armor Division from Fort Hood (that's General Patton's old bunch).

Ask for Samples of these New Products from PBI/Gordon

Other new products that have been developed and thoroughly tested by PBI/Gordon are Bov-A-Mura® a patented, natural organic activator that turns thatch into humus; and Transfilm®, a patented year-around plant protector that is up to five times more effective in reducing transpiration, and lasts up to twice as long as conventional plant protectors.

For your free samples of Ferromec, Bov-A-Mura, and Transfilm, write or call . . .

Toll-free 1-800-821-7925
In Missouri 1-800-892-7281
Ask for Customer Service Department.

Inform us of bids to be let. We furnish detailed specs and names of distributors serving your area.

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1217 West 12th Street
P.O. Box 4090
Kansas City, Missouri 64101
816/421-4070
Perkin's diesel engine.

Bunton, meanwhile, comes out with a smaller version of its Multi-Trac, multi-purpose turf tractor. Implement options include three gang reel mowers, rotary mowers, flail mowers, snowblower, and vacuum sweeper. A 22-hp diesel powers the tractor.

This move to diesel, because of both longevity and economy, is real. This spring, Toro unveiled the diesel version of its Toro Groundsmaster, the 217-D with either 52- or 62-inch cutting decks.

This summer, Excel announced the 28.5-hp diesel 340. In September, John Deere introduced two front mowers, both diesel powered.

Says Mark Rostvold, director of consumer products for Deere, "In late 1984 and early 1985, we began selling our first mowers designed specifically for professional groundkeepers. We are following up on our commitment to the commercial market with two diesel front mowers and implements to make them even more versatile. We are a major force in our very first year. And we expect to grow rapidly."

Here are some of the trends Rostvold foresees:

- More bagging systems. New varieties of grass require more intensive care, which in turn brings about more rapid thatch build-up.
- More hydrostatic drive tractors. Hydro drive is a no-clutch transmission—one lever controls direction and speed.
- More diesel engine models. They provide fuel savings and have a longer life.
- More instrumentation. Operators want to monitor key signals at a glance.

Bucking a trend of the past decade, however, John Deere begins production of three below-40-hp compact tractors at its Horicon, Wis., plant. In recent years, Japanese-manufactured tractors dominated the small tractor market in the U.S.

Excel's zero-turning-radius Hustler mower first appeared in 1969. It, and the Hustlers it spawned, found a ready audience in the municipal market.

This summer Excel unwrapped its newest Hustlers: a 21.5-hp model 320, the 28.5-hp diesel 340, the 34-hp 400 with its 72-inch cut, and the 18-hp rear-discharge 250.

How could Edwin Budding have foreseen what was to follow? Mowing and the commercial mowing market expands and grows in sophistication.

**Bowie INDUSTRIES, INC.**

P.O. Box 931  Bowie, Texas 76220

Toll free 1-800-433-0934, in Texas call 1-817-872-2286 TELEX: 887844

Circle No. 101 on Reader Inquiry Card

30 WEEDS TREES & TURF/DECEMBER 1985
CUT A BIG CHUNK OUT OF YOUR MOWING AND TRIMMING
LIMIT® can cut your tough

LIMIT SLOWS GRASS GROWTH FOR UP TO SIX WEEKS.
Monsanto, the company that brought you Roundup® herbicide, now brings you another important turf management tool. LIMIT turf regulator is the guaranteed way to slow the growth of bluegrass, fescue, and ryegrass for up to six weeks.

LIMIT BUYS YOU TIME IN YOUR BUSIEST SEASON.
Five years of testing by Monsanto and turf managers have proven it: LIMIT can reduce by half the time you spend trimming and mowing treated areas.

LIMIT buys you time.
Time your crews can use for priority projects, especially in the spring.

THE ONLY TURF REGULATOR TO WORK THROUGH THE ROOTS.
Unlike other turf regulators, LIMIT works through the roots. Not through the foliage.
The result? You can spray LIMIT earlier. Only LIMIT works before green-up, as well as after. It fits your schedule. Not the other way around.

ALL KINDS OF TURF MANAGERS GIVE LIMIT HIGH MARKS:

FRED TRAUT
Grounds Supervisor,
Sheppard and Enoch Pratt Hospital,
Baltimore, MD

"...on real steep, hard-to-mow slopes, LIMIT reduced equipment usage, the hazard to my employees...and my labor of mowing."

JOE KOSOGLOV
Golf Course Superintendent,
Hillcrest Country Club,
Indianapolis, IN

"We use LIMIT in areas that require a lot of handwork. I'd recommend LIMIT to any golf course superintendent spending too many hours in areas he'd rather not be."

You know them: all those places where cutting grass is a big headache. And a big time-taker. Hillsides. Roadsides. Wet spots. Bunkers. And pesky trim spots like plantings, monuments and fences.
The places where you wish the grass would grow nice and slow.
The places where, sure as grass grows, you need LIMIT® turf regulator.
THE ONLY TURF REGULATOR THAT DOESN'T MIND THE RAIN.

Root uptake of LIMIT also means there's no wash-off worry. Let it rain. You can actually apply LIMIT while it's raining.

LIMIT IS SAFE EVEN WHEN YOU OVERLAP.
LIMIT is safe to turf, too. It's formulated to get consistent response and quality even where there's unavoidable overlapping; unlike other turf regulators that cause overlap browning.

EASY TO MIX, EASY TO APPLY.

Adding LIMIT to your current spraying program is easy. No special equipment is needed. Plus, LIMIT can be tank mixed with both fertilizer and commonly used herbicides, so you get one-pass efficiency. And, compared with other turf regulators, LIMIT is unusually tolerant of mixing errors.

What's more, LIMIT is harmless to ornamentals. And LIMIT won't stain monuments, sidewalks, or other fixtures.

Monsanto guarantees LIMIT works.

This Spring, cut your toughest mowing and trimming jobs by half.

Monsanto guarantees that spraying LIMIT before seedhead will slow grass growth for up to six weeks. Safely

Try new LIMIT where you want to mow and trim less. A lot less. And give your crew better things to do.

LIMIT TURF REGULATOR BY Monsanto

DicK STEdMaN
President
Wright Lawn and Tree Care, Inc.
Clarence Center, NY

"We've had phenomenal results with LIMIT at two cemeteries. For the first time, we can tell our accounts we have a product that will consistently work."

PHIL PIRRO
Lawn Service Manager, Landscaping, Inc., West Hartford, CT

"With LIMIT, I cut my mowing in half and freed up my personnel to do more detail work that my customers notice."
As sure as grass grows, you need LIMIT.

- One application controls growth for up to six weeks.
- Labeled for repeat applications.
- Reduces mowing and trimming by half.
- Saves you valuable manhours.
- Fits your work schedule—apply before or after green-up.
- Will not wash-off—rain actually improves uptake.
- Overlaps safely.
- Safe to ornamentals, sidewalks, monuments, or other fixtures.
- Can be tank-mixed with fertilizer and commonly used turf herbicides for one-pass convenience.
- Easy to mix and apply.
- Available in quart or gallon size.
- Monsanto guarantees LIMIT will perform as promised on the label.  
  *(Always read and follow label directions.)*

For more information, contact your local LIMIT dealer.  
Or call this toll-free number for the LIMIT dealer nearest you.

1-800-225-1212  
(except Nebraska and Alaska)

LIMIT TURF REGULATOR

BY Monsanto

Get a free quart of Roundup® when you buy LIMIT.

For every 1 gallon of LIMIT® turf regulator you buy between November 1, 1985 and April 15, 1986, you get 1 quart of Roundup® herbicide free! This purchase may include any combination of quart or gallon containers of LIMIT. One quart of Roundup for each whole gallon of LIMIT purchased.

Please use the attached business reply envelope to take advantage of this offer.