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- disease management
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"... helpful and informative. I believe this is a very valuable publication, especially as we all work to protect the environment." Dr. Terrance P. Riordan Turfgrass Plant Breeder University of Nebraska



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GUIDE

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the quality and health of the turfgrass improves. Increased rooting and turf density reduce the reliance on pesticide use also. **Economic benefits?**

The price difference between organicbased fertilizers and synthetic fertilizers has narrowed, but organic-based materials still tend to be more expensive. So can you justify a higher-priced product? Well, if a solid program means that you can reduce your use of other materials, the answer is yes.

Catron says that yearly comparative data at NaturaLawn of America data indicates that they use 80% less control materials than a traditional lawn care company, for weed and insect controls, and over 97% of the applications that they do make for insects are biologically based.

In addition, increases in earthworm populations, mixing of organic materials into the soil and decreases in thatch all contribute to the condition of the soil, and can only benefit the turf, which ultimately will impact the types and extents of treatments required.

How do you start?

Well, besides finding a supplier of organic-based products and updating your ad in the Yellow Pages, it is important to have a good understanding of the nutritional aspects of the turf you are dealing with.

Catron advises people to look down the road and see the long-term benefits. Changing your materials is an easy step, he says. The tough change is adapting your approach and training, and involving your employees to make good decisions and not to treat a disease symptom as soon as they see it. If you are building soil as well as turf, you want to give the soil organisms and insects a chance to do their job.

Chuck Paulson is the National Sales Director and Mike Archer is Product Manager for Spring Valley Turf Products, Jackson, WI.

Fertilization and nutrition products

Emerald Isle's GroWin rootzone biostimulant produces an additive response over and above fertilizers and amendments.

Recently concluded research verifies that GroWin builds larger, deeper, denser roots, increases foliar growth and improves stress tolerance. Applied to the top 4-6 inches of the rootzone before seeding, sodding or sprigging, GroWin reduces the need for nitrogen to produce response.

For more information call 800/628-GROW or Circle No. 283

Johnathan Green's complete line of fertilizers and fertilizer combination products.

Products include premium fertilizers with Green Meter Technology, natural/organic-base fertilizers, liquid applications and fertilizer combinations with weed and insect control products.

For more information call 800/526-2303, website www.jonathangreen.com or

Circle No. 284

Harmony Products is offering Complete 14-3-6 1% Iron, 6-2-12 3% Iron Bridge Products and the new Complete 7-2-5 4% Iron.

New 7-2-2 4% Iron features secondary and micro-nutrients including 4% iron, seaweed extracts and humic acid. The Premium Organic Line includes the Bridge Products 4-2-0 Topcoat and 3-6-3 Turf Food.

For more information call 800/343-6343 or Circle No. 285

Howard Johnson's Enterprises launched its new line of products featuring HJCT-2, a patented coating process for nitrogen and potassium.

Thirteen layers of ultra-thin coating protect the nutrients from moisture and temperature more effectively than the thicker, less accurate coatings. This polymer-based coating technology will provide greater control over turf color, growth and quality.

For more information call 800/298-4656 or Circle No. 286

Lange-Stegmann Co. offer a variety of products.

The products include AgricoTurf II Stabilized Nitrogen, Polyon Polymer Coated Nutrients, Nutralene and Nitroform Nitrogen, as well as Sulfur Coated Urea and Super U. Lange-Stegmann will also be offering fertilizer products with Mach 2 Turf Insecticide Grub control in early 1999.

For more information call 800/279-9531 or Circle No. 287

Natural Fertilizer of America offers biologically-based soil treatments.

Sustane Natural Based and Natural Organic

Fertilizers are dry granulated fertilizer products made from aerobically composted turkey litter. Bolster plant growth supplements, formulated from seaweed, humic acids and plant nutrients, are available in liquid and water-soluble packets.

For more information call 800/383-4081 or Circle No. 288

Nutramax Laboratories, Inc. offers Macro-Sorb radicular and Macro-Sorb foliar amino acid-based fertilizers and Quelant-Ca calcium chelated with amino acids.

Quelant-Ca is tank-mix compatible with herbicides, soluble fertilizers, insecticides, fungicides and plant growth regulators.

For more information call 800/925-5187, website www.nutrimaxlabs.com or

Circle No. 289

Plant Health Care's Flexx reduces stress, stimulates root growth and corrects nutrient deficiencies.

A water-soluble biostimulant premix, Flexx comes with fully chelated micro-nutrients, biostimulants and beneficial bacteria.

For more information call 800/421-9051, website www.planthealthcare.com or Circle No. 290

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Regal Chemical Co. offers Multigreen II.

This liquid water-soluble organic blend of organic chelated of iron, copper, zinc and manganese that improves root growth, color and stress tolerance.

For more information call 800/621-5208 or Circle No. 291

Simplot's line of Best brand fertilizers are formulated for a wide range of applications.

Many Best products contain Polyon, TriKote and Best-Cote controlled-release polymer and sulfur coatings.

For more information call 800/992-6066, website www.bestfertilizer.com

Circle No.xxx

Terra Industries offers a full line of fertilizers. Products include primary, secondary, micronutrient and pesticide packages. Terra's Gold Cote technology delivers predictable, controlled release nutrition.

For more information call 800/288-7353, website www.terraindustries.com or Circle No. 292

Tessenderlo Kerley offers the firsTurf family of liquid fertilizers.

N-Sure-KS liquid fertilizer, part of the firsTurf foliar specialty fertilizer solutions, contains triazone slow-release nitrogen and potassium thiosulfate.

For more information call 800/525-2803 or Circle No. 293

The American work ethic



is not dead •



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Your to-do list just got a lot shorter. Gas or diesel, 2- or 4-wheel drive, Gator[®] Utility Vehicles are great for most any job. Stable and surefooted, they haul more than their own weight (up to 1,400 pounds[†]), yet tread lightly on turf, with a psi of only 7.1 to 7.5. For as little as \$99 a month, you'll wonder how you ever did without one.

Fleet Owner's Discount

Get a minimum of \$100 credit per unit when you buy any combination of 3 or more John Deere commercial walk-behinds (36-in. or larger), commercial front mowers, Z-Trak zero-turningradius mowers and Gator utility vehicles. Ask your dealer for complete details. †Total capacity for the 6x4 Diesel—includes 200-lb. operator, 200-lb. passenger and maximum box capacity.

Front Mowers \$500 off F725* \$800 off F900s and F1145*

The savings? Industrial-size. Choose from six front mower models — 20 to 28 hp, gas or diesel. Every one with patented two-pedal control, power steering, and master brake pedal for the PTO. F1145 has on-demand or full-time 4-wheel drive. See one today.

GATOR

Gator 4x2

or just \$5,995*

\$99/month^{tt}

If All financing offers are for commercial use only at participating dealers and expire 31 May 99. Subject to approved credit through John Deere Credit. Installment Plan. Equipment financing is at 8.4% up to 60 months except as follows: the Commercial Cutter package is 36 mo., Commercial Waik Behind Mowers are 36 mo., the 2-Trak is 48 mo. A 20% minimum down payment is required on all equipment except as follows: the Commercial Cutter Package is \$99, the 190 tractor is \$2,251, 4500 tractor w/460 loader, 616 rotary cutter is \$7,598, Commercial Waik Behind Mowers are up and no interest until 1 May 99 and no payments until 1 June 1999. No down payment is required on 2-Traks, Dealer set up, freight, taxes, and other miscelianeous charges (if any) are not included in prices and monthly payments. *Lease term is 36 mo, and lease amount and monthly payments do not include insurance, dealer set up, freight, or any applicable taxes or fees. For commercial use only; capital cost reduction is required. See dealer for details. **Subject to approved credit through the John Deere Credit Revolving Plan-Commercial Use Account. For commercial was any a participating dealers. and 60 standard for use Now, with the op down (until May about to do the s



Z-Trak[™] F620

zero down^{tt}

***214**/month**

Nothing Runs Like A Deere[®]

With Us, •



Commercial Cutter Package Sale

For this package, the price *is* right. The thirteenhp GS30 gear-drive mower with 36-inch deck, 250-mph backpack blower, fast-cutting commercial hedge trimmer, and industry-best XT120 gas line trimmer all mean business — lots of business, for you.

045 Hvdrostatic

16/month**

or just \$4,677

With 36-Inch

Deck

When you test-drive any commercial equipment in this brochure, you'll receive a FREE John Deere mesh trash bag. Empty, of course. Offer available at participating dealers only.

A deal with a really long string attached. Buy a John Deere commercial walk-behind (36-in. or larger) before May 31, 1999, and you'll receive a free, next-generation commercial-grade line trimmer (plus get zero-down financing).** Besides enjoying the advantages of superior decks and fully enclosed transmissions, on our hydrostatic models, you'll also get the opportunity of a ten-day test drive.***

GS30 Gear Drive

Deck

Free Line Trimmer \$319⁹⁹ Value

with purchase of commercial walk-behind 36-in. or larger

zero down**

With 36-Inch (\$78/month

or just \$2,450

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New XT Series Trimmers Deere M-Series engines

set the tone for power and sound quality. Their extreme durability, reliability, and power make these new handhelds the best way to arm yourself.



Perhaps the most vital part of a commercial mower, John Deere wide-area walk-behind transmissions come with the assurance of a three-year limited warranty. So they'll be part of your crew for a long time to come.

The XT120: A cool-running, highly efficient M-Series 1.2-hp engine. Shock-absorbing grip. Noise-reducing intake silencer and low-tone muffler. Advanced throttle control. Large capacity tap-for-cord line head. And lifetime ignition and shaft warranties.

Manufacturer's suggested list price. Price may vary by dealer

At participating dealers. Subject to approved credit through John Deere Credit Installment Plan. Financing at 8.4% for 36 mo. for commercial use only. Dealer setup, freight, taxes, and other miscellaneous charges (if any) are not included in prices and monthly payments. Personal use installment financing also available. Ask dealer for details. Offer expires May 31, 1999. *It's the John Deere Promise: If you're not completely satisfied with your purchase, you can return it within ten days for a full returnd.

With Us,

Sator 6x4 **136**/month[#]

or just \$8,255



It's an advance on your future. Pay nothing for 90 days for the John Deere commercial parts, service and handheld products you need to build your business now. Offer good through October 31, 1999.***

(30hp / 25 PTOhp

the 20-to 30-PTO-ho class

790 T<u>ractor</u>

\$10,995*

lowest price in its class***

SOHNDEERE

Quality Decks

A great first impression. Most John Deere decks are pressed from a single sheet of heavy steel, lending them a strength weldedtogether rivals simply can't match. Underneath, a high-lift design, maximum blade overlap, and a widedischarge chute provide you the precision cut that impresses the first time — and every time. The original workhorse: Now with more horses. Hitching to implements in under five minutes is just one of this 30-hp tractor's abilities. Others include easy starts, and restarts, with direct injection and an auto-bleed fuel system. Standard transmission is a smooth sliding gear. Package includes 4WD. (8.4% financing available.)

It's Nowhere Nea

The best financing around.

These 20-hp zero-turning-radius mowers with a choice of 48-, 54-60-inch decks already set the ser-friendliness and ease-of-service. option of buying one with no money ay 31, 1999)th, their financing is e same.



The quicker

hooker-upper. A 20-hp diesel engine. HST automatic transmission with easy-to-use Twin Touch® foot controls. 4WD. Mid- and rear-PTOs. Power steering. And really, really quick implement hook up. Stop by your dealer to find out more.

PowerGard® Protection Plan

Security and value for the long term. Available for all new John Deere tractors, engine and powertrain coverage can be purchased for 12, 24, or 36 months (with varying hour combinations) beyond the John Deere Basic Warranty. This coverage transfers to subsequent owners, so it not only protects your investment, but adds resale value, too.



This 45-PTO-hp package includes standard CollarShift transmission with 9 forward/ 3 reverse speeds. Ask your dealer about upgrading to our 540/540E PTO option. For light- to medium-duty jobs, it saves fuel and reduces noise by operating 540-rpm PTO implements at a much lower engine speed.

4500 Tracto

\$399°/month

39 hp / 33 PTOhp

Never lets work pile up. High breakout force, quick cycle times, and a PowrReverser[™] transmission (that lets you go back and forth without clutching) allow this 39-hp tractor package to set the pace in the industry for

loading and unloading. But don't take our word for it, try one for yourself. (Price includes 460 Loader, 616 Rotary Cutter.)

r An Early Retirement.

JOHN DEERE

UHN-P

Implements

Rotary Cutters

The wait is over. Now you can finance John Deere implements worth over \$1,000 for one low rate. These implements are exceptionally easy to hook up, and perfectly complement the machines they attach to. Visit your John Deere dealer to find out more.

RPM Parts Kit

Perhaps the only time in-the-box thinking is a good idea. This kit contains almost everything you need to perform routine service on your equipment. Pick one up when you buy a machine, and you'll be all set for 500 hours of service.

Backhoes



8.4%

1-888-669-7767/ www.deere.com for a dealer near you.

Service

Great workmanship and dedication to the quick fix. We put as much care into servicing machines as we do building them. That's why for the past 160 years, expert technicians have always stood by to perform repairs quickly and well.

Now Through May 31,1999

Parts on time

After-hours. Weekends. Next-day delivery. A 90-day warranty. Before you ever install them, John Deere parts set themselves apart. Crafted to meet the most exacting standards (ours), they're available both when you need them, and where at your John Deere dealer.



Loaders

Nothing Runs Like A Deere

Your target wants to see more from you.

Advanstar Direct Mail Lists are precisely targeted.

Which means that regardless of what you're sending, your target will receive it.

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Build a cost-effective parts inventory

Save yourself time and money by building the right maintenance parts inventory for your operations. Just follow these seven steps

By MARK NEIDICH

f you think the cost of an inventory is all parts and supplies, think again. Parts are 30% of equipment maintenance costs (not including operating costs). Labor constitutes most of the balance, although miscellaneous costs may be as high as 10%.

UNDERSTAND CARRYING COSTS

The breakdown of a typical inventory carrying cost is below:		
Cost of storage, rent, building		
depreciation, maintenance & repair4%		
Cost of inventory supplies, shelves,		
bins, record, taxes		
Cost of insurance2%		
Employee costs, salaries11%		
Obsolescence, damaged or		
nonreturnable parts, pilferage,		
time spent returning parts for		
credit and warranty claims5%		
Money costs, lack of return on		
inventory and control investments		
that otherwise produce income		
(opportunity costs)		

These figures do not reflect average downtime of equipment, the time spent getting replacement parts when breakdowns occur or other data which would indicate the effectiveness of the inventory control system.

The carrying costs of an average inventory are about 34% of the total inventory value.

1. Understand the carrying costs

The figures in the chart at left will vary somewhat, depending on your fleet. Accounting figures estimate that it will take between

11% to 15% of a company's annual parts expenditure to support the employee costs. If the annual inventory is \$2,500, expect those costs to total from \$300 to \$375. This includes ordering, receiving, pick-ups and delivery. Support dollars for shelves, heating, lighting, telephone and vehicle should be 25% of the onshelf inventory. For a \$2,500 annual parts inventory, turned over six times per year, this would give \$416 on-shelf maximum (\$2,500/6).

2. Choose the right parts

New parts — Factory manufactured parts are usually the highest quality, best fit, longest warranted and most expensive. Aftermarket manufactured parts can be as good as factory manufactured ones, but are often the equivalent of rebuilt parts, and sometimes worse.

Rebuilt parts — These parts have been reconditioned and tested. They are 30% to 50% less expensive than new parts. In most cases, you can get good service from such parts, but they have been used and therefore, to a certain extent, are fatigued. Although they are less expensive than new parts, the service life is considerably less.

The cost to consider here is the repeat labor cost of installation associated with the shorter component service life. One rule of thumb seems to cover most rebuilt parts: They make sense when you can expect to get 75% of the original life out of the rebuilt unit, but at 50% or more below the cost of a new one.

A major drawback of a major use or rebuilt part is that the components don't wear at the same rate, thus increasing the frequency of unscheduled repairs, since the unpredictability of the parts makes scheduled maintenance difficult.

Premanufactured parts — These are rebuilt parts, repaired to original factory specifications. They cost more than rebuilt, but less than new. Again, labor costs are a significant consideration.

Your goal should be to plan for scheduled repairs, thus saving the extra cost inherent in unscheduled repairs. Good quality parts replacement helps you reach your goal. Poor quality parts means more frequent failures and low equipment availability.

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