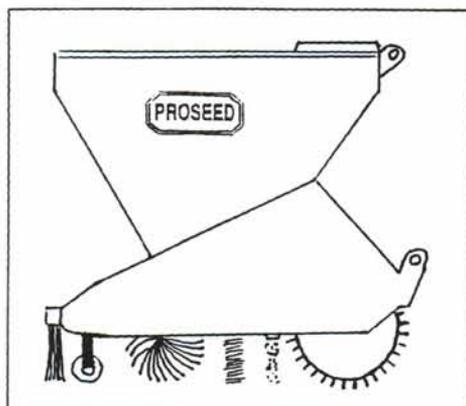


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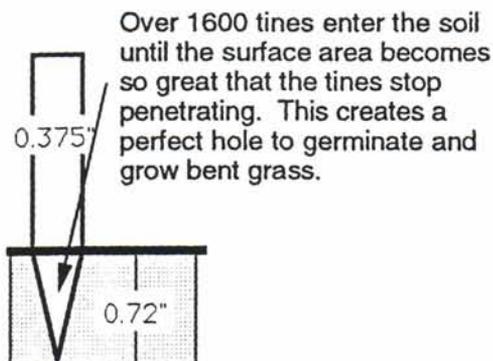
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Ground Driven Precision Gandy seeder

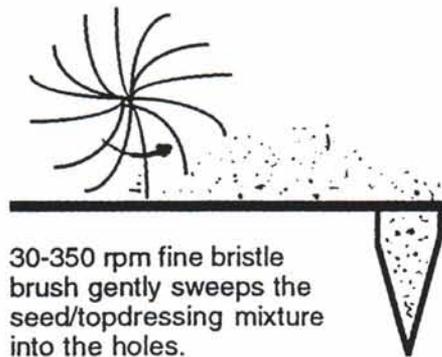
Accurate seed rates from 1/8 lb/1000 bent grass to 3 lbs/1000 ryegrass.

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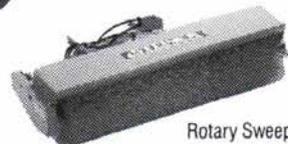
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Bark Mulch

Several types are available. Which do you need?

Charlie Nardozzi
Staff Horticulturist
National Gardening

The advantages of using organic mulches to blanket soil around trees, shrubs, and perennial plants are many: Mulches moderate soil temperature and make a more favorable environment for roots. They reduce evaporation of moisture, helping to conserve water. They reduce splashing from rain or irrigation water, reducing the spread of disease, and they block the germination of many weed seeds. Beyond all that, a mulch dresses up your garden, giving it a more finished look.

This article explores the kinds of bark mulches you can buy and their advantages and disadvantages. Several bark and wood mulches are available — bark nuggets, mini-nuggets, hardwood mulch, and shredded mulch. Some come in bags, some in bulk. A chief advantage of these mulches compared with other organic mulches is that they remain attractive and functional for a couple of years. That's why gardeners mulching around trees, shrubs, and other long-lived plants are wise to choose a long-lasting bark mulch.

The Difference Between Wood and Bark

According to the National Bark & Soil Producers Association, any mulch with "bark" in the name must be at least 85 percent bark of the named tree. A "mulch" material, on the other hand, need be only 70 percent of the named material, and it may be either bark or wood. In both cases, the remaining 15 or 30 percent can be just about anything, but it is usually wood.

The primary difference is how long the mulch will last before breaking down. "Wood breaks down quicker and is more susceptible to insect damage and discoloring than bark," explains Bob LaGasse, executive director of the NBSPA.

Any mulch with "bark" in the name must be at least 85 percent bark of the named tree. A "mulch" material, on the other hand, need be only 70 percent of the named material, and it may be either bark or wood.

Nitrogen deficiency

Decomposing wood requires nitrogen. If you add a quantity of, say, fresh sawdust to your garden soil, chances are your plants will suffer from a lack of nitrogen. In this case, the soil isn't necessarily deficient, but the breakdown of the sawdust "induces" nitrogen deficiency in your plants. Wood and bark mulches can also induce nitrogen deficiency, but it isn't likely because they decompose at such a slow rate. It's also unlikely because they are on top of the soil, not incorporated at root depth. But if this concerns you, or if your plants show the signs of nitrogen deficiency, add a 2-1-1

ratio fertilizer, such as 20-10-10, before mulching (2 to 5 pounds per 500 square feet).

Agricultural by-products

Exotic mulches are usually agricultural by-products and are often (or only) available in bulk. One big advantage is their very low cost. Most are available only seasonally and only in certain areas of the country. Some examples of these include cottonseed, buckwheat, corncobs, grape pomace, pine straw, and pecan, walnut, and rice hulls.

Although many exotic mulches are attractive and less expensive to use, they can be hard to find and may attract insects, such as ants. Plus, they tend to break down quickly. Ask your local Extension agent or garden center about the availability of these mulches in your area.

Cost of bark and wood mulches

Of course prices vary across the country, depending largely upon your distance from the source, the specific type of mulch, and local promotions. In general, expect to pay anywhere from \$1 to \$3 per 2-cubic-foot bag, or \$3 to \$6 per 3-cubic-foot bag. Buying in bulk saves money, but you'll need to have your own truck. One pick-up-truck load (about 1 cubic yard) costs \$14 to \$25.

How to Mulch

Two good rules of thumb are to mulch with 3 to 4 inches of bark mulch each season and to avoid mulch layer buildup (and potential nutrient deficiency problems) by removing old layers of undecomposed mulch before adding new layers. Coarse-textured mulches,

(continued on page 16)

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Bark Mulch

(continued from page 14)

such as shredded bark, can be applied thicker than fine-textured mulches, such as cocoa hulls. However, there are variations and exceptions related to the type of plants you're mulching and your landscape situation.

Mulching Your Plants

Whatever the type of plant, it's rarely advised to mulch more deeply than 6 inches. Mulch layers thicker than that might reduce air circulation in the soil, which will retard plant growth. Also, don't pile mulch around the main stem of a plant where it enters the soil. The added moisture and insect haven that results could damage the plant you're trying to help. Spread the mulch so that it covers the "dripline" of your plant.

Annuals and perennials

To avoid encouraging stem rot diseases, use a 2- to 3-inch layer of mulch around soft-stemmed annuals and perennials.

Trees, shrubs, and vines

Even around older plants with thick bark, don't crowd mulch around their bases. Most won't succumb to stem rot as quickly as soft-stemmed perennials, but it can happen just the same.

Vegetables

Vegetable gardeners usually prefer to use mulches that decompose more rapidly than wood and bark and add nutrients to the soil in the process. A common example is a thin layer of grass clippings. Because vegetables grow fast and prefer optimum soil conditions, a bark mulch that is tilled into the soil before it is decomposed might steal nitrogen from roots and so is best avoided. However, a bark mulch can give well-tended vegetable gardens a much more refined look.

Landscape Situation

Which mulch you choose depends on the site.

AMOUNT OF MULCH TO COVER 100 SQUARE FOOT AREA

Inches of Mulch (depth)	Amount of Material Needed
4"	34 cubic ft.
3"	25 cubic ft.
2"	17 cubic ft.

1 cubic yard = 27 cubic feet = one small pickup load of bulk mulch. Bark mulch bags are commonly sold at garden centers in 2- or 3-cubic foot units.

Areas prone to flooding

Nuggets last many years without breaking down, but they're not useful in wet areas or on steep slopes because they float and wash away easily. Similarly, don't use fine particle mulches, such as cocoa hulls, in windy or seasonally flooded areas since they can blow or float away easily. Of course, aesthetics may weigh heavier in your final decision. Although cocoa hulls float, you may be willing to reapply them because you like their dark, rich color and chocolate smell.

Slopes

On steep slopes, shredded mulch is best and hardwood holds better than softwood. However, hardwood mulch tends to break down faster than softwood and may need to be reapplied sooner.

Pathways

For easiest walking, use shredded bark or pathway bark. The irregularity of shredded bark and the small particle size of pathway bark are better for walking compared with mulches with large particle sizes. ■

Credit: Divots, May 1996

Midwest Regional Turf Foundation of Purdue University

1996-1997 Calendar of Events

Nov. 19-21 / Turfgrass and Ornamental Seminar Lafayette, IL

This three-day workshop features down-to-earth information for the beginning professional as well as more advanced topics for the seasoned professional. Includes turf and ornamental topics with CCHs in both Category 3a and 3b awarded. Split sessions for golf course turf and lawn/landscape maintenance allow more attention to individual aspects of the lawn and golf course industries.

Dec. 17 / Golf Turf Workshop Evansville, IN

Dec. 20 / Golf Turf Workshop Indianapolis, IN

This workshop is for those with golf course experience but with little formal instruction on turfgrass science. Ideal for foremen, crew members, and owners and managers of smaller golf courses. This day-long workshop promises practical information on plant physiology, fertilization, irrigation, greens management, and pest control.

Jan. 21-23 / 1997 Midwest Turf Expo Indianapolis, IN

The Midwest Turf Expo promises to be the largest turf show in the state. An outstanding trade show complements excellent educational programs, making it an event with special interest to every area of the turfgrass industry.

Feb. 24-28 / 1997 Indiana-Illinois Turfgrass Short Course St. Charles, IL

This week-long intensive course is designed for those who are employed or are considering employment in the turf industry. The short course will provide basic information and hands-on instruction on turfgrass management, including soils, fertility, calibration, math concepts, establishment, pest management, and much more.

Feb. 26-27 / 1997 Indiana-Illinois Advanced Turfgrass Short Course St. Charles, IL

A two-day course designed for golf course superintendents, sports turf managers, lawn care professionals, sod growers, and other turf managers with some background in introductory plant physiology, soil science, and turf management activities. The seminar will address turfgrass growth responses to weather conditions, light quantity and quality, traffic, soil conditions, management activities, and pest control.

July 29 / Midwest Regional Turf Field Day West Lafayette, IN

See the latest in turfgrass research taking place at Purdue, including cultivar trials, pest management studies, and turf management studies. Also features a trade show, equipment exhibits and demonstrations, and everyone's favorite barbecue lunch.

Call Bev Bratton at 317/494-8039 for more information.
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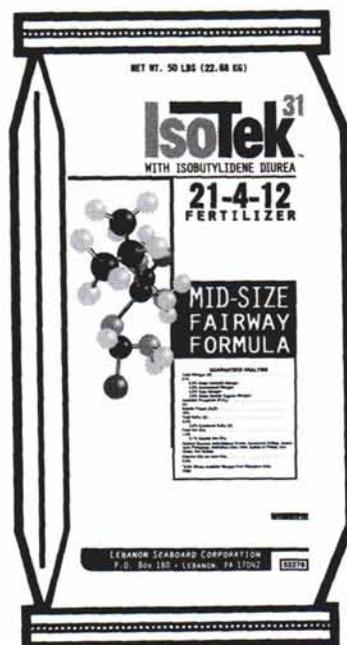
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DATES TO REMEMBER

November 7 — MAGCS Clinic and Annual Meeting at Butterfield C.C.

November 12-14 — Penn State Turf Conference at State College, PA.

November 16 - MAGCS Dinner Dance at Aurora C.C.

November 19-21 — Three-day Turfgrass and Ornamental Seminar at Purdue.

December 3-5 — NCTE at Pheasant Run Resort & Golf.

February 6-12 - GCSAA Conference in Las Vegas, NV.

February 25 - GCSAA Seminar "Prevention Maintenance of Equipment" at Seven Bridges G.C.

April -MAGCS monthly meeting at Mt. Prospect G.C.

June 2 - MAGCS monthly meeting at Rolling Green C.C.

July 7 - MAGCS monthly meeting at Orchard Valley G.C.

September 22 - MAGCS monthly meeting at Ruffled Feathers G.C.

The Board of Directors at their October board meeting, passed the resolution that **at all future golf outings, only spikeless golf shoes are to be worn.**

For Sale: Lesco 500 with 1,600 hours, \$900. Good condition, call Glen Peters at Sunset Ridge C.C., 847-446-5268.

Mike Vercautren at Butterfield C.C. is busy this fall with a new triple-row Toro LTC radio control irrigation system being installed on his 27 holes. A new pump station is also included. He has also built a 4,000 sq. ft. nursery and four new tees. No wonder he wasn't home when I called his home one evening at 6 p.m. to check on the cover photo of this month's magazine.

Peter Leuzinger at the Ivanhoe Club reports that they are widening the 1st hole to about double of what it was on the Prairie course and moving the cart path to accommodate the width. On the Marsh 5th hole, three new fairway bunkers are being built and the green will be recontoured, plus they are bringing the lake closer into the green. Paving will be done to 2,000 ft. of cart paths. Pete also reports that his bird houses this year fledged 81 tree swallows and 36 bluebirds.

Craig Joscelyn of Deerpath G. C. is building three new tees and also is installing a "Nova" tee.

Sales rep wanted; knowledge/experience with golf courses is needed. Call Arthur Clesen, Inc., 847-537-2177.

Congratulations to Parin Schmidt, the new golf course superintendent at Stonebridge G.C. who replaces Roger Stewart who left for New Jersey.

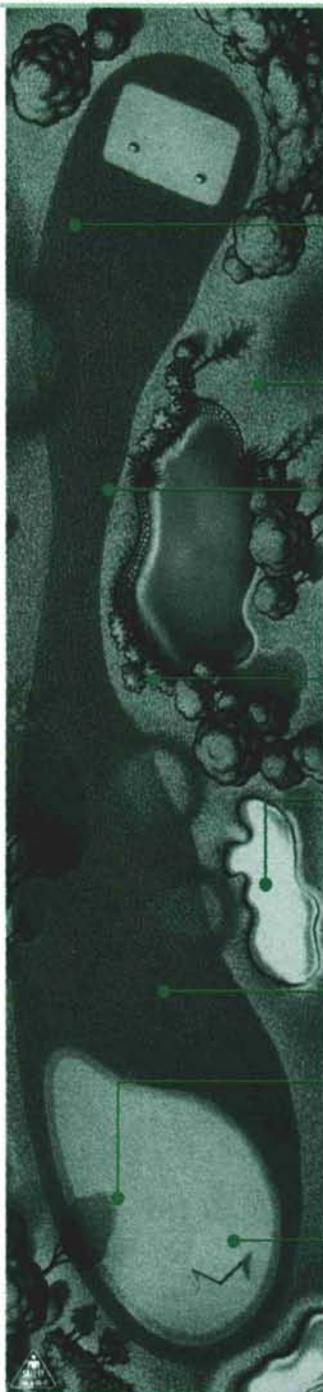
Marilyn and Jim Burdett are proud grandparents once again. But after six grandsons, a granddaughter finally appeared on August 1, 1996. Jessie Kathryn Burdett, born to Julie and Dan Burdett, weighed 7 lbs. 6 oz.

For Sale: One 1994 National Tri-Plex 84" with 16 HP V-Twin Vanguard engine. Only 333 hours; not used in '96, \$5,000. Dedoes fairway aerifier with electric lift kit; works great, best offer. Honda ES 6500 generator 120/240, like new, \$1,000. 100 yellow fiberglass bunker rakes at \$2 ea. 45 Buckner #1330 brass sprinkler heads, \$15 each. 18 Rico flag poles, 7 ft., white with red stripe; never used, best offer. Call Bob Lively at Mc Henry C. C., 815-385-0635.

Don Altman at Forest Hills C.C. is into a major project with the city of Love Park. The city is paying for the building of three retention ponds with a total area of close to 6 acres. All of the excavated material is being used on the property to build a 18,000 sq. ft. practice tee, three target greens, four new tees, and various mounding around the course. New and improved blacktop paths are also being built.

(continued on page 26)

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THE REAL GRASS FACTS

1. Turf's Place in Land-Use: Turfgrass is more than just an eye-appealing, home lawn feature. It's essential to parks and playgrounds, golf courses and sports fields and improving commercial property. It also provides these important environmental benefits: Functional—soil erosion control, dust prevention, heat dissipation, noise abatement, glare reduction, air pollution control and nuisance animal reduction; Recreational—low-cost surface, physical health, mental health, safety and spectator entertainment; Aesthetics—quality of life, social harmony, community pride, increased property values and a complement to trees, shrubs and other plants.

Reducing the total amount of turfgrass in the U.S. and elsewhere will not have a positive effect on our environment or quality of life; in fact, just the opposite is most likely.

2. Investing in Turf Care: The Lawn Institute's estimate of \$25 billion spent on lawn care includes all forms of turfgrass management and maintenance, not just home lawns. The 1995 National Gardening Association's (NGA) Gallup survey (coincidentally) reports \$25 billion spent on lawn and garden care, combined. The NGA reports that just \$166 is spent annually by those households that do take care of their lawn, which totals \$8.4 billion dollars.

3. Turf's Maintenance Requirements: Most homeowners find that mowing is the most consistent and time-consuming aspect of lawn care because only one-third apply fertilizers and pesticides, although more do water the grass. However, mowing a home lawn of 10,000 square feet, with a 19-

(continued on page 24)

Are Grass Clippings Clogging Our Landfills?

Anti-Turfgrass Statements

- The U.S. Environmental Protection Agency (USEPA) says at least one-third of all landfill material is yard waste and most of that is grass clippings.
- 10 to 33% of the total waste stream in landfills is yard waste and grass clippings account for two-thirds of all yard waste.

THE REAL GRASS FACTS

1. "Yard Trimmings," Are More Than Grass: Based on a 1992 study, the USEPA estimates that "yard trimmings," including grass clippings, leaves, branches, brush and other plant materials, accounted for 17.9% of the total municipal solid waste, by percent of weight. Since 1960, when yard trimmings accounted for 22.8% of the total, this percentage has declined each decade, as follows: 1970 - 19.0%; 1980 - 18.2%; 1990 - 17.9%.

2. Grass Clippings Are Wet and Degrade: Most, if not all, studies of municipal solid waste are based on curb-side or landfill destination truck weights. Accordingly, 100 pounds of grass clippings weigh the same as a 100-pound refrigerator and would be considered "equal" contributors to a landfill. However, grass clippings are 90% water and the remaining 10% is very degradable, unlike the refrigerator and many other landfill components such as plastics, metals, glass, construction debris, etc. If calculated a their dry weight, grass clippings would not be more than 2% of the total landfill volume; and this volume will biodegrade very rapidly, helping to improve landfill soils and assist in degrading other organic matter.

3. "Research Bias" Can Confound Reports: A 1993 report on a study of Sacramento, California's, landfill composition reported that leaves and grass accounted for 26% of the total, leading second-place "non-recyclable paper" at 8% by a sizeable margin. However, one apparent purpose of the study was to identify potential income-generating recyclable items; and thus, different forms of paper were reported separately: non-recyclable

(continued on page 24)