

# SEED PRODUCTION

By RICHARD HURLEY  
Vice President - Agronomy & Research  
Lofts Pedigreed Seed, Inc.  
Bound Brook, NJ

How is turfgrass seed produced and where is the major area of production?

Let's take a look at the turfgrass seed industry to find out. The major production area in the United States is in the northwest states of Oregon, Washington and Idaho. A combination of factors make these states ideal for seed production. These areas have a climate with a distinct rainy season during the winter months while having predictable dry months of June, July and August where minimal rainfall is anticipated. As the harvest takes place during these months, there is less chance of crop loss due to heavy rains and severe thunderstorms. When seed is produced in other climates with less predictable weather patterns, heavy rainstorms can dislodge and shatter the seed from the delicate panicles. Once on the ground the seed is lost and can't be harvested.

Low humidity is also important during harvesting as the crop is normally swathed first, set in wind rows and allowed to dry in the fields. High humidity and/or dampness from rain for extended periods can cause rotting of the seed, lower the germination, and increase the incidence of disease which can destroy the entire crop.

How is seed grown?

It is not a complicated procedure in theory but in practice the demands are high due to potential weed contamination, insects, disease and other related problems. The seed utilized by the farmer when planting a field is provided by the breeder or more commonly by a seed company. Seed companies either develop their own \*proprietary varieties through company breeding programs, or acquire

\*Varieties for which one individual, group of people or company have sole control over production, marketing and sales.

marketing rights for varieties developed by breeding programs which do not have facilities with which to market and promote a variety. This is usually the case with breeding programs conducted at state universities. For example Lofts Pedigreed Seed, Inc., has the proprietary and/or co-marketing rights to the following varieties Baron, RAM I, Majestic, Touchdown Kentucky bluegrass, Yorktown, Yorktown II, and Diplomat Perennial ryegrasses, Jamestown Chewings fescue and Beaumont Meadow fescue. The company or its agent will contract directly with the farmers to grow a set number of acres at a certain contract price for a predetermined number of years. The seed which is provided to the farmer would be either breeders' seed or very often foundation seed. Breeders' seed is produced under supervision of the breeder of a particular variety. Very strict standards are set with respect to isolation, contamination, and weed control for both breeder and foundation seed.



*Swathing Baron Kentucky Bluegrass*

*Field burning rejuvenates the plants, encourages new plant growth, and kills surface weed seeds.*

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Breeders' seed is produced from plants or clones of the original seed source or plant. The purpose of the Breeder block is to have a basic source of seed which is genetically consistent and uniform according to the description of the variety. Foundation fields are planted from breeder's seed which will provide relatively large quantities of seed of desirable quality which is utilized to plant new or re-established plowed out acres. For example a breeder block of Kentucky bluegrass has 500 plants which will produce 10 pounds of seed. The ten pounds of breeder seed can plant five acres of foundation fields which will in turn produce 3,500 pounds of seed the following year. The 3,500 pounds of foundation seed could be utilized to plant 1,700 acres of production fields. From this 1,700 acres, a harvest of over 1,000,000 pounds of seed would be available for commercial sale. In a period of four to five years, a variety may be increased from a single plant or a few grams of seed to over a million pounds of seed to be sold commercially. The production fields are planted in spaced rows 12 to 18" wide using extremely low seeding rates per acre, 2-3 pounds per acre for Kentucky bluegrass, 5-7 pounds for Fine fescues, 1-2 pounds for Bentgrasses, 15-20 pounds for Tall fescues, and 5-7 pounds for fine leaf Perennial Ryegrasses. To insure genetic purity of a variety and minimize contamination, fields must be rotated every three to five years as every field planted has a seeding and plow out schedule. Fields planted to sexual grass species are isolated far enough from other varieties of the same species so that pollen from a nearby field will not fertilize the desired crop.

After the field is seeded to "Baron" Kentucky bluegrass, for example, the field agronomist, employed by or acting as a representative for a seed company, must take special precautions to see that off types and aberrants (plants which are not characteristic of the variety being grown are eliminated.) The agronomist advises and works with the farmer to see that field hands walk every foot of the field looking for plants that are larger, smaller, have different color, textures, etc., than the desired variety. These plants are eliminated by spot spraying with a contact total kill herbicide. The purpose of this procedure is to provide uniformity from plant to plant within a field. Weeds are selectively removed from the fields by using various herbicides. Fields which have extremely high weed infestations will be plowed up as directed by the field agronomist, thus resulting in a total loss with the crop in order to assure high seed quality.

There is one harvest per year. Harvest takes place between the months of late June thru August. Each species matures and is ready for harvest at different time periods. Kentucky bluegrasses, Tall fescues, and Fine leaf fescues mature first during late June and early July. Next are the Perennial Ryegrasses in mid-July followed by Bentgrasses in mid-August.

From seeding to harvest all fields are routinely visited by state seed inspectors whose responsibility is to verify records as to what variety and species was planted in a field. They also check for weed contamination, if any, and for off-types and aberrants, which may prevent a variety from being certified. The state inspectors, field agronomist and farmers do an excellent job in assuring the public a source of high quality turfgrass seed.

After harvest the seed is combined to separate the seed from the seed head while straw, dust and other inert debris are removed by cleaning machines. These cleaners utilize different size screens and air blowers to sift and separate the viable seed from weed seeds and undesirable elements. All seed is labeled by lot numbers designating the farmer and field in which the seed originated. All seed is tested by licensed laboratories for percent purity, germination, inert matter, and weeds. Seed not meeting strict quality standards as regulated by state and federal laws, can not be sold as certified seed.



After harvest, preparation has already begun for next year. One of the most critical field procedures conducted in an established field after harvest, is to burn the field stubble with fires set and controlled by the farmers. The field burning is necessary to rejuvenate the plants, encourage new plant growth, kill weed seeds, and temporarily kill surface soil pathogens. If not burned, the yield generally will decline in succeeding years.

The procedures described above have been generalized in some cases, and only the most important grass species utilized for fine and sports turf have been mentioned. However, I feel it is important for everyone interested in turfgrasses to have a basic understanding of seed production procedures.

## CORRECTION:

Our apology to U.S.S. Agri-Chemicals for omitting their name in our list of advertisers that appeared with The President's Message in the April 1979 issue of "The South Florida Green".

# ROUNDUP

Two major turf products — one an herbicide and one an improved turfgrass variety — have joined forces to provide professional turf managers with a new, effective program for renewing or renovating existing turf areas.

Roundup® herbicide by Monsanto and Pennfine Perennial Ryegrass have been teamed up in the "2-Step Turf Renewal Plan". Details of the plan are available in a new test kit that includes enough Roundup and Pennfine to renew approximately 200 sq. ft. of turf.

The one application of Roundup called for in the plan will destroy a variety of annual and perennial grasses and broadleaf weeds. Roundup is a foliant-applied herbicide that utilizes the biological process of "translocation" to spread its killing properties to all parts of treated plants. (Translocation is the means by which sugars and other materials are circulated throughout living plants.)

Roundup requires several days to be absorbed into the foliage and translocated throughout the entire plant and its network of below-ground roots and rhizomes. Because Roundup leaves no residual soil activity, Pennfine can be spread over the treated area in about seven days after the herbicide application.

Pennfine's agronomic characteristics make it the ideal variety for the turf renewal plan. Developed by Dr. Joe Duich at Pennsylvania State University, Pennfine germinates quickly and grows into a dense, full stand of grass. Pennfine has a proven wide area of adaptation, the ability to persist at moderate fertility levels, and it withstands drought conditions and soil compaction.

Pennfine's ability to take a clean, smooth cut is one of its most desirable characteristics. After mowing, Pennfine doesn't produce ragged, fibrous ends which quickly turn brown. In addition, it holds up well under heavy traffic conditions.

A free test kit containing usage instructions and enough Roundup and Pennfine to renew approximately 200 sq. ft. of turf is available to turf professionals by writing: Turf Renewal Plan, P.O., Box 923, Minneapolis, MN 55440.





# WHAT'S INSIDE IT A BET

If you're hardnosed about business decisions, you want to get the in-depth facts on a product before you buy. That's why we've put together this head-to-head comparison between the insides of an E-Z-GO and a Cushman. We took comparable top-of-the line models, E-Z-GO's GT-7 and the Cushman Turf Truckster. Here's what we found.

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**Power Source:** 18 horsepower OMC engine, tightly compartmentalized. Ground speed 0 to 22 mph.

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**Braking:** Hydraulic internal expanding.

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**Payload:** 1000 pounds.

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**Suspension System:** Torsion bars, leaf springs, front and rear shocks.

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**Dump Construction:** Single wall.

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**Headlights:** Single.

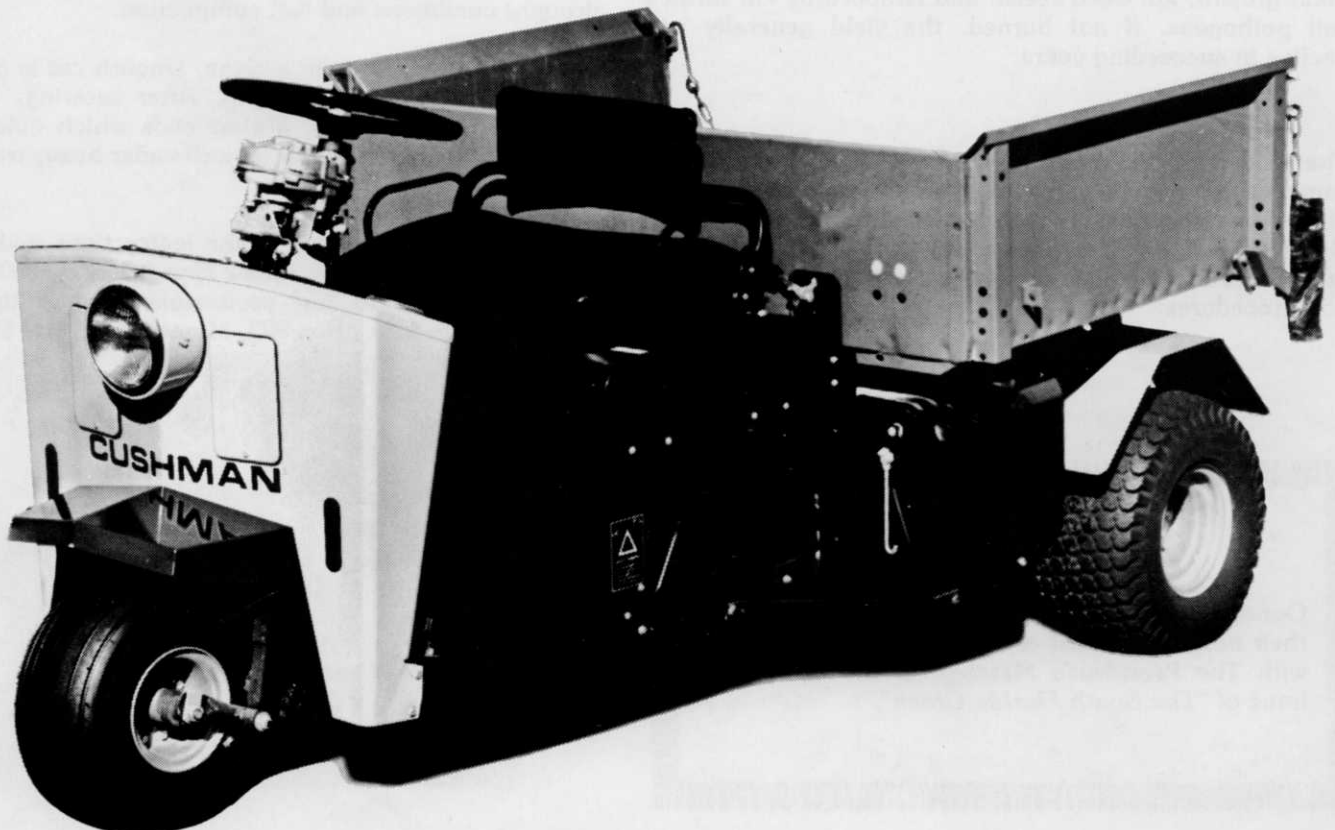
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**Seating:** Single seat for one passenger with back rest and hip restraint.

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**Price:** Virtually the same.

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# AN E-Z-GO MAKES TER BUY.

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**Power Source:** A rugged, reliable 18 horsepower Onan engine with the power to carry a full payload up to 24 mph. Substantially larger engine compartment for easier maintenance.

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**Braking:** Improved hydraulic internal expanding.

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**Payload:** 1500 pounds. A massive 50% greater carrying capacity than Cushman. More cubic space for greater material volume.

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**Suspension System:** Heavy duty torsion bars, leaf springs, front and rear shock absorbers, designed to support the bigger payload.

---

**Dump Construction:** Heavy duty diamond plate steel with rugged rear bumper for heavier loads and longer life. Easily convertible to flat bed.

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**Headlights:** Dual lights for greater night vision.

---

**Seating:** Dual seats for two passengers with individual back rests and hip restraints, constructed for larger men, greater comfort.

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**Price:** Virtually the same.

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**Summary:** E-Z-GO carries a greater payload, is easier to maintain, is larger, more durably built, and safer with a wider wheel base. E-Z-GO uses top quality components from companies such as Bendix, Borg Warner, Dana, Onan, and Rockwell International.

For the complete story on the E-Z-GO GT-7, a demonstration on your course, contact your E-Z-GO distributor. For his address check your Yellow Pages or call or write Mr. William Lanier, E-Z-GO, P.O. Box 388, Augusta, Georgia 30903, at (404) 798-4311.



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# RESEARCH REPORT

# COOL SEASON GRASSES

By E.L. MC WHIRTER and J.V. KRANS  
Assistant Agronomists  
Mississippi Agricultural & Forestry Experiment Station

Hybrid bermudagrasses (*Cynodon Spp.*) are the most widely used turfgrasses for golfgreens in the Southeastern United States. The hybrid bermudagrasses ('Tifgreen' and 'Tifdwarf') become dormant and turn a brownish-gray color when frost occurs. Overseeding these bermudagrasses with a cool-season grass about three weeks before frost is desirable to provide a living green surface, to reduce traffic damage to the dormant bermudagrass, and to insure a more visible target for golfers.

A major problem with overseeding is the transition from bermudagrass to a cool season grass in the fall and back to bermudagrass in the spring. Obtaining a quick cover of overseeded grass in the fall is desirable. Also, gradual death of the cool-season grass the following spring is necessary to allow bermudagrass to develop a dense turf. Bermudagrass normally breaks down dormancy slowly and a mix of cool season grasses with bermudagrass during the early summer provides a semifirm putting surface during the transition period.

We overseeded bermudagrass greens with selected species, mixtures (two or more species mixed together) and blends (several varieties of same species mixed together) of cool-season grasses in the fall and evaluated quality of the turf in the following winter and spring.

A large block of 'Tifgreen' (Tifton 328) bermudagrass sod<sup>1</sup> was divided into plots for overseeding with several species, mixtures and blends of commercially-available and experimental cultivars of cool-season turfgrasses. Plots were 25 feet square and each entry was replicated 4 times. The bermudagrass was not dormant and we removed some thatch and competition before overseeding — by vertical mowing in two directions followed by mowing 1/16 inch below the normal cutting height.

Seed of each species, mixture and blend were preweighed, mixed with moist sand as a carrier, hand seeded on October 15, 1976, worked into the turf by brushing with a stiff-bristle broom and topdressed with about 1/8 inch of masonry sand. Water was applied by sprinkler irrigation 3 times daily until germination was complete and at weekly intervals thereafter. Mowing at a cutting height of 1/2 inch was started 10 days after overseeding and plots were mowed at a

height of 1/4 inch three times each week after the cool-season grasses were well established.

Plots were visually rated for quality at weekly intervals from time of establishment until transition the following spring. Quality was judged to be a function of texture, color, density of stand and uniformity. A quality rating scale of 1 to 10 was used, with 1 lowest, 5 acceptable and 10 highest.

## Results

'Gulf' annual ryegrass became established faster than the other grasses and turf quality was acceptable in October (Table 1). However, low soil and air temperatures resulted in unacceptable turf quality (color fading and stand thinning) in November and for the remainder of the growing season.

The perennial ryegrasses produced acceptable turf later than the annual ryegrass but quality remained acceptable until spring transition, when the quality of all overseeded plots declined. Low temperatures affected the quality of all perennial ryegrasses slightly but they did not exhibit the loss of green color observed in the annual ryegrass and fine-leaved fescues.

Quality of turf produced by the fine-leaved fescues generally was unacceptable. 'Dawson' was producing acceptable turf by mid-November. However, it went "off color" in January and did not recover. The extreme cold affected the other fine-leaved fescues similarly. All fine-leaved fescues faded out fast in the spring transition and brown areas were observed.

Quality of turf produced by all mixtures was acceptable by late November and remained acceptable until spring transition. Differences in quality of turf were negligible.

'Medalist 2,' 'Medalist 5' and 'CBS' blends produced acceptable turf in November. Turf quality was not reduced appreciably by extreme cold and continued acceptable until spring transition. Transition to bermudagrass was very good.

<sup>1</sup>A plot that had been maintained as a golf putting green on the MAFES Plant Science Farm at Mississippi State University.



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for commercial use.



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Model No. 23022 hand-propelled  
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**The advantages:** hand propelled or self propelled Whirlwind® models; a simple, rugged, durable mower engineered for easy maintenance, dependable performance. Optional features include 5 qt. gas tank, spark arrester muffler and remote air cleaner kit. See specifications.



Optional Remote Air Cleaner P/N 28-0580



Throttle control

Meets ANSI specifications  
(see Toro specs)

2 quart gas tank  
(5 qt. optional)

Heavy duty 5 hp,  
4 cycle engine

Hinged rear  
deflector shield

8" x 1 3/4"  
semi-pneumatic tires

Deflector bar and  
steel deflector chute

10 gauge frame  
welded to housing

Stamped deck of  
12 gauge steel

1" to 4 1/8"  
height of cut

Steel wheels with  
greaseable ball bearings

Wind-Tunnel® housing

# HEVI-DUTY 25" WHIRLWIND<sup>®</sup> MOWER

Model No. 23267

**The advantages:** self propelled; high capacity with smooth, easy handling over rough terrain. Built for reliability and day in, day out service. Optional features include spark arrester muffler. See specifications.

Full width handle controls traction

Conveniently located throttle control

Convenient cutter blade control

Meets ANSI specifications (see Toro specs)

5 qt. gas tank standard

6 hp, 4 cycle engine

Three position handle height adjustment; storage position

Large 10 $\frac{1}{4}$ " x 3 $\frac{1}{2}$ " semi-pneumatic rear tires on steel disc wheels

Deflector bar and steel deflector chute

One piece welded frame of 1" x 12-gauge square steel tube

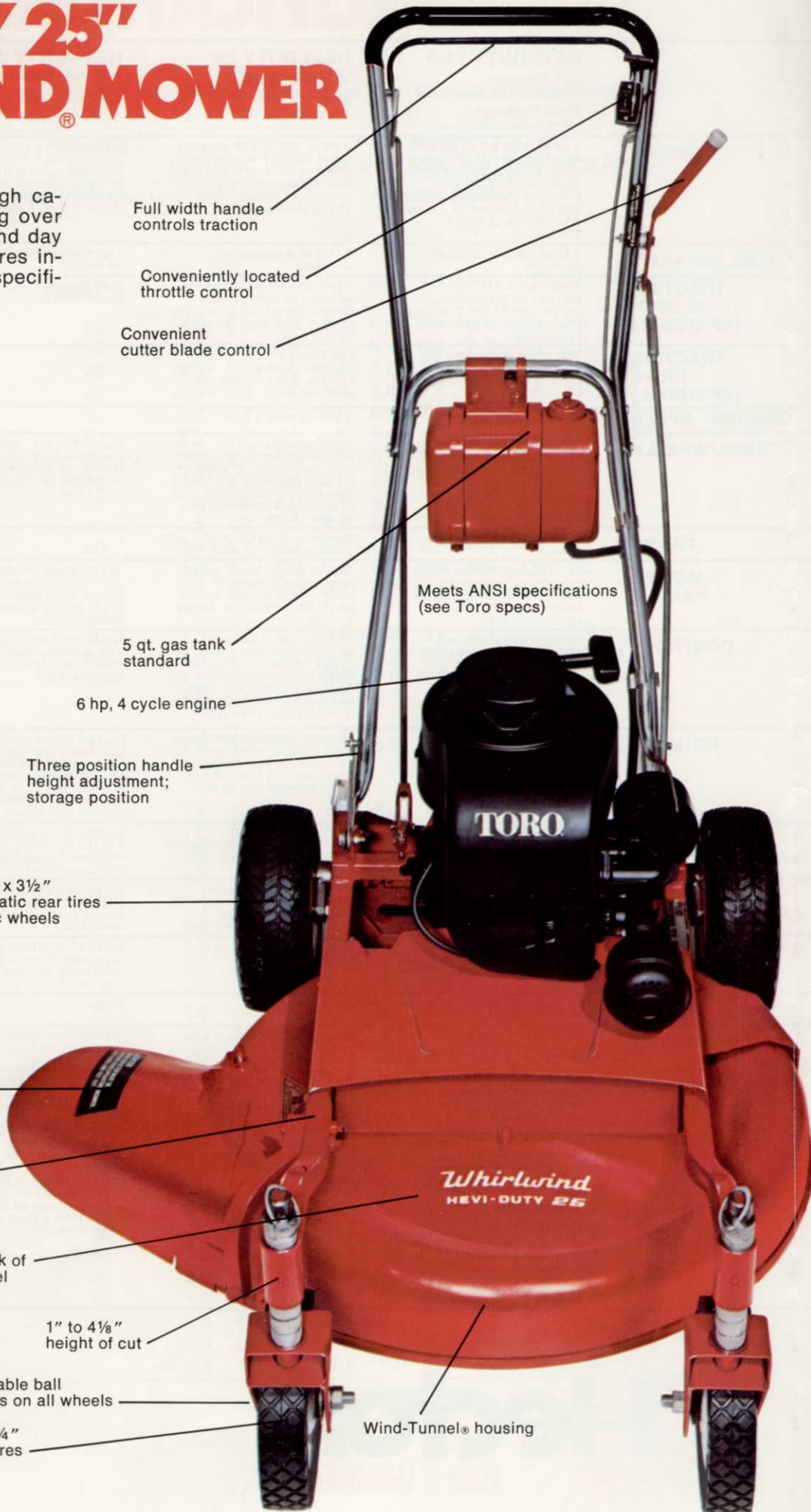
Stamped deck of 12 gauge steel

1" to 4 $\frac{1}{8}$ " height of cut

Greaseable ball bearings on all wheels

Caster-mounted 8" x 1 $\frac{3}{4}$ " semi-pneumatic front tires on steel wheels

Wind-Tunnel<sup>®</sup> housing

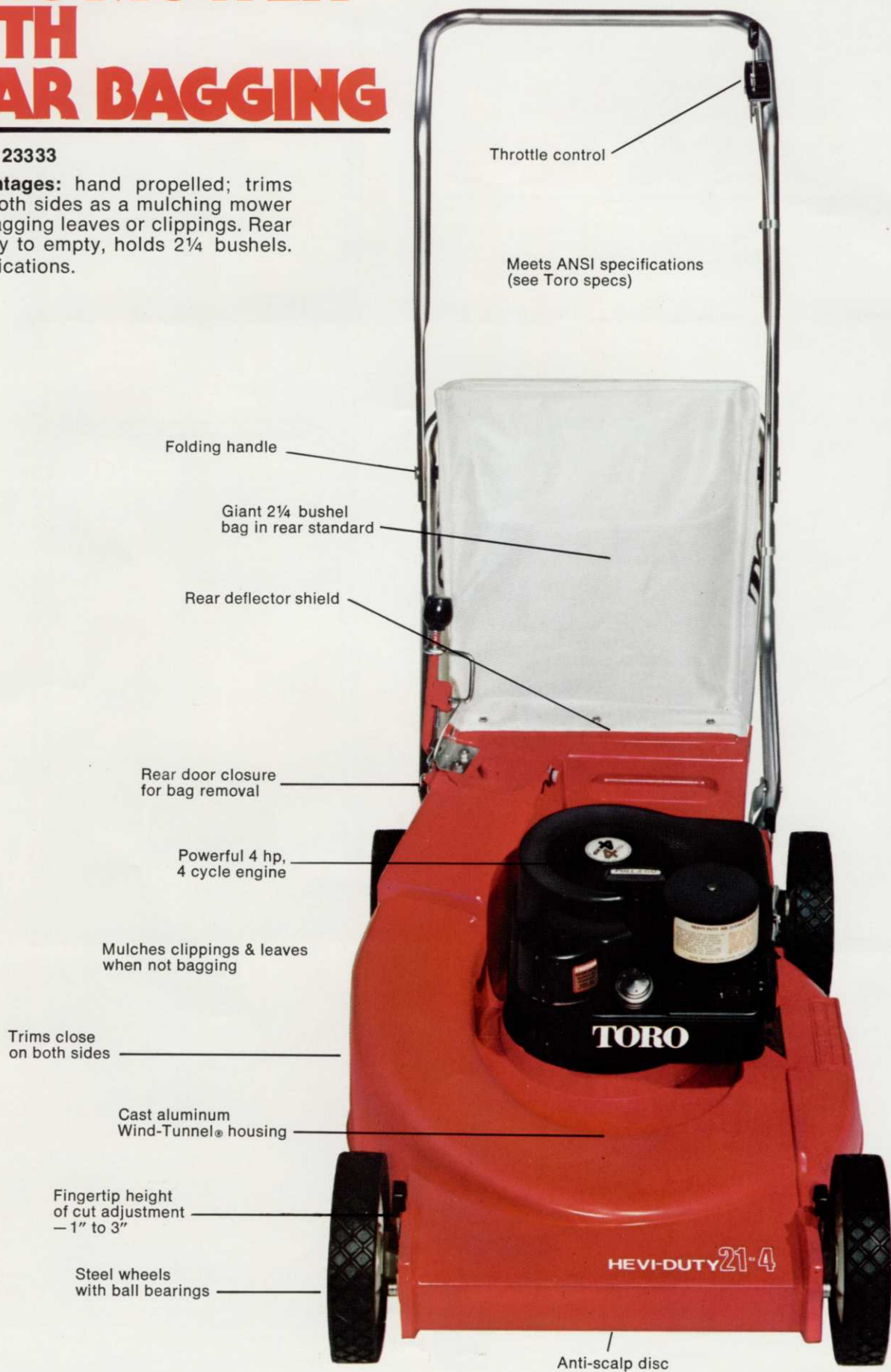




# HEVI-DUTY 21-4 TORO MOWER WITH REAR BAGGING

Model No. 23333

**The advantages:** hand propelled; trims close on both sides as a mulching mower or when bagging leaves or clippings. Rear bag is easy to empty, holds 2¼ bushels. See specifications.



Throttle control

Meets ANSI specifications  
(see Toro specs)

Folding handle

Giant 2¼ bushel  
bag in rear standard

Rear deflector shield

Rear door closure  
for bag removal

Powerful 4 hp,  
4 cycle engine

Mulches clippings & leaves  
when not bagging

Trims close  
on both sides

Cast aluminum  
Wind-Tunnel® housing

Fingertip height  
of cut adjustment  
— 1" to 3"

Steel wheels  
with ball bearings

HEVI-DUTY 21-4

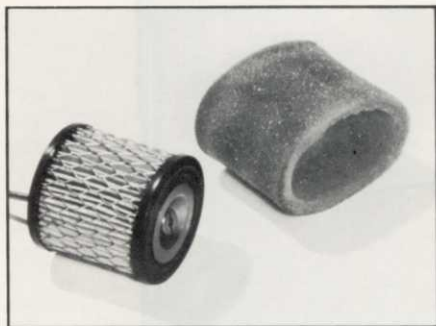
Anti-scalp disc

# HEVI-DUTY 21-4 TORO MOWER WITH OPTIONAL SIDE BAGGING

Model No. 23307

**The advantages:** hand propelled, specifically designed with safety improvements in mind—including rear shield, deflector bar, steel deflector chute and optional standard size or giant heavy knit bag with quick on-off attachment. See specifications.

## Two Stage Air Cleaner



Pleated paper element with poly-foam jacket standard on all 21" models.

Folding handle

Throttle control

Meets ANSI specifications  
(see Toro specs)

Rear deflector shield

Water clean-out port for deck

Fingertip height of cut adjustment  
— 1" to 3"

Powerful 4 hp,  
4 cycle engine

Optional bagging  
system on side

Deflector bar and  
steel deflector chute

Cast aluminum  
Wind-Tunnel® housing

Steel wheels  
with ball bearings

TORO

4  
HP  
11.39 CU. IN.

HEVI-DUTY 21-4

Anti-scalp disc



# SPECIFICATIONS

	<b>HEVI-DUTY 21-5</b> Self Propelled (Model No. 23158) Hand Propelled (Model No. 23022)	<b>HEVI-DUTY 25" WHIRLWIND®</b> Self Propelled (Model No. 23267)	<b>HEVI-DUTY 21-4 with rear bagging</b> Hand Propelled (Model No. 23333)	<b>HEVI-DUTY 21-4 with optional side bagging</b> Hand Propelled (Model No. 23307)
<b>ENGINE</b>	5 HP @ 3600 R.P.M. Governor Set at 3000 R.P.M., 4 cycle, 28 oz. oil capacity, 12.6 cu. in. displacement; Crankshaft extension 1" diameter x 1 1/8" long. Dual element air cleaner, recoil starter (Briggs & Stratton).	6 HP @ 3600 R.P.M. Governor Set at 3200 R.P.M., 4 cycle, 27 oz. oil capacity, 13.53 cubic inch displacement, dry element air cleaner, recoil starter (Tecumseh).	4 HP @ 3600 R.P.M. Governor Set at 2700 R.P.M., 4 cycle, 20 oz. oil capacity, 11.39 cubic inch displacement, dual element air cleaner, recoil starter (Briggs & Stratton).	4 HP @ 3600 R.P.M. Governor Set at 2700 R.P.M., 4 cycle, 20 oz. oil capacity, 11.39 cubic inch displacement, dual element air cleaner, recoil starter (Briggs & Stratton).
<b>FUEL CAPACITY</b>	2 quart gas tank mounted on engine.	5 qt. gas tank mounted on handle.	1 qt. gas tank mounted on engine.	1 qt. gas tank mounted on engine.
<b>TRACTION CLUTCH (SP MODEL)</b>	Tight Slack V-Belt. Clutch operated by control bail on handle. Control bail disengages traction drive when released by operator.	Tight Slack V-Belt. Clutch operated by control bail on handle. Control bail disengages traction drive when released by operator.	Hand propelled only (Model 23333).	Hand propelled only (Model No. 23307).
<b>TRACTION DRIVE (SP MODEL)</b>	Rear wheel drive with a one way over-running roller clutch between speed reducer and each rear wheel.	Rear wheel drive with a one way over-running roller clutch between speed reducer and each rear wheel.		
<b>GROUND SPEED</b>	3 MPH @ 3000 R.P.M.	3 MPH @ 2800 R.P.M.		
<b>TIRES/WHEELS</b>	Four — 8" x 1 3/4" semi-pneumatic tires mounted on stamped steel wheels. Greaseable ball bearings on each wheel.	10.25" diameter x 3.50" semi-pneumatic rear tires on steel disc wheels. 8" diameter x 1.75" semi-pneumatic front tires on steel disc wheels. Greaseable ball bearings on all four wheels.	Four — 8" x 1 3/4" semi-pneumatic tires mounted on stamped steel wheels. Greaseable ball bearings on each wheel.	Four — 8" x 1 3/4" semi-pneumatic tires mounted on stamped steel wheels. Greaseable ball bearings on each wheel.
<b>FRAME</b>	10 gauge supports welded to housing.	One piece welded 1" x 12 gauge square steel tube.		
<b>MOWER HANDLE</b>	7/8", 16 gauge chrome plated, steel tubing in separate halves. Three position handle height adjustment and storage position.	7/8", 16 gauge chrome plated, steel tubing in separate halves. Three position handle height adjustment and storage position.	7/8", 16 gauge chrome plated, steel tubing in separate halves. Three position handle height adjustment and folded storage position.	7/8", 16 gauge chrome plated, steel tubing in separate halves. Five position handle height adjustment; vertical and folded storage position.
<b>CONTROLS</b>	Throttle control wire and casing located on upper handle for choke and shut-off.	Throttle control wire and casing located on mower handle for choke and shut-off. Cutter blade control with adjustable control rod. Dead-man handle controls tight-slack V-belt traction drive clutch.	Full range throttle control with operating lever conveniently located on upper handle.	Full range throttle control with operating lever conveniently located on upper handle.
<b>HOUSING</b>	12 gauge stamped steel. Spiral grass chamber, right hand discharge, deflector bar and steel deflector chute. Also has rear deflector shield between rear wheels.	14 gauge stamped steel. Spiral grass chamber, right hand discharge. Steel deflector chute. Also has rear deflector shield between rear wheels.	Die cast aluminum alloy, spiral grass chamber, with provisions for rear bagging (2 1/4 bushel capacity) or mulching. Also has rear deflector shield between rear wheels.	Die cast aluminum alloy, spiral grass chamber, right hand discharge with integral baffled deflector and steel deflector chute. Also has rear deflector shield between rear wheels.
<b>CERTIFICATION</b>	Certified to meet ANSI B71.1b-1977 safety specifications which meet federal and state OSHA regulations.	Certified to meet ANSI B71.1b-1977 safety specifications which meet federal and state OSHA regulations.	Certified to meet ANSI B71.1b-1977 safety specifications which meet federal and state OSHA regulations.	Certified to meet ANSI B71.1b-1977 safety specifications which meet federal and state OSHA regulations.
<b>BLADE</b>	21" hardened high carbon steel, positive attachment with one fastener to engine crankshaft.	25" hardened, high carbon steel, positive attachment with one fastener to spindle with V-Belt drive from engine.	21" hardened high carbon steel, positive attachment with one fastener to engine crankshaft.	21" hardened high carbon steel, positive attachment with one fastener to engine crankshaft.
<b>HEIGHT OF CUT</b>	1" to 4 1/8" adjustable in 5/8" increments.	1" to 4 1/8" adjustable in 5/8" increments.	1/2" to 3" adjustable in 1/2" increments by moving wheels individually with leaf spring-type hand levers.	1/2" to 3" adjustable in 1/2" increments by moving wheels individually with leaf spring-type hand levers.
<b>WEIGHT</b>	SP Model 100 lbs. HP Model 87 lbs.	161 lbs.	72 lbs.	58 lbs.
<b>DIMENSIONS</b>	Width 26 1/2"; length 32 1/2", height 14 1/2" less handle with wheels set at 1" height of cut.	29" width, 19 1/2" height less handle (at 1" height of cut), 43" length.	22" width, 14" height less handle (at 1" height of cut), 34" length.	29" width, 13" height less handle (at 1" height of cut), 35" length.
<b>ACCESSORIES</b>	Optional: Spark Arrester Muffler — Briggs & Stratton Muffler Assembly 391313 and Outlet Exhaust Screen 392194. Exhaust system approved by United States Forest Service. Approval number 391913. Remote Air Cleaner Kit part no. 28-0580. Remote Fuel Tank Kit of 5 qt. size part no. 28-5590.	Optional Equipment: Spark Arrester Muffler — Toro part no. 23-8960 with 2811-6 Street Elbow and 3290-154 locknut — is a United States Department of Agriculture and United States Forest Service approved exhaust system. Approval number is 10291.	Optional Equipment: Spark Arrester Muffler — Briggs & Stratton muffler assembly 392188 which includes outlet screen 391911 — is a United States Department of Agriculture and United States Forest Service approved exhaust system. Approval number is 391435. Remote Air Cleaner, part no. 28-0580, mounts on upper handle and provides a clean intake of air for the engine.	Optional Equipment: Spark Arrester Muffler — Briggs & Stratton muffler assembly 392188 which includes outlet screen 391911 — is a United States Department of Agriculture and United States Forest Service approved exhaust system. Approval number is 391435. Remote Air Cleaner, part no. 28-0580, mounts on upper handle and provides a clean intake of air for the engine. Remote Fuel Tank, part no. 28-5590, mounts between lower handle. Its 5 quart capacity provides extra mowing time between fills.



worth more



**Table 1. Quality Ratings of Selected Species, Blends and Mixtures of Cool-Season Grasses Overseeded on Bermudagrass, Mississippi State University, Oct. 15, 1976.**

Cultivars	Seeding Rate lbs/1000 sq. ft.	Month									
		Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Ave.
<b>Annual Ryegrass</b>											
Gulf	50	6.0	4.6	4.8	4.8	5.2	4.8	3.8	1.9	3.9	3.9
<b>Perennial Ryegrass</b>											
Derby	40	2.5	5.3	6.3	6.2	6.4	8.0	6.5	3.9	2.3	6.1
Regal	40	1.8	4.5	5.4	5.4	5.9	8.0	7.1	4.8	2.8	5.6
Berdie	40	3.0	5.0	5.6	6.2	6.2	7.9	6.7	4.5	3.0	5.8
Citation	40	2.8	4.8	5.7	5.9	5.8	7.7	6.8	4.4	3.0	5.6
Omega	40	3.3	4.8	5.7	5.8	6.3	7.4	7.0	3.8	2.8	5.6
NK 200	40	2.3	4.7	6.1	5.5	5.3	6.4	6.4	3.4	2.5	5.1
Eton	40	2.5	4.7	5.9	5.2	5.4	7.0	6.6	3.7	2.5	5.3
Pennfine	40	3.8	4.2	6.8	7.2	6.6	8.2	6.9	3.9	2.5	6.1
K5-90	40	2.5	4.9	6.0	7.1	6.4	7.7	6.6	2.8	2.3	5.5
K5-92	40	3.5	4.9	6.1	6.6	6.4	7.9	5.9	3.2	2.3	5.6
Loretta	40	2.8	4.3	5.7	5.5	5.8	6.9	6.4	4.2	3.0	5.4
Caravette	40	2.0	4.8	5.9	6.3	5.1	5.9	6.4	3.6	1.8	5.3
Average		2.7	4.7	5.9	6.1	6.0	7.4	6.6	3.9	2.6	
<b>Fine Fescues</b>											
Syn W.	30	1.5	3.6	4.7	3.9	4.9	3.7	4.1	3.5	3.9	
Dawson	30	1.5	4.8	5.5	4.1	4.6	6.2	5.4	3.1	2.3	4.5
Kinnington	30	1.0	3.0	4.0	3.3	2.8	3.3	3.0	2.6	2.3	3.1
Average		1.3	3.8	4.7	3.8	3.7	4.8	4.0	3.3	2.7	
<b>Poa trivialis</b>											
Sabre	12	1.3	3.3	5.1	5.9	6.2	7.0	6.3	2.9	2.0	5.0
<b>Mixtures</b>											
Yorktown (50%), Diplomat (20%), Jamestown (30%)	35	1.5	4.2	5.6	6.1	6.0	7.3	6.6	3.7	2.3	5.3
Diplomat (60%), Jamestown (40%)	35	1.5	4.7	5.7	5.3	5.9	7.1	5.8	4.1	2.5	4.9
Yorktown (60%), Jamestown (40%)	40	1.3	4.2	5.4	5.8	5.8	7.1	6.3	3.3	2.3	5.1
Synd-1 (60%), Jamestown (40%)	35	1.3	4.4	5.7	5.3	6.1	7.2	6.4	4.0	2.5	5.3
Diplomat (35%), Synd-1 (35%), Jamestown (30%)	35	1.3	4.3	5.2	5.3	5.8	7.1	6.3	4.1	2.8	5.2
Dixie green (60%), Sabre (40%)	18	1.5	4.2	5.2	6.3	6.1	7.7	6.8	3.6	2.0	5.4
Derby (80%), Sabre (20%)	20	1.3	4.0	5.3	6.1	6.1	7.7	6.7	3.9	2.0	5.5
Diplomat (50%), Yorktown (20%), Jamestown (30%)	35	1.0	4.3	5.1	5.1	5.9	7.3	6.4	4.1	2.3	5.2
Dixie green	40	2.3	5.1	6.3	6.4	6.4	7.8	6.4	4.4	2.3	5.3
Winter Green I®	40	2.0	4.4	5.6	5.8	5.4	6.1	6.4	3.7	2.3	5.1
Medalist 400®	40	3.3	4.6	5.8	6.1	5.9	6.7	6.1	4.1	2.5	5.4
Medalist 200®	40	3.5	4.8	5.8	5.9	5.7	6.8	6.4	4.1	2.5	5.4
Average		1.8	4.4	5.6	5.8	5.9	7.2	6.4	3.9	2.4	
<b>Blends</b>											
OS 601®	40	2.3	4.8	5.9	6.5	5.5	6.9	6.6	4.0	1.8	5.1
OS 603®	40	1.8	4.4	5.4	5.9	5.7	6.9	6.4	3.5	1.8	5.1
CBS blend®	40	3.0	5.2	6.1	6.6	6.3	7.8	7.1	4.4	3.3	5.9
Medalist <sup>5</sup> ®	40	3.0	5.1	6.2	6.1	6.0	7.5	4.1	3.8	2.0	5.6
Medalist <sup>4</sup> ®	40	3.3	4.7	5.8	5.8	6.2	7.7	6.9	4.0	2.8	5.6
Medalist <sup>2</sup> ®	40	3.8	5.2	5.6	6.1	6.1	7.2	5.9	3.0	1.8	5.3
Diplomat (50%), Synd-1 (50%)	40	1.5	4.7	5.3	5.8	6.4	7.5	6.6	4.4	2.5	5.5
Yorktown (50%), Synd-1 (50%)	40	1.5	4.9	5.3	5.6	6.1	7.6	6.5	4.2	2.3	5.5
Yorktown (50%), Diplomat (50%)	40	1.3	4.2	5.4	5.8	5.7	7.1	6.3	4.1	2.3	5.1
Average		2.4	4.8	5.7	6.0	6.0	7.4	6.3	3.9	2.3	

On these three pages we show you some of the more than 85 members that attended our May 15th meeting at Seminole Golf Club.

Bill Whitiker was our superintendent host and Mr. Allen R. Ryan, President, welcomed our group.

*Golf Digest* rates Seminole in the top ten layouts in the world and our members found out why. A truly memorable event and we're grateful to the members of this fine course for allowing us to meet there.

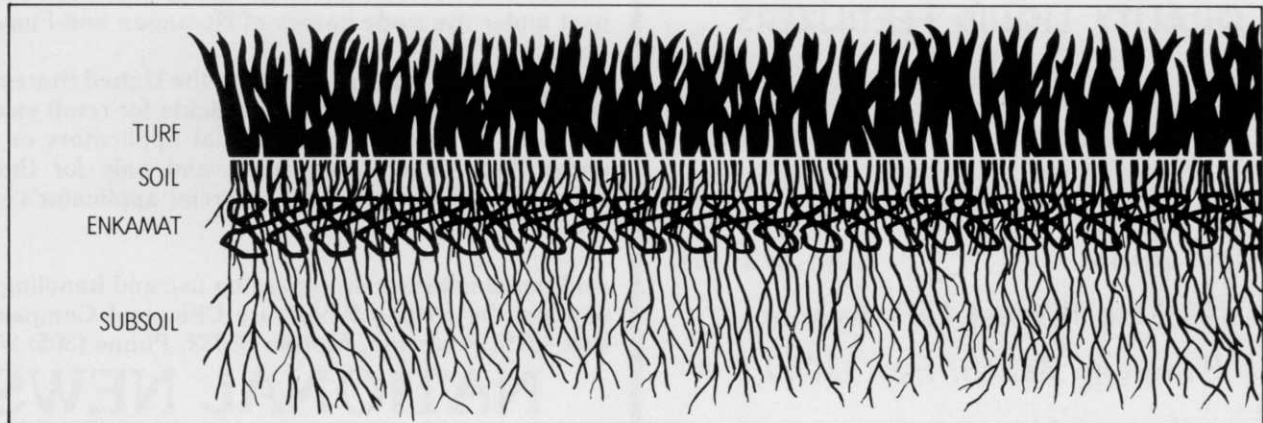
(Photograph report by Harry McCartha and Dave Bailey)

(Photographs continued on Page 28)



# PROBLEM: **MAINTAINING TURF ON INTENSIVE USE AREAS.**

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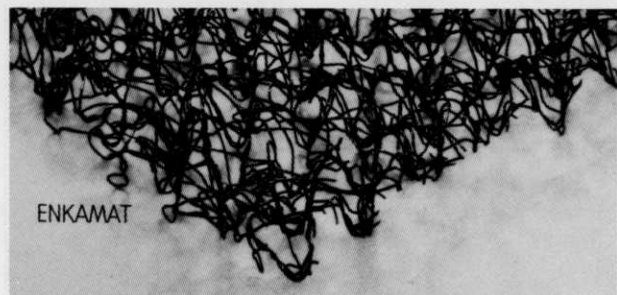
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low air, water and nutrients to move freely into the soil, minimizing maintenance costs.

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## DBCP NEWS RELEASE

**DBCP Registered For Use On  
Established Turfgrasses In Florida**

Woodbury Chemical Company is pleased to announce that a Special Local Need registration for the use of DBCP on established turfgrasses in Florida has been granted by the Florida Department of Agriculture and Consumer Services. Nematocide EM 15.1 when properly labeled can now be used in controlling plant parasitic nematodes by chisel injection or hydrojet injection. DBCP has been sold in the past under the trade names of Nemagon and Fumazone.

This product is being produced in the United States and will be sold as a Restricted Use Pesticide for retail sale to and use only by certified commercial applicators or persons under their direct supervision, and only for those uses covered by the certified commercial applicator's certification.

Additional information regarding use and handling may be obtained by writing Woodbury Chemical Company, P.O. Box 4319, Princeton, Florida 33032. Phone (305) 247-0524.

## NATIONAL NEWS

The G.C.S.A.A. recently created an organizational structure committee to study the feasibility of possibly dividing the association into districts.

The first and foremost advantage of this, for us, would be equal representation from *each* district on the G.C.S.A.A. Executive Committee — no more taxation without representation.

I have been appointed to this committee and have already presented to them a lengthy draft of a plan which includes many changes in the structure of the association — changes which effect national, state, and local levels. A committee meeting has been scheduled for Oct. 5, 6, and 7.

If anyone has a comment to make on this subject, I would appreciate hearing from you. If you care to contact G.C.S.A.A. headquarters or the Committee Chairman, feel free to do so. *But however, I do ask that you keep me abreast of your actions* as I would appreciate not being embarrassed at a committee meeting if discussion leads to comments from my area which I am ignorant of.

Thank you for your cooperation in this matter. I look forward to hearing from those who are interested and we all should be as this could be a progressive step for our profession.

I can be contacted at:

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Tequesta, Fla. 33458

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Bill Wagner,  
Golf Course Supt.  
Tequesta Country Club