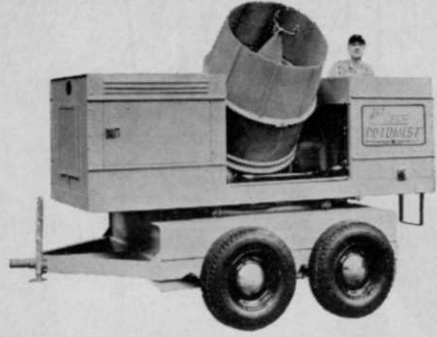


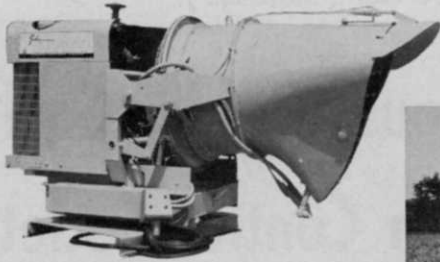


MODEL 100G ROTOMIST® shade tree, sanitation, mosquito control, leaf windrowing. 29" fan delivers 28,000 CFM at 100 mph.



MODEL 303T ROTOMIST biggest performer among mist-type shade tree sprayers. 40" fan, 60,000 CFM air volume.

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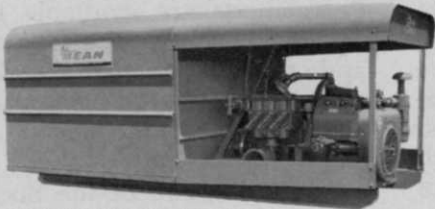
ROTOCAST® specially designed for roadside weed control. Teardrop discharge head provides reach plus close-in coverage.

Contourmatic boom provides maximum flexibility to follow roadside ground or brush line configurations.



TURFKEEPER handles high pressure spraying applications of liquid fertilizer, weed or brush control chemicals. 17-nozzle, 3-section boom, wide flotation tires.

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MODEL 1010G SPRAYER designed for golf course operation on a Cushman. 13-nozzle hinged boom, 100-gallon Fiber Glass tank, full-flotation tires.



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Inspecting large fresh-water snails, which are being evaluated for biological control of various aquatic weeds, are officers and directors of The Hyacinth Control Society (left to right): President, Dan Gorman, Hillsborough; Vice-President, Zeb Grant, Central and Southern Florida Flood Control District; Secretary-Treasurer, Robert Blackburn, U.S. Department of Agriculture; Editor of Newsletter, Lyle Weldon, U.S. Department of Agriculture; and Directors, Jack Salmela of Brevard Mosquito Control District, Clayton L. Phillippy, Fishery Biologist of Florida Game and Fresh Water Fish Commission, and Paul Cohee of Hercules Incorporated.

Kill of All Noxious Weeds, Goal of The Hyacinth Control Society

Goal of The Hyacinth Control Society, Inc., at Fort Lauderdale, Fla., is to exchange information on aquatic weed problems at the applicator level. In restating the full scope of this goal, members believed the name chosen at birth of the organization in 1961 led many to believe that interest was limited to hyacinth control. Such is not the case. To make this clear, officers and directors have placed an addendum to the name which states, "The Hyacinth Control Society—Dedicated to the Control of Noxious Aquatic Weeds."

That the group is active in all phases and on all types of aquatic weed control is demonstrated in a listing of papers presented at the Society's meeting last year. Only one of 18 papers pertained directly to water hyacinth control. Others covered the entire spectrum of aquatic weed control.

Charter membership of the Society was 30. Current members number 150 and persons interested in information at a scientific level aimed at the application of specific findings are

being invited to join the group. Both active and associate memberships are available. Each type entitles the member to a copy of Proceedings of the annual meeting and to the quarterly newsletter of the group. The first five annual volumes of the Proceedings are available at a nominal cost. Application forms and other information are available from Secretary-Treasurer Robert D. Blackburn, P.O. Box 9087, Fort Lauderdale, Fla.

Chief program of the Society during the past year has been preparation and selling of an aquatic plant herbarium. Blackburn says the group has found that a primary problem of individuals or companies beginning aquatic weed control is proper identification of various species of aquatic weeds. The aquatic herbarium that is available includes 52 specimens which occur throughout the United States. These are sold at cost for \$2 per sheet. A complete listing is available from the Society.

Annual meeting of the group for 1967 will be June 18-21 at the Holiday Inn, Fort Myers, Fla.

Across-the-Board Tree Culture At 22nd Midwest Shade Tree Conference

Dutch Elm Disease continues to plague the industry, despite the best research and control efforts, but use of cobalt 60 and its effect on Dutch Elm Disease at the research level shows some promise. Dr. Richard Campana, president of the International Shade Tree Conference and plant pathologist at the University of Maine at Orono, is heading up this work at the Maine Experiment Station. At the recent Midwest Shade Tree Conference at Chicago, Dr. Campana reported that by the time a tree shows general symptoms of the disease, it very likely was infected during the previous season. In his research terminal inoculations developed very limited reactions the first season. High levels of radiation to cobalt 60 caused marked changes in plant growth. Dr. Campana said a general stunting and dwarfing effect was noted with some degree of control. Work on the project is to continue.

A Des Moines, Iowa, group, David Orcutt, Iowa Power and Light Co., Harold Hodgkinson, City Forester, and John L. Wright Jr., Wright Tree Service, discussed the big elm tree removal program brought about by a major epidemic of the disease. Both utility crews and private contractors are cooperating in a massive citywide effort to cut down outages and damage claims to public and private property. Some \$67,000 will be spent for tree replacement during the coming six years.

Safety Is Prime Factor In Working Near Powerlines

A slide training film presented by Arthur R. Truelsen, Safety Advisor, Commonwealth Edison Co., at Northbrook, Ill., emphasized safety factors when working around powerlines. Utility arborists must be able to recognize line power by learning size and type of insulators used for each. A body or tool clearance



Webster Crowley
Morton Arboretum

Ralph Carmichael
President

of 8 feet is mandatory on 320,000 volt lines on towers. This distance, according to Truelsen, includes using even pruners and saws. As size of transmission lines decreases, safe clearance drops as low as 3 feet. Without proper clearance, Truelsen warns against pruning unless such wires are "rubbered up," that is, insulated for personnel protection. He also urged proper grounding for bucket trucks along with daily inspection of hydraulic lines on both cranes and bucket trucks because they present a serious potential fire hazard. First aid training, especially mouth to mouth resuscitation, Truelsen believes, is most important for safe operation among line clearance crews.

Dr. Donald L. Schuder, Department of Entomology, Purdue Univ., Lafayette, Indiana, gave clues on spotting spruce mite damage which is often confused with other types of mite damage. Early season damage, he said, is usually from this mite. Lime-sulphur dormant sprays are effective as well as several well-known miticides such as kelthane.

In working with sod webworms and their control, Dr. Schuder reported the omni-directional light trap has proved that moth activity over lawns is not greatest in the evening and mornings, but that peak activity is between midnight and 2:00 a.m.

Basic interrelationships between design, construction and maintenance in development and utilization of the landscape were discussed by Justin C. Harper,



Noel B. Wysong, sec.-treas., left, confers with Orville Hatcher, pres.-elect.

Deere & Co., Moline, Ill. Harper believes the future of any landscape project lies almost wholly in the hands of the person who will be maintaining it.

Distinguished Service Award To Dr. J. Cedric Carter

A distinguished service award was presented Dr. J. Cedric Carter, Illinois Natural History Survey, Urbana, for meritorious service to the Midwest Chapter and the International Shade Tree Conference.

Officers elected at this 22nd Midwest Shade Tree Conference at Chicago, February 8-10, were: President Orville Hatcher, City Forester, Omaha, Neb.; Vice-President, Archibald E. Price, Glenview, Ill.; and re-elected as Secretary-Treasurer, was Noel B. Wysong, Golconda, Ill.

The 314 attending the event made plans for their 1968 chapter meeting to be held at St. Louis, Mo. Presiding at the opening of this 22nd convention, President Ralph G. Carmichael, Bettendorf, Iowa, urged the group to take an active part in the proceedings and to aid the cause of education and cooperation among arborists and others concerned with shade trees. Both Iowa State University Extension Service and the University of Illinois set up displays which included their latest bulletins and publications concerning the industry.

Santa Ana—A New Vegetatively Propagated Turf Bermudagrass Developed for California

By

VICTOR B. YOUNGNER

University of California, Riverside

Santa Ana, the first vegetatively propagated turf bermudagrass developed specifically for California was released in 1966 by the California Agricultural Experiment Station and distributed to stolon and sod producers for propagation.

This new variety had its beginning in 1956 as one of several hundred seedling selections made in a segregated population from a strain of South African origin (Plant Introduction number 213387). After several years of further selection among these clones, only a few remained. One of these was number RC-145, which formed a dense, smooth, dark green turf. Subsequently RC-145 was tested in many California locations under various conditions and almost always received top ratings. Last year it was named Santa Ana after the well-known California city to identify it as a variety from and for California.

Santa Ana Matched To California Needs

Bermudagrass varieties developed in the East and South are used extensively in California and have been valuable additions to our list of turf varieties. However, there has always been a need for varieties more nearly meeting the peculiar turf requirements of the Pacific Coast region. Santa Ana is our first attempt to achieve this objective.

Although Santa Ana has had wide testing in California, it has been in few trials outside the state. Therefore, its performance and value in other parts of the country are unknown. A thorough test of Santa Ana is recommended before it is produced or sold in these areas.



Greenhouse flats containing vegetatively propagated turf bermudagrasses are being checked, above, by Dr. Victor B. Youngner, in charge of this research at the University of California, Riverside. Laboratory performance is checked closely and followed by field tests.

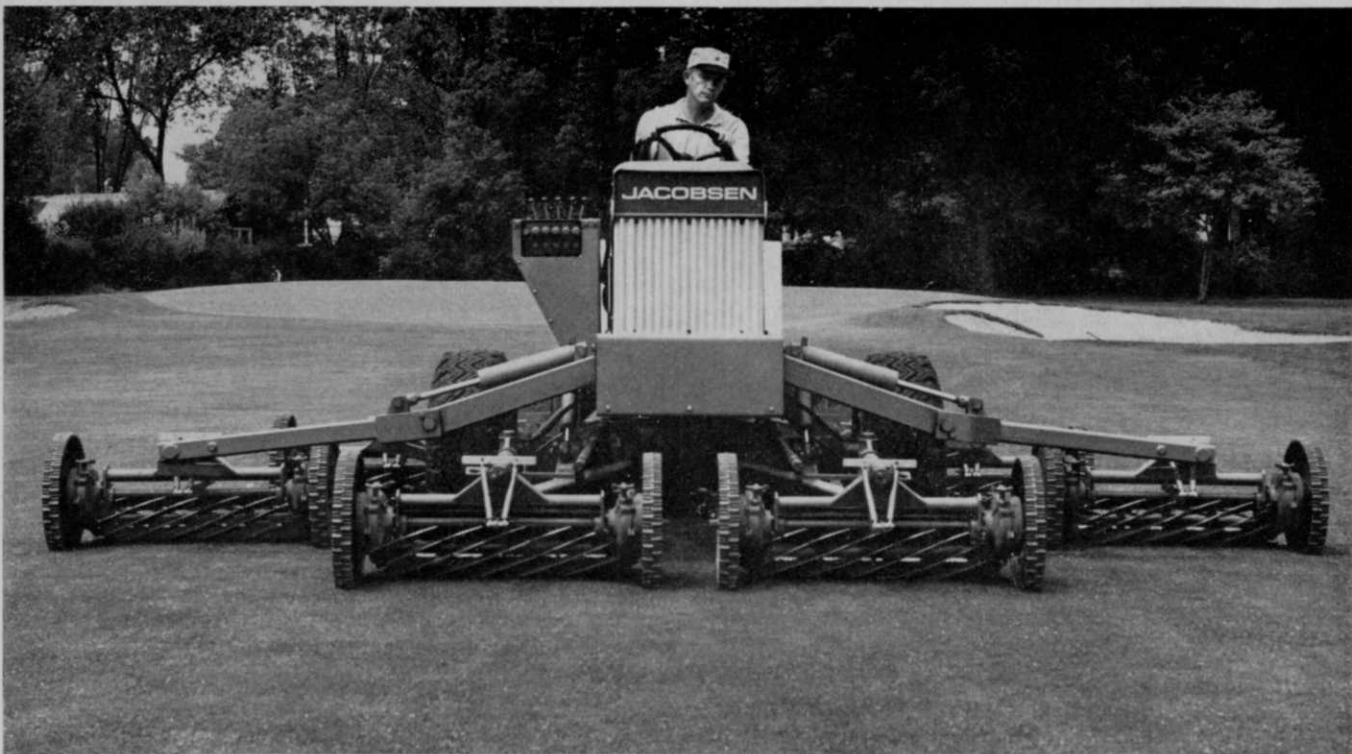
The smog tolerance exhibited by Santa Ana has excited considerable interest. While smog has long been thought of as a southern California problem it has now become a problem in many metropolitan areas. This characteristic of Santa Ana may, therefore, assume a wider importance in time. Typical injury from smog as seen on Tifway or Tifgreen is a bronze discoloration of the blade tips. Very little of this has been seen on Santa Ana, even after a day of severe smog conditions.

In California, where turf is used the year around, a short winter dormant period is highly desirable. Santa Ana is superior in this respect to Tifway and Ormond, previously our best strains for winter color. This characteristic may be undesirable in colder climates as prolonged growth in the fall and

early spring green-up may reduce its winter hardiness.

As with any bermuda variety, proper management is essential to obtain the shortest possible dormant period. Thatch must be controlled as no bermuda will remain green in cool weather if it has developed a thick thatch. Adequate, readily available nitrogen must be provided to stimulate new growth under the lowered temperatures. We have kept Santa Ana green throughout the entire winter in mild coastal areas by early fall thatch removal and biweekly applications of ammonium nitrate or ammonium sulfate. Heavy nitrogen fertilization in late fall is not recommended, of course, where winters are severe.

Other characteristics of Santa Ana bermuda include high salinity tolerance, a feature of great importance to turf management



F-10 *The mowing tractor that's out front with out-front mowing!*

Out-front reels cut turf smoothly and evenly—with famous Jacobsen precision—before tractor wheels can mat grass down. Operator can see better, maneuver faster and reduce overlap. Reduces your mowing costs because it is built to handle today's mowing problems.

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Young evaluation plots of salt tolerant selections of creeping bentgrass, above, are under study at the Department of Agronomy, University of California, Riverside. Santa Ana is one of varieties to be included in the California certification program for vegetatively propagated turfgrasses.

in arid climates, and resistance to the Eryophyid mite. This mite has recently become a serious pest of bermuda throughout the Southwest.

Vigor, Wear-Resistance Are Santa Ana Features

Although Santa Ana has a medium-fine texture it is vigorous and highly resistant to wear. It recovers rapidly from any injury such as divots. For these reasons it is especially recommended for golf tees, playgrounds, athletic fields and other heavy use turfs. Homeowners, on the other hand, may find it to be too vigorous for them to maintain easily.

Viable seeds are not normally produced under California conditions although flower heads may appear at times. Flowering, with the resulting steminess, may be kept low by maintaining adequate nitrogen fertility levels. In general, however, Santa Ana is one of the least stemmy of the bermudagrasses we have grown.

Fungus diseases of bermudagrasses have not been serious problems in California so Santa Ana has not been tested for disease tolerance.

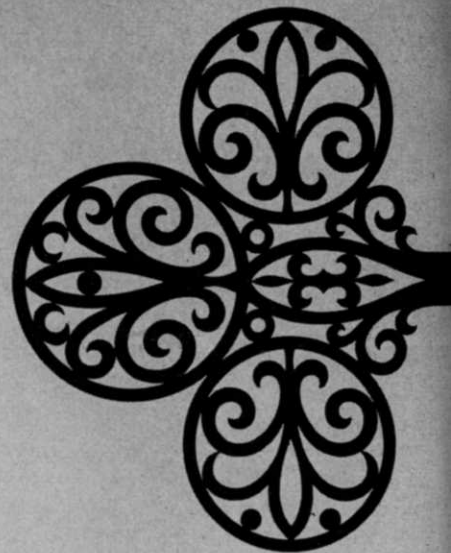
Stolon and sod producers will

not find it necessary to modify their regular growing practices for Santa Ana. Its rapid rate of establishment should give them a marketable product a short time from planting.

Santa Ana will be included in the California certification program for vegetatively propagated turfgrasses. California producers are urged to follow the certification regulations in growing this new variety. However, meeting the certification standards is not a requirement and any grower may obtain planting material upon request.

California stolon and sod producers who obtained propagating material in the summer of 1966 were: Jacobsen Brothers Turf Farms, Tehachapi; Cal-Turf, Camarillo; Dennis Turfgrass Company, North Hollywood; and Duro-Sod Farms, William H. Brown Nurseries, Inc., Alhambra.

Several more nurseries in California and other states have arranged for stolons for 1967 spring planting. Growers wishing to have it for production or testing may obtain small amounts of stolons from the Department of Agronomy, University of California, Riverside, California, 92502.



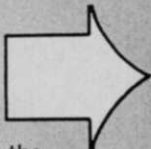
THE KEY TO EFFECTIVE BRUSH CONTROL

Amchem, originators of 2,4-D, 2,4,5-T and amino triazole weed and brush killers, present in this magazine a series of four single page advertisements outlining the keys, or most effective ways, of obtaining economical brush control.

This "key" series will include the following topics:

1. CONTROL OF MIXED BRUSH
2. AERIAL APPLICATION
3. STEM FOLIAGE APPLICATION
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Be sure to watch for the entire series. Advertisements are scheduled for March, April, June and September.

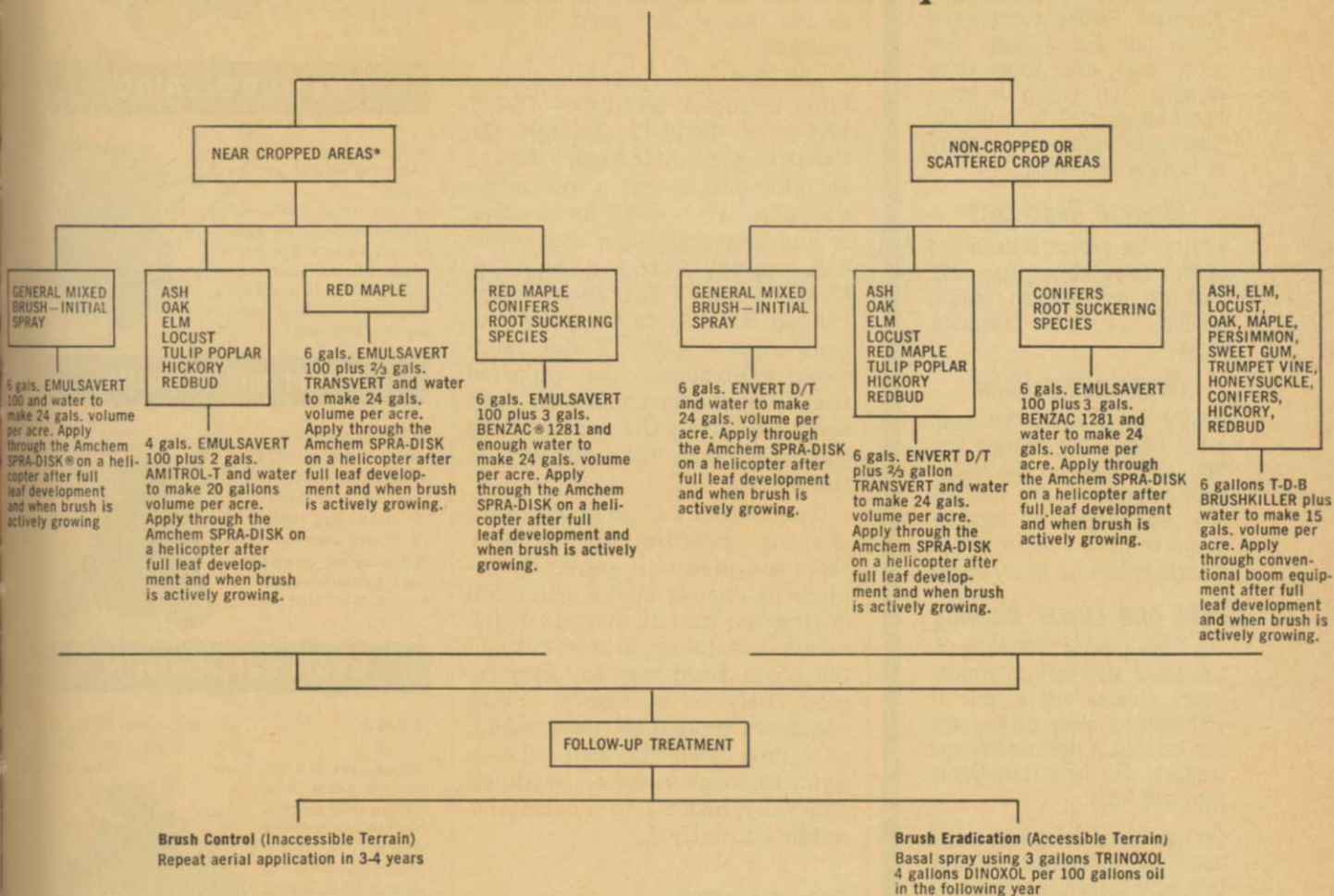
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For specific problems not covered here contact your nearest Amchem representative or write Amchem Products, Inc., Ambler, Pennsylvania

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Fylking sustains its full deep green from spring through late fall. Early greenup and longer color retention in the fall, are plus advantages to superior summer color, even under drought conditions, heavy usage.

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The "low-growing" characteristics cause slow vertical growth, insure a dense turf capable of withstanding close cutting and less mowing. A vigorous rhizome producer, Fylking quickly fills in gaps and voids.

For additional information and names of authorized distributors, write Jacklin Seed Co., Inc., Dishman, Wash., 99213.

*This variety is licensed internationally, solely and jointly to Jacklin Seed Co., Inc., Dishman, Wn., and Hogg & Lytle Seeds, Oakwood, Ontario, Canada.

Contractor Prices Vary Little In Detroit Area

Who shows the best net profit? The landscape contractor who sods the new lawn, or the one who seeds? Donald D. Juchartz, county agent, Wayne County, Mich. recently put this question to 400 operators in the Detroit area. Replies showed that it depends on what the operator is best geared up to handle. Those who have the equipment and skilled help to do both jobs equally well say they make the best profit on seeding lawns.

Charges ranged for each operation. Operators charged 80c to \$1.50 per yard for sodding, though most were in the \$1 to \$1.25 bracket. For seeding, charges ran from 35c to \$1 per yard, most being 65c to 70c. For adding 2" of good topsoil when needed, the charge has been 5c to 10c per square yard of lawn covered.

All but one operator used a high nitrogen fertilizer—10-6-4, 12-8-4 or 12-12-12—though the thinking of Michigan State agronomists is that a low nitrogen mixture is best for seeding or for new sod. One contractor did report using a 5-10-10. Charges made for fertilizing ranged from \$5 to \$10 per thousand square feet. These landscape contractors also reported that they charged more for such services during the spring when they were busy than during late summer or fall.

Guarantees varied along with charges, according to Juchartz. Most sod men will generally replace patches or strips which fail during the first 12 months, if the owner has taken proper care of the lawn. Seed men say they reseed spots as necessary. Sixty operators replied to the question as to how often they call back on a job to check results. Seedmen generally make 2 to 4 callbacks, sodmen usually 1.

Crew Size And Recommendations Vary

Contractors laying sod normally used crews ranging from 2 to 5 men with equipment. Seeding crews number from 2 to 3 plus equipment. These Detroit

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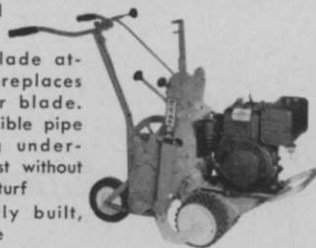
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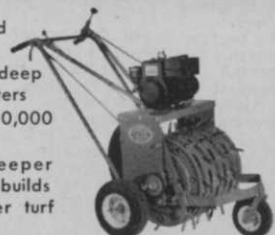
- Vibrating Rollaire provides over 1/2 ton compaction. Vibratory action can be engaged, disengaged as you roll
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RYAN MOTORAIRE

- Self-propelled coring aerator

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- Promotes deeper root growth—builds thicker, healthier turf



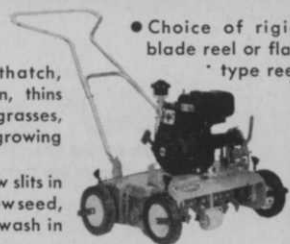
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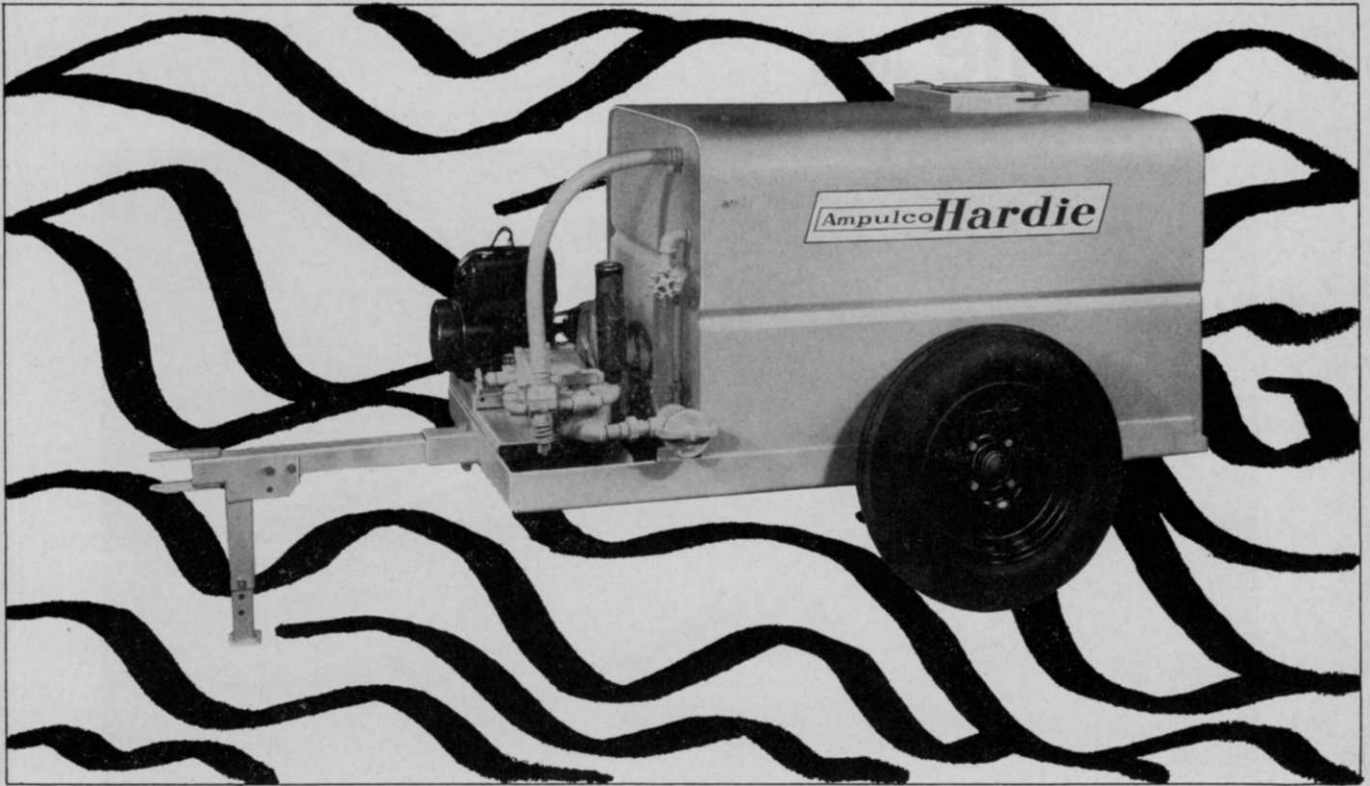
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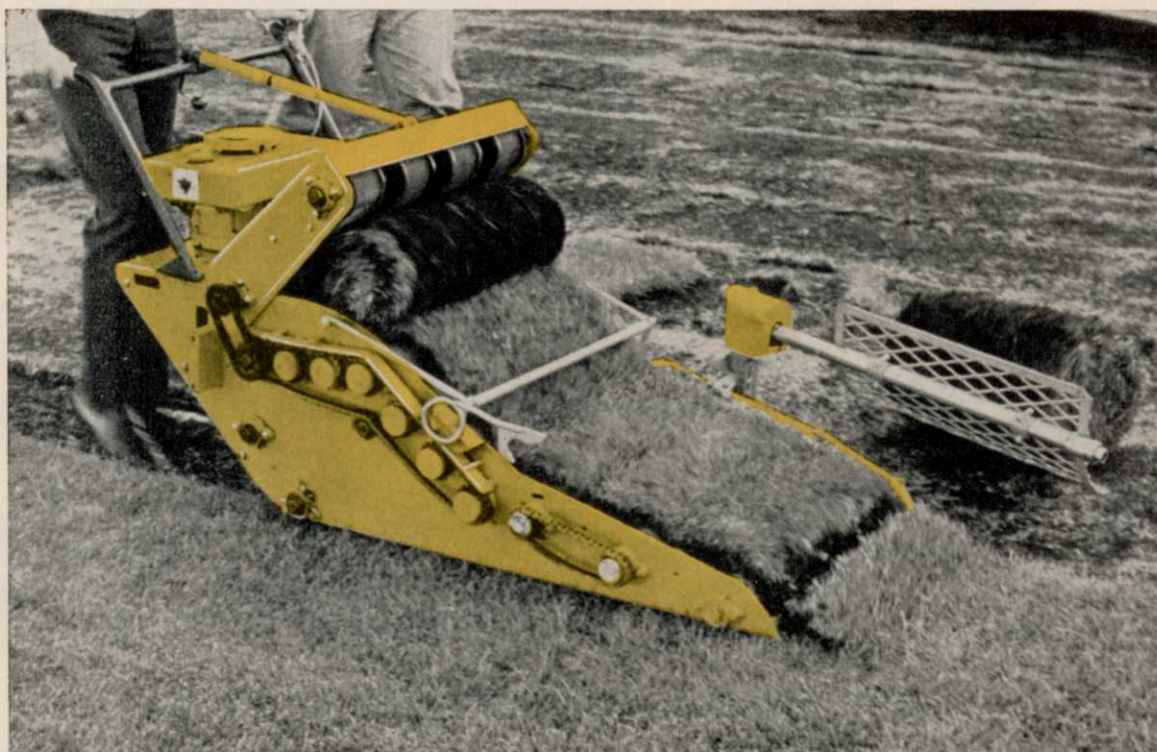
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