

NOW Warren brings you Warren's® A-20 Bluegrass

The ideal grass for tees, approaches and collars. Takes short cut. Grows upright, gives better support to ball. Resistant to leaf spot, mildew, rust and stripe smut. Develops less thatch. Greens up earlier, stays green later.

Golf courses from coast to coast for years have planted Warren's Creeping Bent stolons for the finest greens in America. Clean, pure strain Warren's stolons provide perfect, even texture and color. Greens planted with seed do not hold their uniformity of color and texture as well as greens planted with stolons.

And Warren research has now made available the new grass, A-20, with the same high quality, for tees and aprons of greens. A-20 has been tested and rated excellent or superior by leading universities.

Write for specific information about A-20 Bluegrass and Warren's stolons.



WARREN'S TURF NURSERIES
PALOS PARK, ILLINOIS

Phone (312) 974-3000

For more information circle number 232 on card



by Fred V. Grau

ANSWERS TO TURF QUESTIONS

Q's and A's

Q.—At our club we would like to convert our teeing grounds to a mixture of bluegrasses, but we are afraid that we can't hold bluegrass at the short cut demanded by our golfers. We've had experience with bermudagrass, but the players don't care for the poor appearance in late fall, through the winter and, especially, in the spring before the bermuda turns green. Can you suggest some treatment(s) by which we could hold our bluegrass?

(Virginia)

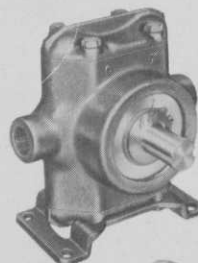
A.—Mow your bluegrass tees at about two inches, or slightly less, and give them the best bluegrass treatment you know. When you set the tee markers mow that strip (about three feet wide) down to one-half inch. This will give the golfers the short-cut firm teeing surface they want. Repeat the process when the tee markers are moved and allow the previous "set" to grow up to full height. By rotating the markers the bluegrass will not be seriously set back by the occasional short cut. The teeing area will be clearly delineated. Remove the clippings

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Hypro Pumps

for applying weed and turf chemicals

PISTON PUMPS



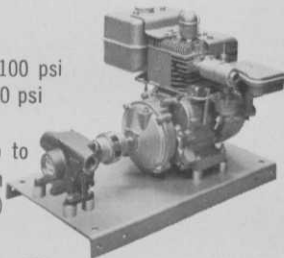
Series
C5210
BIG TWIN
10 gpm (at 600 rpm)
400 psi pressure
also available with gas engine

Series
5400
4-CYLINDER PUMP
25 gpm output at 600 psi

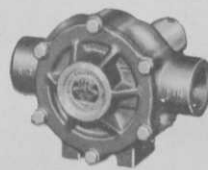


ROLLER PUMPS

Series
GN6310R
6.9 gpm at 100 psi
5 gpm at 200 psi
3 hp engine
(develops up to 250 psi with 4-hp engine)



Series **7560**
8-ROLLER PUMP
Output 12 gpm (at 540 rpm)
Pressure to 300 psi.



Series **1500**
6-ROLLER PUMP
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Choice of rubber or nylon rollers
Write for complete pump catalog or request pump recommendation for your need.



Hypro

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343 Fifth Ave. N.W., New Brighton
Saint Paul, Minnesota 55112

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GRAU

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where you mow closely, of course.

I am indebted to my good friend, Al Radko of the United States Golf Assn. Green Section, for this idea.

Q.—Our new course will be located in hilly country on clay soil, with fairways cut through heavy oak woods. We are on the dividing line between warm- and cool-season regions. We would appreciate your help in selecting the grass(es) for our fairways. Appearances count heavily in this case. We will be ready to plant in fall 1970.

(Oklahoma)

A.—My answer to your question has been heavily influenced by the excellent scarifier-seeders with which we can successfully introduce selected grass seeds into existing turf without interrupting

play. Therefore, in fall 1970 I suggest for the fairways a blend of turf-type perennial ryegrasses (Pelo, Manhattan, NK-100) with several vigorous low-growing bluegrasses (Merion, Fyking, Pennstar, South Dakota common). A suggested rate of seeding is 25 pounds per acre of the ryegrasses and 50 pounds of the bluegrasses. With good seedbed fertilization provided this should give excellent cover for appearances and a solid base of permanent cool-season grass. The next step, to protect against hot dry summers when water might be in short supply, is to scarify-seed hulled bermudagrass (common) into the turf in June 1971. Twenty to 25 pounds per acre should be a satisfactory rate.

By judicious re-seeding as needed, coupled with adequate, timely fertilization (principally to benefit the cool-season grasses) and minimum irrigation, you should have fairway turf of cham-

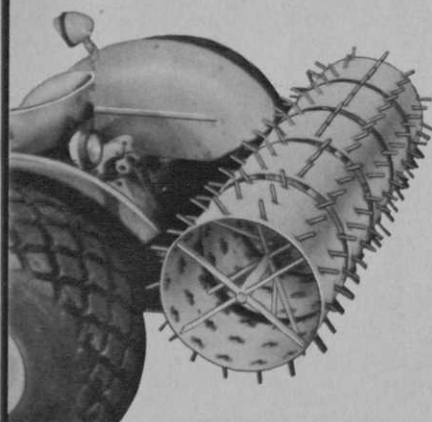
pionship quality. As newer, improved grasses are developed and as seed becomes available, the turf can be up-graded by scarifying-seeding.

Q.—There has been talk of a new turfgrass book, but we have not seen it on the market. What can you tell us about it?

(Oklahoma)

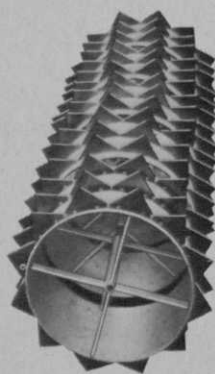
A.—The new book is "Turfgrass Science," a monograph, published by the American Society of Agronomy, edited by Hanson and Juska, United States Department of Agriculture. It is No. 14 in the Agronomy Series. There are 38 authors and 28 chapters. It is a complete reference book. The price is \$10 to members of A.S.A.; \$12.50 to non-members. Orders may be placed with the American Society of Agronomy, 677 S. Segoe Road, Madison, Wis. 53711. □

Dedoes Turf Maintenance System



AERATOR

Removes 180 plugs per revolution, passes them completely through plunger tubes, and distributes them evenly. Plunger tubes, made of tempered steel, makes clean holes up to three inches deep and will not tear up turf because they pivot.



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Operates on the same principle as the aerator utilizing the tractor weight as a down force. Each of 180 slicing units cuts into turf with each revolution. Installed in mere minutes. Heat treated blades — fits quick-changing conversion unit.



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Roller, six feet wide, weighs less than 300 lbs. yet needs no water ballast to produce more than 2,000 lb. down force when attached to tractor. Operates same as aerator and slicer.

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— Each aerator and slicer cylinder is made up of individual sections which are complete units in themselves.

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Utilizes hydraulic system of any standard tractor to allow operation of aerating, slicing, and rolling attachments. Specially designed to shift more than 2,000 pounds of weight from rear tractor wheels to equipment in use. Permits equipment to be raised or lowered instantly for passing over driveways and easy transportation. Quick change — one unit required for all pieces of equipment.

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Entire system is exceptionally well-constructed for great reliability and durability.

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41st Turf Grass Convention in
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