WE GAVE IT EVERYTHING BUT A PREMIUM PRICE

Our new T-17D Bobcat riding mower. We gave it premium features from the ground up. Commercial features you'd expect to pay thousands more for: A heavy-gauge steel up-front cutter deck, offset 15″ for superior trimming. Maneuverability so tight, it leaves an uncut circle of only 11″. Single-pedal hydrostatic control, for effortless forward and reverse motion. Plus a low center of gravity for cat-like hill climbing, and full-floating deck for a fine, contoured cut.

The Ransomes T-17D Bobcat rider. We gave it our all, so you can get all you'd ever want in a mower. Without paying the price.

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

RANSOMES

BOB-CAT®

WHERE GREAT IDEAS START

Circle No. 241 on Reader Inquiry Card

causing thatch build up and poor performance of Kentucky bluegrass.

Although lawn grasses are vulnerable to many different stresses, a lawn can be one of the most self sustaining plant systems known. Not only do lawns function as sites of vital gas exchange, but they practically eliminate soil erosion. And, with a root system that is active except in the dead of winter, they prevent significant loss of nutrients to the groundwater.

Leave the clippings

For a lawn to reach its full potential as a self-sustaining system however, grass clippings should remain on the lawn where they will decompose and release nutrients essential for sustained growth. (See this month's "Jobtalk.")

As clippings rot, they add to the vital humus content of the soil. This is recycling at its best. Unfortunately, it has become traditional to collect and remove grass clippings, place them in plastic containers, and send them off to the landfills. On any given summer day, thousands of plastic bags, stuffed with lawn clippings, show up at the landfills. This practice is not only a direct expense to the home owner in trash removal, but it is also an expense to society as it significantly reduces the life of landfills.

In the interest of prolonging landfill life, some states and municipalities now prevent the dumping of leaves in landfills. Can similar rulings aimed at lawn clippings be far away?

H_2O management

A second important step in LIL is water management. Water is a critical resource and will become more so with the demands of an expanding population. Failure to provide water for plants quickly causes a severe stress. In partitioning limited water supplies, it's clear that people will come first and plants must "make do" with what's left. Given the inevitable short supplies of water for landscape work, it's imperative that more performance be wrung out of every drop.

Drought-tolerant species and moisture conserving mulches must be used where possible. Drip and subsurface irrigation should be explored as techniques that can increase water use efficiency to more than double that of overhead sprinkler equipment.

The essentials of LIL are based on the fact that adapted plant material, well managed and given optimum conditions of soil, air and water, will by itself resist the normal stresses imposed by diseases, insects, weeds and foot traffic.

The goal of LIL is to achieve optimum growing conditions for plants while keeping to a minimum the application of pesticides and other chemicals. This goal can be reached by recycling lawn and garden wastes, using humus produced by composting municipal waste and making full use of improved mechanical equipment to improve the soil-air-water system. **LM**

Applying LIL techniques to the home lawn

Vertiseeding mixes the humus and soil, creating the optimum environment for germination.

A lawn in need of improvement may benefit from the following LIL program:

☐ Make a thorough survey of the existing site. Note the topography, the degree of shade, soil texture, level of soil compaction and the pressure of thatch and existing vegetation. Measure the soil pH to establish need for lime.

☐ Thoroughly aerify the lawn using one of the new coring machines designed to remove 5/8- to 3/4-inch diameter soil plugs to a depth of 2½ to 3 inches. Coring is the first step in improving the air supply for grass roots while at the same time getting on top of a thatch problem.

☐ Topdress the lawn with screened humus from a municipal waste processing plant. Practically all major cities and many small communities either operate or are in the process of constructing such plants. Humus (composted waste product) is being used on the Capitol grounds in Washington, on statehouse lawns and on the most prestigious golf courses and home landscapes.

Humus improves the physical condition of the soil while at the same time supplying essential plant nutrients. Humus, in addition to clippings which are allowed to remain on the lawn, will supply all of the plant nutrients needed for healthy, vigorous grass.

Broadcast humus to a depth of 1/8 to 1/2 inch (0.4 to about 1.5 cu. yds. per 1,000 sq. ft. of lawn). If the lawn is exceedingly rough, mix humus with equal parts of sand or topsoil prior to broadcasting.

☐ Vertiseed the lawn using one of the highly effective vertiseeding machines that have appeared on the market. Vertiseeding will mix humus with soil and provide seed-soil contact that is so essential for germination.

There is a wide range of grass species and cultivars to choose from. Base your selection on the environment in which the grass must grow.

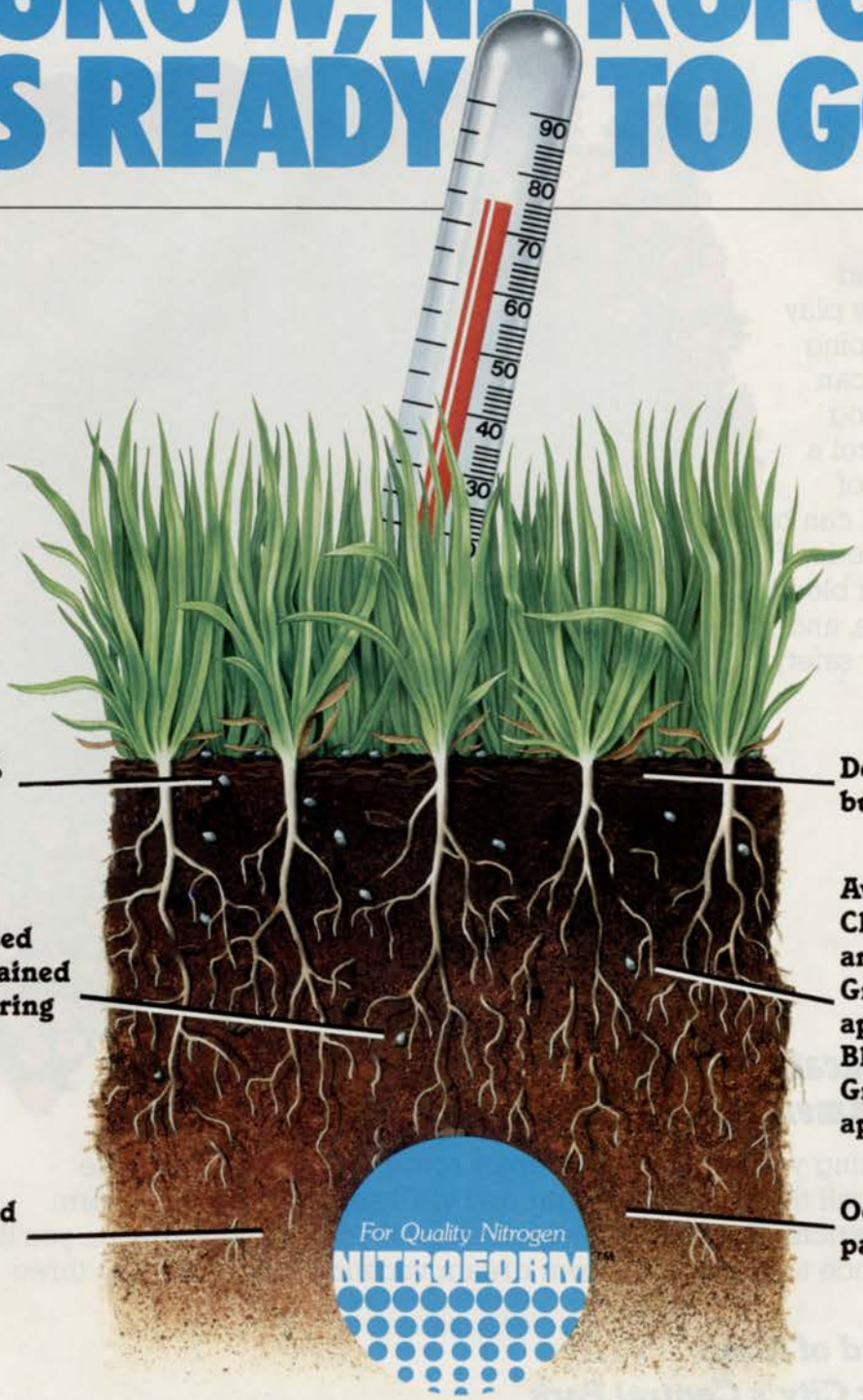
☐ Maintain the lawn with annual spring or fall applications of humus applied at about 1/2 cu. yd. per 1,000 sq. ft.

☐ Set the mower to cut not less than a height of 2 inches and mow on a regular schedule, trying never to remove more than 1/3 of the existing top growth. A modification of the steps outlined for lawn renovation and maintenance can be used for the care of annual and perennial flower beds, foundation plantings, trees and shrubs.

Drip irrigation tubing, mulched with composted waste, is an effective way to irrigate annual and perennial flower beds. It also shows a commitment to resource conservation as well as to waste recycling, both of which are essential components of LIL.

—*W.M. Mitchell* ☐

WHEN TURF IS READY TO GROW, NITROFORM® IS READY TO GO



Consistent 38% nitrogen

Nitrogen released slowly for sustained turf feeding during active growth periods

Nonburning and nonleaching

Decreased thatch build-up

Available in Blue Chip®, Gray Chip™ and new Blue Granular™ for dry application; Powder Blue® and Powder Gray™ for spray application.

Odorless and pathogenfree

Always look for the NITROFORM® logo.
It's your assurance of high-quality nitrogen.

NOR-AM®
NOR-AM CHEMICAL COMPANY
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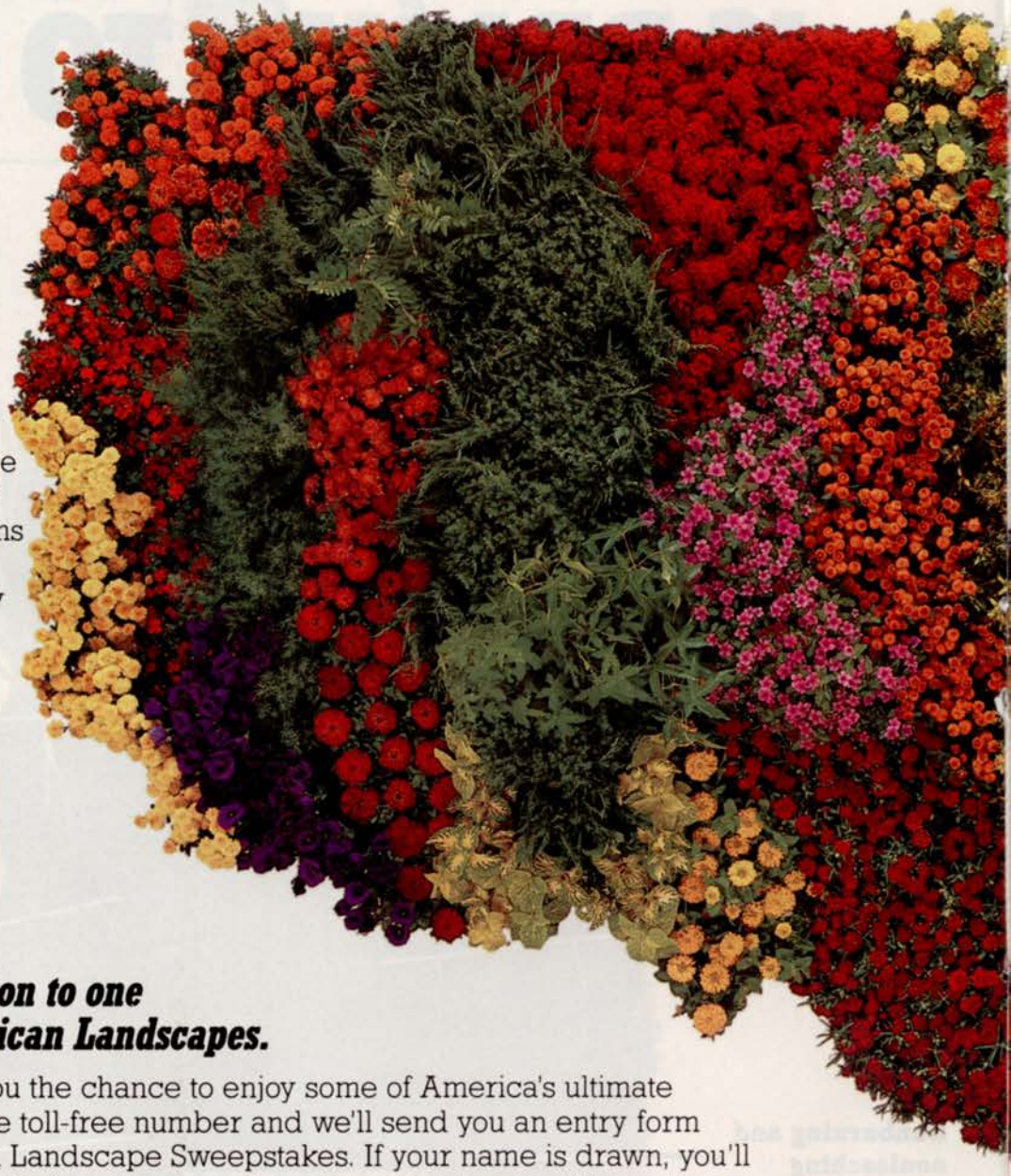
The Great American



Mavrik® and **Pentac**® Aquaflow play a big role in keeping the Great American Landscape looking great. They control a broad-spectrum of insects and mites, can be applied to hundreds of plants—even open blooms—without damage, and offer outstanding safety to applicators.

Win a dream vacation to one of three Great American Landscapes.

We're offering you the chance to enjoy some of America's ultimate landscapes. Just call the toll-free number and we'll send you an entry form for the Great American Landscape Sweepstakes. If your name is drawn, you'll be given the chance to design your own dream vacation to one of these three garden spots:

The Island of Maui
New York City's Central Park
San Francisco's Golden Gate Park

SANDOZ CROP PROTECTION

Use pesticides effectively.
Read and follow label directions carefully.

Landscape can be yours.

Visit our booth for another chance to win.

You can also enter the Great American Landscape Sweepstakes by visiting the Sandoz booth at one of the upcoming trade shows listed below. All Sweepstakes entries received at the show will be entered in a "Show Special" drawing. On the last day of the show, you could win a Weber Genesis III deluxe gas grill.

TO ENTER THE GREAT AMERICAN LANDSCAPE SWEEPSTAKES:

Visit the Sandoz booth at:

Tropical Plant Industry Expo
January 26-28, 1989
Miami, Florida

Golf Course Superintendents Association of America
February 11-13, 1989
Anaheim, California

Or call toll-free ***1-800-992-2828*** for an entry form.

In Illinois call collect ***(312) 351-5307.***

THE GREAT AMERICAN LANDSCAPE
SWEEPSTAKES

Circle No. 158 on Reader Inquiry Card

PART II of II

MANAGEMENT CALENDAR: WARM-SEASON ATHLETIC FIELDS

Quality turf can make athletic fields safer for young athletes. Field managers should follow this general guide for safer turf.

by J. R. Hall III, Ph.D., Virginia Tech

Athletic field managers should periodically evaluate their field management programs and set up programs for the entire year. This allows the professional to plan ahead for equipment and material purchasing, and to determine seasonal labor needs.

What follows, provided for planning purposes, is a generalized management scheme for Bermudagrass athletic fields. Specific dates, intensity and frequency of practices will vary with every geographic location. This calendar is only intended as a general guide for programming.

January-April

If the field is infested with winter annual weeds, is completely dormant and is not covered with straw, then weeds can be controlled by spraying with a non-selective herbicide such as glyphosate. Follow label directions closely.

Collect soil test samples from the field, sampling from several areas to a depth of three inches. Submit the samples to a reputable laboratory for analysis.

Keep traffic off field if at all possible to minimize damage to field.

If field has been protected with a straw mulch, remove the mulch about one week prior to the 50 percent frost-free date in your area. If the field was covered with a plastic tarp all winter, the tarp will periodically need to be removed for mowing and replaced to prevent frost damage. Plastic tarps should not be permanently removed until the probability of frost is zero.

Keep traffic off the field if at all possible to minimize damage to the field.

Fill in low areas with good topsoil to improve surface drainage. If areas are extremely low, cut sod out, fill area and re-install sod.

If you desire to control summer annual weeds with pre-emergence herbicides, apply a pre-emergent for summer annual weeds such as crabgrass, goosegrass or foxtail at the appropriate time in your area.

Determine amounts of winterkill and decide whether sodding, sprigging or plugging will be adequate for repair. Small plugs can be brought inside and kept in sunlight to give an early indication of the amount of winter damage the field has suffered. If damage has been minimal, plugging will suffice. Begin repair as soon as Bermuda has fully greened.

Hybrid Bermudas will need to be repaired with sprigs. Seven to 10 bushels per 1000 sq. ft. will suffice. Common Bermudagrass fields can be seeded at 1 to 2 lbs. per 1000 sq. ft.

Fields that have been previously treated with pre-emergence herbicides cannot be repaired with Bermudagrass seed unless the area to be seeded is treated with activated charcoal (5 to 7 lbs. per 1000 sq. ft.). Areas to be sprigged also can be negatively affected by recently-applied pre-emergence herbicides. Minimize this possibility by applying activated charcoal and tilling soil prior to sprig planting.

Initial fertilization should begin about two weeks after Bermuda has greened up, applying 40 to 60 lbs. ni-

Mention of specific products in this sample program does not imply exclusive endorsement of any one product. It was done only to simplify the program for educational purposes.

MUSTANG

THE TALL FESCUE THAT LOOKS LIKE BLUEGRASS

KENTUCKY BLUEGRASS

MUSTANG TURF-TYPE TALL FESCUE

BLUEGRASS QUALITIES WITH TALL FESCUE PRACTICALITY

You'll quickly notice Mustang's finer texture, rich dark green color and dense, uniform turf—and you'll understand why we say Mustang has bluegrass-like qualities.

But there's more to Mustang turf-type tall fescue than beauty; it's tough and durable. It's heat and drought tolerance, winter hardiness, and ability to endure low mowing heights are remarkable. Mustang even shows improved resistance to *Helminthosporium* netblotch and many other diseases.

Best of all, Mustang is practical, because it performs extremely well under low maintenance conditions like minimum fertilization, watering and mowing. National tests and actual applications in parks, golf courses and playing fields have proven it.

DROUGHT TOLERANCE AFTER SEVEN WEEKS NO RAINFALL.

KENTUCKY BLUEGRASS | **MUSTANG** | **K-31 TALL FESCUE**

That's why Mustang is becoming the favorite choice of professional turf managers, over K-31 and many other commercially available varieties.

For bluegrass qualities and tall fescue practicality, use the professional's choice—Mustang turf-type tall fescue.

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and other fine turf grasses available nationwide from quality seed suppliers.

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trogen per acre.

May-August

Begin mowing with a reel mower as soon as the Bermuda gets 1/3 higher than the intended mowing height. Set mower slightly lower than the normal mowing height the first time you mow the field to remove debris. Maintain the Bermudagrass at mowing heights between ½ and 1 inch, depending on use being made of the field, smoothness, budget, etc. Collect clippings only if they are excessive.

Core aerify field every 30 to 45 days with open spoon ¾-inch diameter tine aerifier once field is well rooted. Make two passes over field each time. Drag field to break and incorporate aerifier cores.

Re-plug damaged areas that are not healing rapidly enough.

After field greens up, and at least 30 days after the first application noted above, apply 40 to 60 lbs. nitrogen per acre to the field on 30 to 45 day intervals. Sandy fields prone to leaching will require higher levels of nitrogen. Apply lime, phosphorus and potassium as indicated necessary by the soil test.

Fields under high levels of maintenance will benefit from periodic vertical mowing or slicing to increase tiller density.

Irrigate as necessary, watering infrequently, but heavily when you do.

If goosegrass and crabgrass begin to invade the turf, use post-emergence herbicides such as disodium methane arsonate (DSMA), monosodium methane arsonate (MSMA), asulam or metribuzin. Follow label directions closely.

If broadleaf weeds invade turf, spray with broadleaf herbicides such as 2,4-D, dichlorprop, dicamba, mecoprop, triclopyr and other labeled materials.

On high maintenance fields periodic top dressing with a suitable ma-

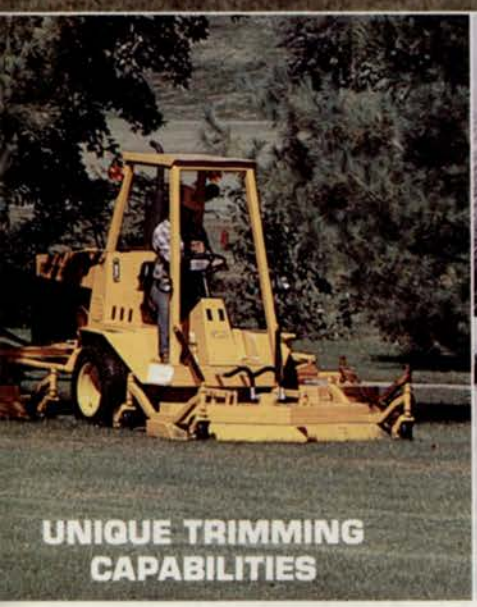
continued on page 62

WARM-SEASON ATHLETIC FIELD MANAGEMENT

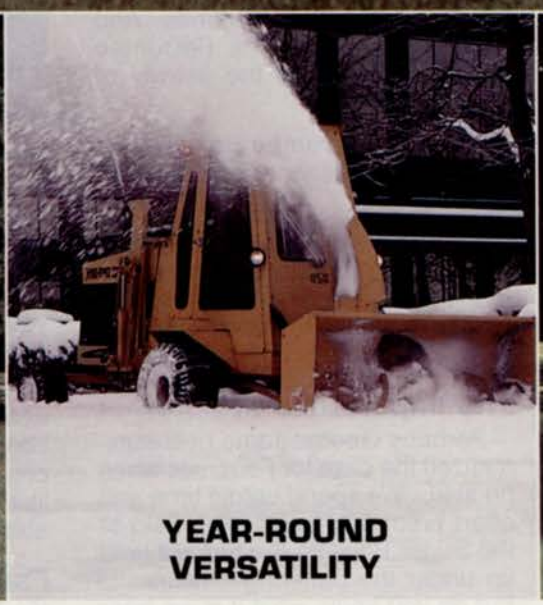
	JANUARY FEBRUARY MARCH APRIL	MAY JUNE JULY AUGUST	SEPTEMBER OCTOBER NOVEMBER	DECEMBER
AERATE		Core aerify every 30 to 45 days with open spoon ¾-inch diameter tine aerifier. Make two passes each time. Drag field to break up cores.	Core aerate 30 days before overseeding.	
FERTILIZE	Begin fertilizing about two weeks after Bermuda has greened up. Apply 40-60 lbs N/acre.	At least 30 days after first application, apply 40 to 60 lbs. N/acre on 30 to 45 day intervals. Apply other elements as indicated by soil test.	When Bermudagrass growth begins to slow, apply the equivalent of 60 lb./acre of potassium oxide to improve winter hardiness.	
IRRIGATE		Irrigate as necessary watering infrequently, but heavily.		
MOW		Mow with reel mower when Bermuda gets 1/3 higher than intended mowing height. Vertical mowing or slicing should be done periodically.	As growth rate slows, raise mowing height to 1½ inches.	
REPAIR/RENOVATE	Fill in low areas with topsoil to improve surface drainage.	Re-plug areas which are not healing rapidly. Periodically topdress, followed by dragging.		Cover field for the winter. Keep traffic off the field.
SEED/SOD	Determine the amount of winter kill and decide whether to sod, sprig or plug. Begin as soon as Bermuda has greened.		Overseeding may be desirable. Core aerate or vertical mow 30 days prior to overseeding. Top dress.	
SOIL	Collect soil samples and send them to a lab for analysis.			
WEED CONTROL	If field is dormant and not covered by straw, use a non-selective herbicide for annual winter weeds. Apply pre-emergence weed control at proper time for your area.	If goosegrass and crabgrass invade turf, use post-emergence herbicide. If broadleaf weeds invade turf, use a broadleaf herbicide.		

CUT YOUR TURF PROBLEMS DOWN TO SIZE

with HYDRO-POWER 180



UNIQUE TRIMMING CAPABILITIES



YEAR-ROUND VERSATILITY

EASY-FOLDING CUTTING UNITS FOR TRANSPORT

Your search for a high capacity mower encompassing a one man operation is now concluded. The Hydro-Power 180 with its 15 foot hydraulically driven rotary mower has a mowing capacity of up to 11 acres an hour while incorporating rear wheel steering for maximum maneuverability. Cutting units are designed for maximum floatation and may be used individually or in any combination of the three.

A foot pedal controlled hydrostatic transmission affords variable mowing speeds as well as transport speed to insure maximum travel time between the job sites. The Hydro-Power 180 offers year-round versatility with a 2-stage, 73'' snow blower and heated cab.

Manufactured by HOWARD PRICE TURF EQUIPMENT 18155 Edison Avenue Chesterfield, Mo. 63017

Circle No. 127 on Reader Inquiry Card

New amine-compatible iron greens up turf in less than 48 hours.

Prosperity resolution for 1989: Use FëRROMEC® AC (amine-compatible) in your lawn-care program. Green up your world and green up your wallet ... get a Roll-X™ Measuring Wheel in the bargain.

Everett Mealman, President
PBI/Gordon Corporation

Ferromec liquid sprayable iron can produce a deep, vibrant, emerald-green color in ornamental turfgrass very, very rapidly . . . and very, very economically. In most instances, it can achieve this miracle in less than 48 hours, at a cost of about $1.70 for a 6,000 sq. ft. lawn.

. . . But, wait! That's only part of the good news about Ferromec. Equally important is the fact that Ferromec does not produce a lot of rapid top growth that requires hours of expensive, unwanted time on the business end of a mowing machine, plus exposure to disease that so often results from abnormal growth caused by using excessive amounts of expensive nitrogen out of season to generate the green color of the grass.

And there's still more good news!

Nitrogen will eventually produce a green color, but excess nitrogen plus turfgrass equals hay. Obviously, Ferromec is a better way!

Ferromec AC can be tank mixed with any TRIMEC® Herbicide formulation, so it gets a free ride. And guess what else. The Ferromec actually speeds up the activity of the Trimec!

Indeed Ferromec is unique. There's absolutely nothing like it on the market.

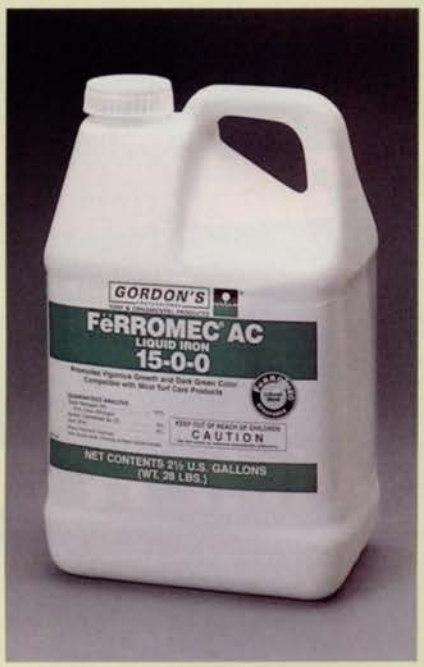
No wonder literally thousands of lawn-care operators, landscape managers and golf-course superintendents are now using Ferromec in their turf-care programs.

The importance of color

Perhaps George Toma best summarized the case for Ferromec when he said, "We spend untold time and effort preparing the playing field of the Super Bowl so the turf will hold up under the battering it takes . . . But do you know what it is we hear about? We hear about that beautiful green color we get from Ferromec!"

Color is so important! You give a homeowner a brilliant green lawn, and give it to him fast, and you've got a happy customer who will recommend you to his friends.

Surely you'll want to try some Ferromec in 1989. To help you make that decision, we're offering you a chance to order a $60 value



Roll-X™ Measuring Wheel for only $20 when you buy five gallons of Ferromec AC. (You'll need an extra wheel to measure all the new lawns you'll be invited to bid on when your customers tell their friends about your work.)

Meantime, you might like to review some of the facts about iron, which will help you understand how Ferromec works, and why no other company can offer you a product like our patented Ferromec sprayable iron.

Facts about iron that turf professionals need to remember.

First: Iron is essential for the synthesis of chlorophyl. No iron . . . no green.

Second: In most instances where ornamental turf is being grown there is not enough naturally occurring iron in a useable ferrous state to produce a vibrant green color. Accordingly, a chelated iron can be added to the soil.