



Them. Us.

There are plenty of mono-filament trimmers on the market; all quite similar in appearance.

But before you buy, take a close look. Because one, The Green Machine—the country's best-selling gas-powered monofilament trimmer—is much more than just a great monofilament trimmer.

It's also a great brush cutter ...and a great tree and vine pruner.

The Green Machine's unique PowerStik™ design lets you work with maximum performance overhead, on the ground, and at all levels in between.

Using quick-change accessories, The Green Machine will trim, prune or cut just about everything in the yard. From the most delicate grasses, to three-inch thick tree branches. You'll replace a whole range of hand trimmers, pruners, clippers, edgers—even chain saws in most pruning and thinning operations.

We could almost say the

only other yard tool you'll need is a lawn mower.



Remember that The Green Machine is gas powered. There are no cumbersome electrical cords to worry about. The powerful, lightweight 22.5 cc engine gives you torque to do the full range of jobs without the stalling-out problem often found with electrical units.

But performance is only one reason to buy a Green Machine.

Quality is the other. The Green

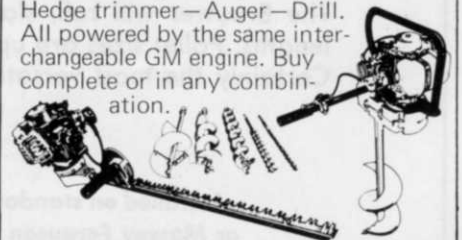
Machine is engineered throughout for easy starting and long hours of trouble-free operation. Parts and service support are nation-wide.

So, don't settle for a tool that does only part of the job. Monofilament trimming is great. But for complete grounds care you need number one. Us. The Green Machine. The Trimmer-Cutter-Pruner.

HMC, 22133 S. Vermont, Torrance, California 90502 (213) 320-0940

Plus these great optional tools:

Hedge trimmer—Auger—Drill. All powered by the same interchangeable GM engine. Buy complete or in any combination.



Versatility makes it number one.

The Green Machine™

THE METICULOUS CONSULTANT

BURNS: "The superintendent should have the most to say. If he is qualified, he should get what he wants, within reason.

"I would prefer to interview for a job on a design basis, meaning, if an owner would give some nominal cost, have two or three consultants present a design on the same fairway and explain concepts and why."

WT&T: Is your system dependent upon any particular line of products, or are you personally committed to any one manufacturer?

BURNS: "No and I always ask for more than one brand be listed for competitive bidding. If the owner is satisfied he wants only one brand because of past relationship, I ask that the equipment price be negotiated as the contractor price is negotiated.

"Being in the supply business in past years myself, obviously I have a lot of understanding of pricing as to what is fair, and where a negotiated figure should be.

"I honestly don't feel any one manufacturer has an advantage over another. I do feel one supplier over

another is important. The service of the supply house is what we leave with the owner after the job is completed.

"Every manufacturer would like the designer to give him an advantage, but I think most manufacturers would rather see an equal shot for his products than be left out. This past year, I was commissioned for several designs by the manufacturers directly, (as a service for that manufacturer), by three of the four major irrigation equipment manufacturers. I feel this speaks highly for our independence."

WT&T: Does every golf course need an irrigation system which is as elaborate as the systems which you design?

BURNS: "No, but I disagree strongly on some of the jobs I see go in, especially in areas where irrigation becomes somewhat supplemental. The Midwest and Eastern States can get away with more inadequacies because rain covers up mistakes. Most of my work has been in the Southwestern United States and the State of Hawaii, but I continually run across work or re-do work that would not have cost any more if it had been done right the first time." □

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Brouwer



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The Brouwer will roll, slab and fold. Will cut 15", 16", 18" or 24" widths, at various lengths. Pallet sizes are up to 60" wide. Production of up to 1,500 square yards an hour. Certainly the most versatile Sod Harvester available.

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or Massey Ferguson tractors.

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UPON REQUEST

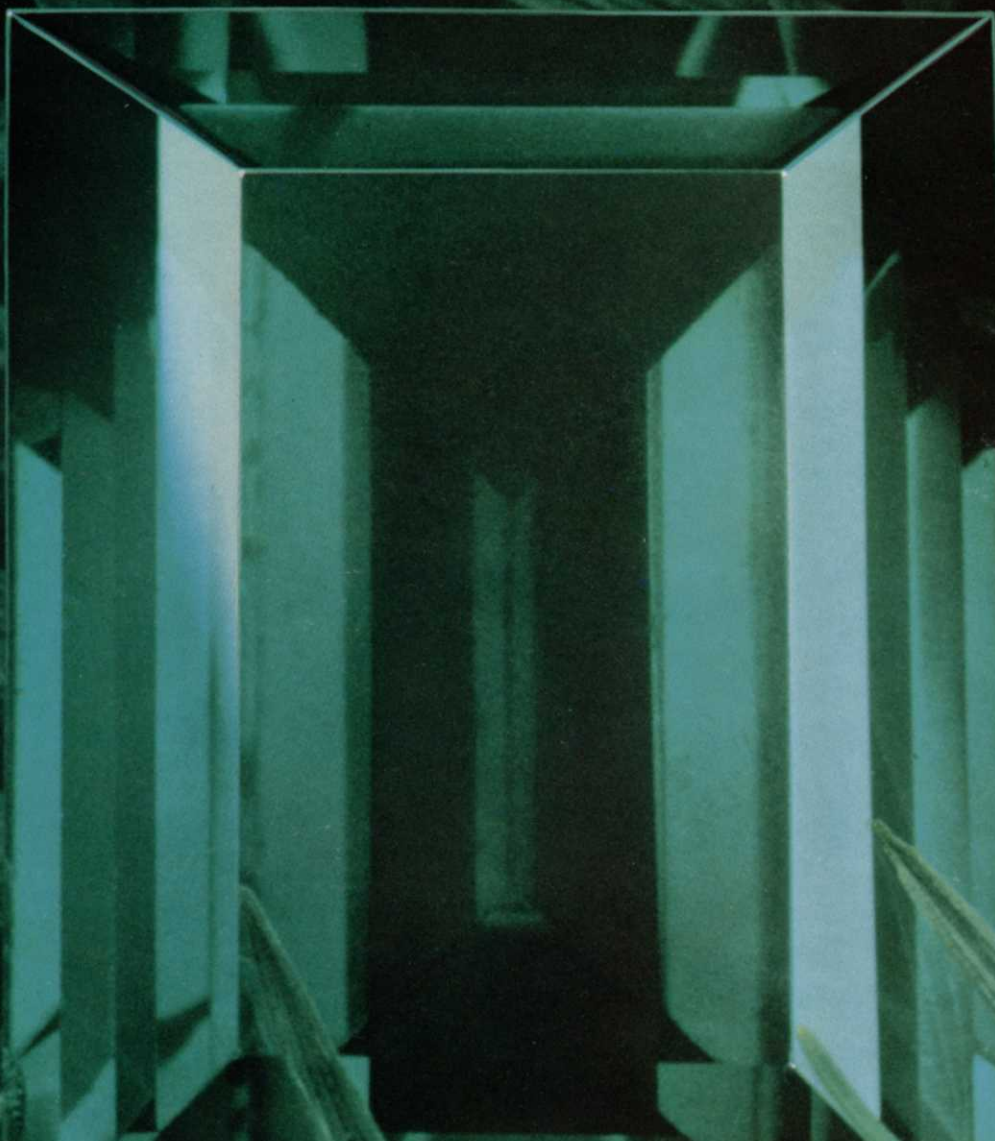


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MANUFACTURER & DISTRIBUTOR

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the bents that won't cost you
a king's ransom.**



Emerald
SMARAGD
variety creeping bentgrass.

Emerald tees, fairways and greens look rich, play true, and cost less to establish and maintain.

Rich, luxurious turf that's easy to establish, easy to maintain. Rapid germination, quick spring green-up and a deep, vigorous rooting system. They all add up to make Emerald your best choice for seeding greens, tees and fairways.

Easy on your budget.

But here's the pay-off: because Emerald is easier to produce, Emerald will cost you less per pound than the most popular bentgrass.

And because Emerald develops less thatch, doesn't demand as much top dressing and even requires less mowing and brushing, Emerald costs less to maintain, too.

In fact, while Emerald has shown equal density to other bentgrasses on the market under normal management conditions, tests have shown that Emerald will maintain its color and density with two to three pounds *less* nitrogen per year per 1000 sq. ft.

Exceptional uniformity.

Medium green in color, Emerald seeded on greens provides a welcome contrast in many cases to darker bluegrass aprons. And because each Emerald seed traces



Emerald seeded at the Broadmoor Country Club, Colorado Springs, Colorado shows healthy, vigorous roots after only nine months of growth, including 3 month winter dormancy period.

back to a single outstanding parent, Emerald is exceptionally uniform. There's less patchiness, less grain, a better playing surface for your club membership.

Outstanding vigor.

In vast numbers of evaluations, Emerald has shown to be less aggressive under established conditions than the most popular bentgrass varieties. Yet Emerald still does an excellent job of crowding out weeds, including *Poa annua*, and self-heals divot wounds and cart tracks.

Order today.

This year, seed Emerald. The crown jewel of the bents that won't cost you a king's ransom to seed or maintain. From tee to green, you won't find a better variety.

"Putting green quality"

Emerald now available from your Emerald distributor or jobber or write:

**The Rudy-Patrick Division,
North American Plant Breeders,
P.O. Box 2955,
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We make two heavy-duty aerators. The Ryan **Renovaire** has 12 tine wheels that operate in pairs. Unlike other models, they swing a full 18 inches to follow the contours of your land and ride over rocks instead of being damaged by them. Weight can be added to each pair for deeper penetration.

The Ryan **Tracaire** is an economical, rigid axle aerator. It's available with 9 or



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EQUIPMENT

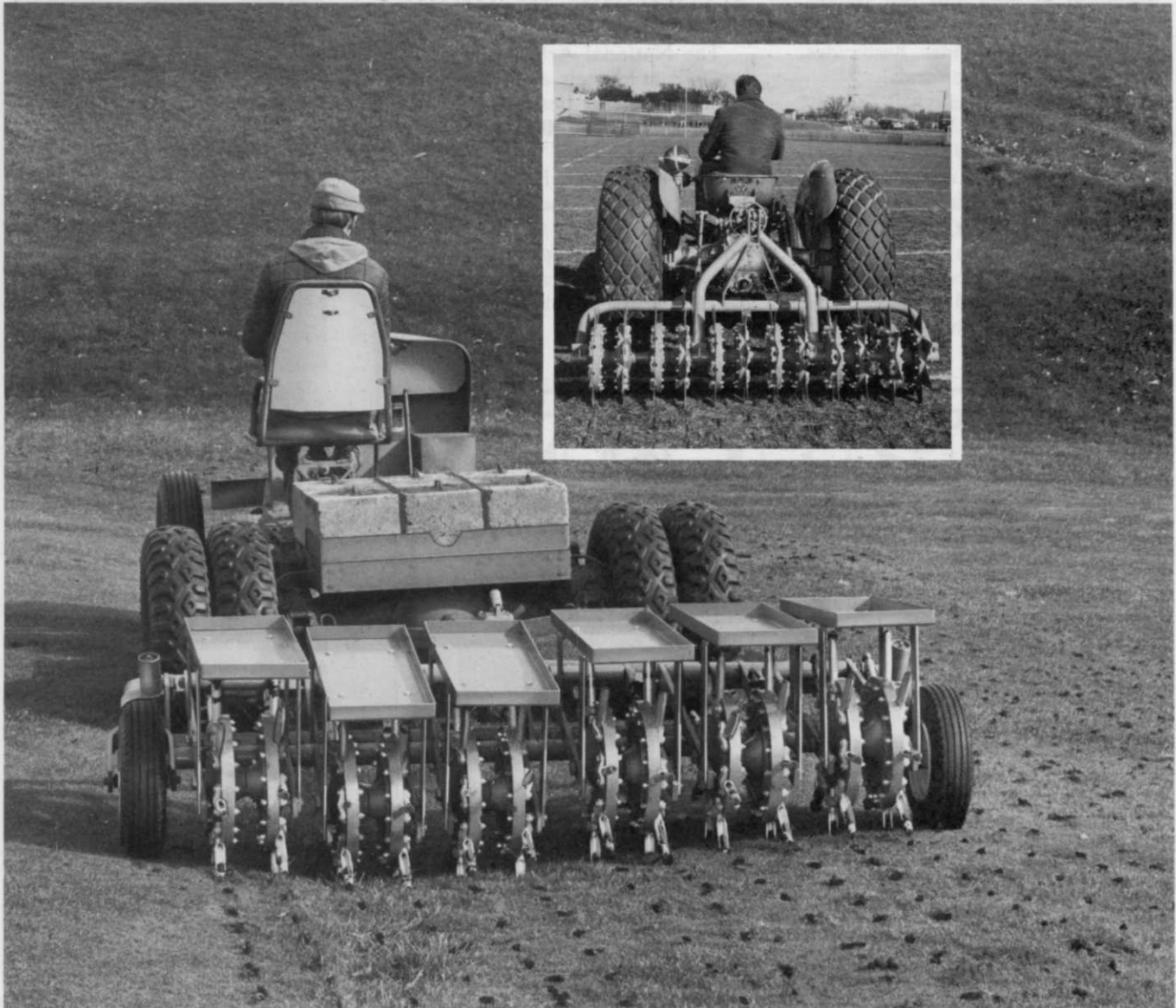
12 tine wheels and has a 3-point hitch to force the tines into the turf.

Both models are fast and easy to use. Each can be used with interchangeable open spoon, closed coring, and slicing tines. And you can order a 12' by 10' dragmat as optional equipment.

The large area aerators from Ryan. We've designed them simply to work well. And built them to stay that way. For more information see your Ryan distributor or write: OMC-Lincoln,

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The large area aerators.



Researchers tell story of aerial application

The Wright Brothers really started something in 1903 according to Connie J. Streeter and Dr. Orvin Burnside, weed scientists at the University of Nebraska-Lincoln Institute of Agriculture and Natural Resources.

The UN-L researchers, reporting at the 1976 North Central Weed Control Conference held here Dec. 7-9, said the Wrights' airplane flight at Kittyhawk, N.C., has been followed by the use of aircraft for sport, transportation, war, transportation of mail and fast freight. More recently, planes have been used to apply pesticides, herbicides, and fire fighting chemicals.

The first use of aircraft for pest control occurred in 1922 when they were used for dusting catalpa trees. Military aircraft were used because of their availability and the military did much experimentation in that era to aid the agricultural industry, the Nebraskans explained.

Ms. Streeter said that later outbreaks of the cotton boll weevil,

locusts, and other devastating insect plagues did much to spur the development of the aerial application industry. Other successful agricultural uses for aircraft came into use such as sowing seed, fighting forest fires, and the application of herbicides. Helicopters as well as fixed-wing aircraft have become important in the aerial application industry since about 1946.

Arborists to meet

The National Arborist Association will hold their annual meeting at the Don CeSar Beach Resort Hotel, St. Petersburg Beach, Florida, Feb. 13-17.

Robert Lederer, Executive Vice-President of the American Association of Nurserymen will be the featured speaker in a program which will explore avenues for environmental improvement and beautification.

Double up, America.



Two can ride cheaper than one.

When people carpool, companies benefit directly, because, obviously, fewer cars will make less demand on the parking spaces in the company lot. And some companies have attributed an increase in punctuality to the fact that more and more of their employees were carpooling.

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The Answer



The Hahn Flex-A-Matic 140 is the answer to your turf maintenance needs. Match the Flex-A-Matic against other gang units, and you'll see why this machine is the best all-around, self-propelled gang mower in the business. Ideal for commercial turf care operators; parks, cemeteries, and schools. Perfect for all-around golf course maintenance.

- REAR WHEEL STEERING FOR TIGHT, 45-INCH TURNING RADIUS...permits use where ordinary gangs can't perform.
- INDIVIDUALLY CONTROLLED REELS...outside reels can be folded hydraulically so Flex-A-Matic can be used in tight situations.
- BIG 11'8" CUTTING WIDTH WITH 20 HP ENGINE...gives high-quality mowing over large acreage, fast.
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- FACTORY TRAINED SERVICE PERSONNEL...assures you of prompt service and parts availability.

There's no question about it! If you want the best in turf maintenance you want the Flex-A-Matic 140. Test drive a Hahn Flex-A-Matic 140 at your nearby Hahn distributor.

For healthier turf use Hahn Vertifiers, Aerifiers, and Verti-Cutters.

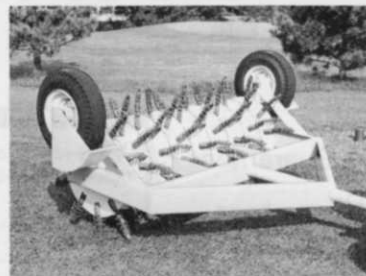
Hahn JR-3 Aerifier



Hahn MC-5C Vertifier



Hahn AB-1 Aerifier



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Hahn

U.S. pesticide consumption rate slows down

U.S. consumption of synthetic organic pesticides increased at an annual rate of nine percent between 1970-1975, but a decrease in consumption is anticipated by 1980, reports Stanford Research Institute (SRI).

In a series of reports on pesticides published as part of SRI's Chemical Economics Handbook

(CEH), domestic consumption, the Institute estimated, was 1.3 billion pounds last year and is expected to reach 1.5 billion pounds by 1980. This represents a slowing of the rate of consumption to an average two to four percent per year — primarily as a result of a leveling off of herbicide demand.

"Pesticides have emerged as a

large, rapidly growing chemical industry, both domestically and abroad," says Jeanie Ayers, the primary author of the reports.

Herbicides and insecticides account for 68 percent of total pesticide consumption while fungicides are 19 percent and fumigants and nematicides are 13 percent.

Ayers says that herbicides and insecticides are expected to continue to dominate pesticide sales but growth is expected to decrease in some key agricultural markets. The outlook for the U.S. pesticide market depends on factors related primarily to the production of corn, cotton, deciduous fruits/nuts and soybeans.

The high degree of maturity of the herbicide and insecticide markets for corn and cotton and approaching maturity of the soybean herbicide market will see future consumption more sensitive to annual acreage fluctuation. Opportunities for foliar fungicide use in the soybean market are expected to develop into a growth market for these products.

SRI also predicted these developments:

—U.S. policies that will affect domestic and international agricultural commodity demands.

—Government regulation will continue to apply pressure against selective pesticides that are considered risks to health and safety.

—Marketing abilities of pesticide manufacturers will play an important role in the product mix of future pesticide consumption as competition increases in saturated markets and as key patent expirations encourage entry by new suppliers.

—International agricultural and pesticide policies will influence the volume and type of pesticide exports from the U.S.

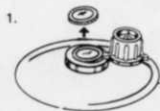
The SRI Pesticide series is available as separate reports or as a complete 540-page series of five pesticides reports covering Fumigants and Nematicides, Fungicides, Herbicides, Insecticides, and a Pesticide Industry overview.

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The Brandt Cap Cutter easily opens a five gallon drum of chemical as it cuts a circular opening in the plastic spout.

WE CAN Cut It . . .



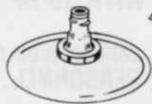
1. Use the uniquely designed hand bar built into the bottom of the cap to pry off the chemical seal.



2. Pull up the plastic spout and remove the drum cap.



3. As you twist on your Brandt Cap cutter, you are cutting an opening into the plastic spout, eliminating the need for knives, screwdrivers and other sharp instruments.



4. RESULT—A circular opening with no jagged edges - ready to pour - in 1/3 of the time.

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If you don't agree that the Brandt Cap Cutter is the safest, easiest way to open plastic spouts, return immediately for full refund!

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Check or Money Order is enclosed (Allow one week for delivery.)

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Edger works from grass or street side.

Catcher/Compactor — ingenious! Paddles pull and compact clippings into tight mass without noisy blower or dust. No loss of maneuverability.

Heavy duty 72" deck for rough cutting, discharges to rear.

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ROPS Cab for comfort, roll-tested for safety.

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Dozer blade turns HUSTLER tractor into mini-dozer. 60" x 18" spring-load blade raises, lowers hydraulically. Angles 30° right or left.

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Catcher/Compactor



Heavy duty 72" deck



Flail cutter



Snow thrower & ROPS Cab



Broom



Dozer blade



Tilt-deck trailer



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The Bunton Breed



Introducing the 36 inch cut Bunton Rear Discharge mower. A new design deck allows close trimming on both sides, helps prevent windrows and gives you a clean manicured cut (not that just-cut look). The new variable speed drive gives a wider range of ground speeds. The 3 gallon fuel tank and Hi-Way front caster wheels are standard equipment. This new mower is designed for fine lawns and rough areas. The finger tip control gives the same easy handling and hill-side stability and maneuverability as the other Bunton Self-Propelled models. Also available is a new 52 inch rear discharge mower.

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Tractor**



No weekend toy—this garden tractor gives you real workpower. Doze with 4-ft. angling blade. Mow up to 3 acres per hour. Landscape, plow, roto-till, cultivate, haul, load. 14 hp plus extra size, weight and traction. No fluid-drive loss...geared drive converts horsepower to more pull and push power. Most for your money. Send for catalog, prices.

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DIRECTORY APPENDIX

The following equipment listing was inadvertently omitted from our 1977 Managers Guide to Equipment and Supplies:

Tuflex Manufacturing Co., P.O. Box 13143, Port Everglades, Fla. 33316

Pumps: fiberglass spray tanks
50 to 120 gal. capacity

Irrigation Field Storage Tanks (Fiberglass)

Sprayers: Complete power unit jet or mechanical agitation

Hopper-Spreader type (Fiberglass)

Custom production-Fiberglass items

ALCA Convenes

The Associated Landscape Contractors of America will hold their annual meeting at the Riviera Hotel in Palm Springs, California, Jan. 23-28.

Peter F. Drucker will be the featured speaker in a program to be entitled "Focus on Management."

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