

**BUY
NOW AND
SAVE**



GATOR® UTILITY VEHICLES

The concept behind the Gator is simple. It works. And works. Gas or diesel, 2- or 4-wheel drive, these vehicles are stable, surefooted, and can seat two comfortably. And with just 7.1 to 7.5 psi, they can really carry a load – turf, trail, or no trail at all. These go-anywhere haulers are the elite of the working class. Try one today.

NEW JOHN DEERE HAND-HELDS

Add the finishing touches to your lawn maintenance jobs with a full line of commercial-quality John Deere hand-held tools (shown at right). Everything from hedge trimmers and stick edgers, to line trimmer/brushcutters, backpack blowers, and chain saws. Make your operation 100 percent John Deere. See our full line today.



COMMERCIAL FRONT MOWERS

Save now on the F725, F900 Series and the F1145. Choose from six mid- or full-size models – 20 to 28 hp, gas or diesel. All have 2-pedal hydrostatic drive for speed and direction control. And a master brake pedal that disengages the PTO when depressed. Welded steel frame provides strength. Hydrostatic power steering for superb maneuverability. The F1145 has on-demand or full-time 4-wheel drive. A wide variety of attachments is available.

**ASK ABOUT OUR PRIVATE
GOVERNMENTAL CONTRACTOR PROGRAM**

90 DAYS SAME AS CASH*

Tune up, fix up and clean up your hard-working commercial equipment and pay nothing for 90 days. Why not call and schedule a service appointment now? Or order the parts you need to do your own repair work. It's also a good time to buy RPM prepackaged parts kits for those frequently replaced items like belts, blades, filters, oil and spark plugs.

RPM
PARTS KIT



AT JOHN DEERE, "UTILITY

EQUIPMENT TO KEEP AND PROFITS



GATOR 6x4 UTILITY VEHICLE
ONLY
\$8,925
OR JUST \$174/MONTH FOR 48 MONTHS*

Gator 6x4 offer includes base machine with heavy-duty tires, front bumper, bedliner, front shock kit, windshield, and brush guard.

COMMERCIAL CUTTER PACKAGE

THESE ITEMS SHOWN AT LEFT, EXCEPT HEDGE
R: GS30 MOWER WITH 36-INCH DECK; FREE
LINE TRIMMER (SEE OFFER ON OVERLEAF); BP40
CK BLOWER AND SE23 STICK EDGER.



This is one deal you shouldn't pass up. The 13-hp mower has a 5-speed gear transmission. The gas 1.4-hp line trimmer has a straight shaft and 18-inch cut. The 1.2-hp stick edger has a 9-inch adjustable blade. And the blower generates a velocity of 250 mph and weighs just 17 pounds.

BUY 3 OR MORE

GET UP TO \$150 CREDIT PER UNIT

Fleet owners special credit for purchases of three or more John Deere commercial walk-behinds (36-inch or larger), front mowers (F700 Series or larger), and Gator® Utility Vehicles made between November 1, 1997 and October 31, 1998. Credit is good for purchases of John Deere products, parts and service. Credit per unit is based on quantities: 3-5 - \$100; 6-10 - \$125; over 10 - \$150.

Ask your dealer for full details.

* All financing offers are for commercial use only at participating dealers and expire May 31, 1998. Subject to approved credit through John Deere Credit. Equipment financing is at 7.9 percent unless indicated otherwise. A 20 percent minimum down payment is required for all equipment, except commercial walk-behinds. (The Commercial Cutter Package requires no down payment.) Dealer set up, freight, taxes, and other miscellaneous charges (if any) are not included in prices and monthly payments. 90-Days-Same-as-Cash is through John Deere Credit Revolving Plan Commercial-Use Account. Personal-use installment financing also available. Ask dealer for details.

** 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.

5210 TRACTOR

Great performance

in a new 45-PTO-hp package. High-torque, cleaner-burning diesel engine. Standard collar-shift transmission with 9 forward/3 reverse speeds. Hydrostatic power steering. Independent 540-rpm rear PTO.

Planetary final drives.

Hydraulic self-equalizing wet-disk brakes.

LIKE IT? LEASE IT!
NEW 5210/2-WHEEL DRIVE/BAR TIRES



955 HYDROSTATIC

Now it's more rewarding than ever to own a 955 Tractor. The 955 features four-wheel drive and a 33-hp diesel engine. Patented 2-pedal hydrostatic drive. Independent live PTO. Hydrostatic power steering for superb maneuverability. Planetary final drives and wet-disk brakes are also standard. Be sure to see our long line of easy-on attachments.

955 HYDROSTATIC COMPACT
NOW
\$1000 OFF
MANUFACTURER'S SUGGESTED LIST PRICE



"7" IS OUR MIDDLE NAME

KEEP PRODUCTIVITY ON TRACK.



NEW!

\$199/MONTH*
FOR 36 MONTHS

4100 TRACTOR

New styling, new features, special introductory price. Standard features include 20-hp diesel engine. Sliding gear/collar shift transmission with 8 forward/4 reverse speeds. Four-wheel drive. Mid and rear PTOs. And power steering. Come in soon for a test-drive.

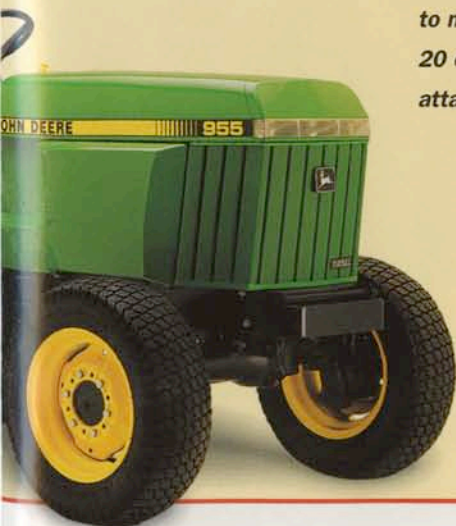


NEW!

4100/4-WHEEL DRIVE/GEAR/BAR TIRES

ONLY \$149/MONTH*

AMOUNT FINANCED IS \$7,365.30 AT 7.9% FOR 60 MONTHS



This special 770

770 PRICE FIGHTER

Tractor package includes a 24-hp diesel engine and sliding-gear transmission with 8 forward/2 reverse speeds. Four-wheel drive. Power steering and continuous live 540-rpm rear PTO.

Fast hookup to more than 20 optional attachments.



770/4-WHEEL DRIVE/BAR TIRES

ONLY \$179/MONTH*

AMOUNT FINANCED IS \$8,848.25 AT 7.9% FOR 60 MONTHS



1998

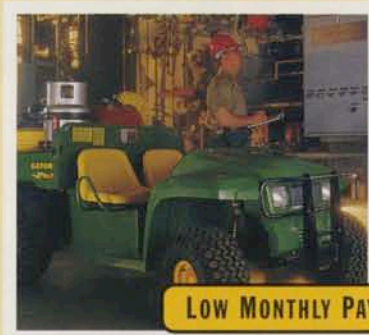
JOHN DEERE



0% FINANCING



GREAT INTRODUCTORY PRICE



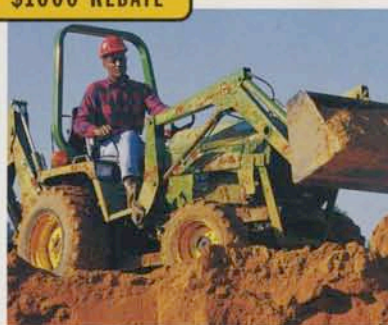
LOW MONTHLY PAYMENT

PRICE FIGHTER



FREE LINE TRIMMER WITH PURCHASE

\$1000 REBATE



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Our Third Annual Sale Exclusively for Commercial and Grounds Care Professionals

It's like adding 160 years of know-how to your business.

Every time you buy or lease a piece of John Deere equipment, you get the best of one of the oldest companies in America. The best equipment. The best financing. The best parts delivery. The best service after the sale.

COMMERCIAL-USE FINANCING

The John Deere Credit Installment Plan offers: flexibility in down payment requirements, competitive low rates, up to 60 months to pay, and a variety of payment options. Including a skip-payment plan that helps you match payback schedules to your cash flow. The John Deere Credit Lease Plan offers another way to get new equipment on the job site, while providing a way to manage equipment rotation and replacement. The John Deere Credit Revolving Plan Commercial-Use Account is a quick and easy way to buy parts, service, and hand-held products. And until May 31, 1998, you can buy them, 90-Days-Same-as-Cash, with approved credit, at participating dealers.

PARTS

John Deere is the **only** company that provides after-hours and weekend parts service and next-day delivery. We're ready to process your order 24 hours a day, 7 days a week. And, you get a 90-day warranty on all genuine John Deere parts. Many of our competitors offer nothing. We also have 13 parts warehouses throughout North America, with a storage area equal to 96 football fields. Now that's commitment.

SERVICE

The biggest advantage of all is your servicing John Deere dealer. With factory-trained technicians doing the maintenance and repair work, your dealer helps keep your down time to a minimum. And the work can be financed on **The John Deere Credit Revolving Plan Commercial-Use Account**. Unlike many of the competitors' dealers, ours provide warranty work for the entire machine, including the engine, transmission, battery, and even the tires, on most models. For qualifying larger customers, dealers can also provide parts on consignment at no additional cost. Take advantage of us today. It's the dollars-and-sense thing to do.



Nothing Runs Like A Deere.®



GET BEHIND THE BUSINESS END OF A JOHN DEERE.

COMMERCIAL WALK-BEHINDS

No Down Payment. No Payment Til June 1, 1998*

When it comes to commercial walk-behinds, you now have a choice of transmissions, as well as horsepower and deck sizes.

Pick a GS Series gear-drive, shown at right. Or an all-new HD Series hydro like the one below.

Choose a traction unit - 13, 14 or 17 hp. Then add

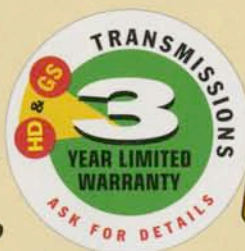
a 36-, 48- or 54-inch deck.

The GS has 5 speeds, the HD hydro is infinitely variable. Both trans-

missions have a 3-year limited

warranty. And the HD Series is backed

by a 10-day return policy (ask for details).



WHEN YOU TEST-DRIVE ANY COMMERCIAL EQUIPMENT IN THIS BROCHURE, RECEIVE A FREE JOHN DEERE MESH TRASH BAG. Offer available at participating dealers only.

FREE MESH BAG WITH TEST DRIVE



10 DAY RETURN

FREE LINE TRIMMER \$379 VALUE

When you buy any new John Deere GS, HD, or Deluxe (yellow deck) commercial walk-behind, you'll receive at no cost this T26SB Gas Trimmer. The commercial-quality T26SB has a 25.6 cc Mitsubishi engine and a 59-inch straight solid shaft. It cuts an 18-inch swath and is blade capable. Vibration isolation provides more comfortable operation.

* Manufacturer's suggested list price. Price may vary by dealer.
** At participating dealers. Subject to approved credit. For commercial-use only through John Deere Credit Installment Plan. 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.

ished drainage system. Usually, the slits are cut at regular intervals of three to six feet. The narrower the interval, the more effective the system will be.

A narrow sequence is generally used for high-wear areas, such as the center of a soccer field. Drainage is most important in these areas, because most of the play is concentrated here. Tight patterns will also be used when surface percolation rates are low, such as in skinned areas or when there is little or no surface slope.

Slits are cut perpendicular to the surface slope to intercept surface runoff. As water moves down the slope, it passes over coarse material and seeps into the surface (grass or skinned). Finally, the slits transmit excess water to an underground pipe system. Water does not percolate through the soil to reach the collector drains, and drainage performance is not dependent on soil characteristics.

A two-tiered system

As water is absorbed by the drainage slits, it travels down through gravel or sand to be evacuated by an underground drainage system. The traditional drainage tile in a stone-filled trench is very effective for this. Slits penetrate the surface to such a depth that they connect with the coarse material surrounding the drain tile. This creates a continuous path for the water to travel out of the field.

Of course, it's essential to control cutting depth so that the tile is not damaged by the cutting wheel. The advent of laser leveling has produced

significant developments in slit drainage cutting techniques. The cutting wheel can now be fitted with hydraulic systems to control cutting depths.

This development has paved the way for drainage machines that simultaneously cut the slit and lay drainage pipe with very precise slopes. This allows the slit to take on the dual task of runoff interception and water evacuation. The drainage system can now be placed in situations of little or no

mance. One important characteristic of modern slit drainage techniques is the ability to evacuate trenching spoils directly into a trailer immediately after excavation with minimum spillage.

It's also important to limit the length of time the drainage slit remains empty after it has been cut. Systems exist which allow the drainage slit to be filled as it is being trenched. The process becomes a three-step (cutting, excavation and filling), one-pass operation. This method protects the slit's sides from crumbling or caving-in before filling.

Draining a new playing surface.

Installing modern slit drainage in new field constructions is a very straightforward and quick process. Once main collector pipes are set at the perimeter of the field and final surface grading has been approved, pipe fitted drainage slits can be set lengthwise at regular intervals using small diameter (one or two inch) perforated pipe.

As explained previously, site conditions, soil type and surface slope determine the appropriate distance between the drain lines. As with slit filling, this method integrates pipe laying into the one-pass process. Once the drainage pipes are set in place and the slits are filled, the pipes can be connected to the collector.

For seeded fields, a one-inch topping of sand acts as a seedbed. If a field is to be sodded, the sod must be grown in sandy soil prior to installation to prevent contamination of the slits. Of course, washed sod completely eliminates all risk of contamination.



A typical slit drainage installation consists of a series of narrow trenches cut into the playing surface and filled with a drainage medium, such as pea gravel, fine crushed stone or coarse drainage sand. Courtesy: Lanco.

surface slope, since the drainage pipe can now carry water on its own.

A three-step, one-pass operation

As slit drainage equipment evolved, construction techniques improved. Drainage of existing turfgrass surfaces, particularly drainage of the difficult contours of golf courses, imposed certain standards on the quality of work methods.

Contamination of the slit's surface or manipulation of soil over and around the drainage slit can adversely affect the drainage system's perfor-

Skinned surfaces can also be drained

In many instances, skinned surfaces consist of a mix of medium grade sand and silt, or other materials that offer sufficient permeability to allow the installation of an efficient slit drainage system.

Typically, such a drainage system requires a very tight set, so that minimal surface water movement is needed. A fine layer of drainage sand must cover the slits to bridge the gap between the fine granular curve of the surface layer and that of a coarser material used to fill the drainage slits.

Slit drainage systems in skinned soil areas are less efficient than systems set under a grass cover, but the design still eliminates surface water in very little time.

Renovating existing surfaces

Since slit drainage uses such nar-

row channels, they can be cut into an existing grass or skinned surface with very little destructive effect. Of



Installing modern slit drainage in new field constructions is a very straight-forward and quick process. Courtesy: Lanco.

course, work crews must use low pressure tires when working on sports surfaces, especially when slit drainage

has already been established. Because modern slit drainage machines can effectively evacuate spoils with little or no spill-over, such a system can be installed very cleanly with practically no repair work.

Once the system is in place, the slits can be seeded over or covered by natural spreading of the turf plants. In fact, a retrofitted system will perform more effectively than one that is installed in a new construction, because the drain slits are not being covered with heavy soil-laden sod.

When renovating skinned surfaces, the slits are covered over with a layer of the surface mix before it is smoothed over, just as in regular maintenance.

An effective and versatile drainage option

A slit drainage system allows for fast evacuation of water independently of the percolation characteristics of the soil in which it is established. It can effectively solve severe drainage problems where other drainage solutions have failed.

In association with the use of sand-based rootzone mixes and automatic irrigation systems, slit drainage has proven to be an important component in the economical construction of high performance sports fields. More importantly, the system can be invaluable in the rehabilitation of existing sports fields. This is especially true for those fields constructed from native soils that are often plagued with poor percolation.

Slit drained sports fields require careful maintenance in order to prevent contamination of the drainage network. But when properly cared for, they can provide reliable service for a great many years. □

LANCO SLIT DRAINAGE FOR SPORTSFIELD CONSTRUCTION AND RENOVATION

Slit drainage offers sportsfield designers and managers a wide range of solutions to their most severe surface water management problems.

Lanco has developed techniques and machinery capable of installing the latest in slit drainage systems, both in new constructions and existing turfgrass surfaces.

GIVE US A CALL AND FIND OUT HOW SLIT DRAINAGE CAN BE INTEGRATED INTO YOUR PROJECT



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François Hébert is a landscape architect for Lanco Aménagement, 1110 Place Verner, Laval, Quebec, Canada H7E 4P2. Tel: (888) 664-7489, Fax: (514) 664-4555, e-mail: lanco@total.net

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Plant an improved turf-type bermuda from seed.

Seeded turf-type bermudas are easier to establish and less expensive to maintain.

Choose **Primavera** for its excellent, proven turf performance or **PRIMO** blend, which has all the advantages of **Primavera**, upgraded for denser, finer textured turf. **PRIMO** blend bermudagrass includes all the benefits of the more recently released improved varieties. Perfect for seeding new projects or upgrading your existing bermuda turf.

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From Seed to Soccer: Bermudagrass You Can Sink Your Cleats Into

by Brenda Dossey

At one time, "Common" bermudagrass from seed had to be imported from Australia. This changed in the early 1900's, when seed producers in Arizona and California realized they could produce the seed on their own. Today, Southwestern Arizona and the Imperial Valley of California produce over 95 percent of the world's supply of bermudagrass. Due to its drought tolerance, durability, low input maintenance and ease of establishment, bermudagrass has become the primary turfgrass in the Southern U.S., and in the semi-tropical and tropical regions of the world.

Above-ground stolons and underground rhizomes contribute to bermudagrass' rapid cover and aggressive growth characteristics. Bermudagrass is so hardy and durable that the U.S. government purchased the entire seed crop during World War II to grass its runways in North Africa and the South Pacific. The method was so successful that bermudagrass saw duty on runways once again in the Vietnam War.

In the 1980s, researchers in

Oklahoma and New Mexico developed seeded bermudagrass varieties with improved turf characteristics. Funding from the USGA Green Section Research and other sources helped move the research from experimental plots to wide release.

The first variety of bermudagrass developed exclusively for turf, certified

summer green color and improved its turf density.

An application

The ease and economy of establishing quality bermudagrass turf from seed represented a new and exciting concept for turfgrass professionals. Carlos Benavides of Peru saw great

potential in the new Sahara variety. He put it to the test when called upon to manage seed variety selection, installation and maintenance for a soccer stadium in Lima.

Figures two and three dramatically illustrate the effectiveness of his work. Comparing pictures of the stadium before and after seeding, it's hard to believe both could be the same field. This is just one example of the kind of results that a certified turf-type bermudagrass variety makes possible.

The before picture shows a turf that consists of a hodgepodge of various cool- and warm-season grasses

on a very rough surface. To prepare the seedbed, Benavides' crew killed the existing grasses, and proceeded to till, amend and level the soil. They broadcast certified NuMex Sahara with

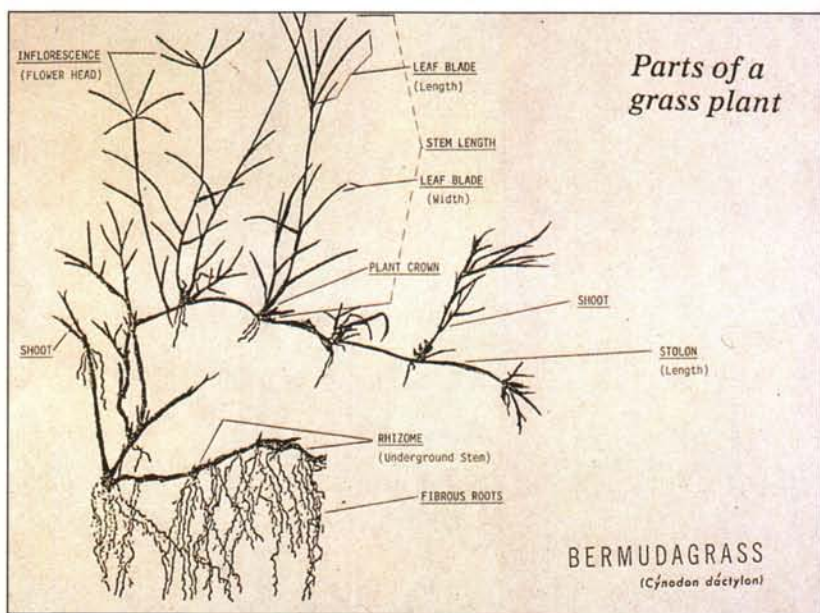


Figure 1: Above ground stolons and underground rhizomes contribute to bermudagrass' rapid cover and aggressive growth characteristics.
Courtesy: Seeds West.

NuMex Sahara, became commercially available in 1989. Sahara improved Common bermudagrass by shortening internodes. Better genetic uniformity in the new variety increased the grass'