The STMA, *sportsTURF* and Beam Clay introduce the 1997 College Baseball Diamond of the Year: the field of Al Worthington Stadium on the campus of Liberty University.
Courtesy: Brock Van Faussien

plugs of Vamont bermudagrass each June, then slice and mat drag it in.

"We also sprig Vamont into the high wear areas. The Vamont plugs are pulled from our other fields to cut expenses. This provides a thicker bermudagrass base and a better look to the field. But during the harshest winters, we lose some, or even all of the Vamont."

In early October, the field is core aerated in four directions. It's overseeded with a blend of perennial ryegrasses and one bluegrass cultivar. The crew applies seed at a rate of six lbs. per 1000 sq.ft. using a drill seeder. They set the blades at a one-inch depth and cross the field at 30-degree angles. They drag in the cores and thatch, and remove excess material once the young plants emerge.

Johnson notes, "We don't try to phase out the cool-season grasses, because we need to keep all of our options open for active growth in fall and spring. Our bermudagrasses don't begin active growth until mid to late May in a 'normal' year.

"We mow almost every day during the growing season, using a triplex reel mower. We alternate directions at each mowing, and change the patterns frequently to keep the turf upright. Mowing height for play ranges between 1-1/4 and 1-1/2 inches. If growth patterns allow, we drop to one-inch for a week or so once play ends to encourage the bermudagrasses."

As a private school with a 'somewhat limited' budget, the field-care program must look to outside sources - not only for the 'extras,' but also for many of the necessities. Johnson notes that some of the coaching staff and former players with time in the Major Leagues have made significant donations to the program, and both alumni and community support is strong.

Features have been incorporated to reduce both wear and maintenance. A drag path runs from the storage area onto the third base side of the field. Practice pitching mounds, installed along the right and left field fences, duplicate the slope of the on-field mound and help minimize wear. Conveyor belt pieces placed in the batter's boxes prevent holes. 'Carpeted' fungo circles, on deck circles, coaching boxes, and the circle around home-plate further cut maintenance.

Johnson says, "Work has begun on a new baseball team restroom, coaching area and indoor batting cages. We're also planning for an enclosed pitcher's bullpen." Obviously, keeping

top fields up to speed is an ongoing process.

Johnson adds, "To maintain any good facility takes a good working relationship between the end user and the care providers. We have that here, especially with baseball. They understand that what we do makes a difference and they appreciate it. The Al Worthington Stadium field is very important to them and it's very important to us."

Coach Pastors adds, "Success builds on itself. Each time field conditions improved, that became the standard to build beyond. The award and the recognition it brings present another set of challenges. To make the field worthy of the award, we need to maintain and exceed the standards met to receive it - and we're all dedicated to making that happen." ❑

Players take an active role in maintaining the award winning field. Many who are continuing their degree programs after completing four years of play join the daily maintenance crew to remain involved.
Courtesy: Brock Van Faussien

Bob Tracinski is manager of public relations for the John Deere Company in Raleigh, NC, and is public relations co-chair for the national Sports Turf Managers Association.

The Beam Clay Baseball Diamond of the Year Awards are sponsored by the Sports Turf Managers Association, sportsTURF Magazine, *and Beam Clay. This is the 12th year the Beam Clay Awards have been presented. Each year, four Major League groundskeepers serve as judges. This year's judges were: Tom Farrell, Toronto Blue Jays (AL-East); Barney Lopas, Anaheim Angels (NL-West); Ralph Frangipani, Philadelphia Phillies (NL-East); and Eric Hansen, Los Angeles Dodgers (NL-West).*

Plan of Attack

The basic maintenance plan

Fertilization: The fertilization program and pH adjustments are based on soil test results. Soil testing is done every three years. If problems arise, testing is done annually.

Fall fertilization is done three times a year, in September, October and November. The crew uses a 30% slow-release, complete fertilizer. They spread a total of 4 lbs. of N per 1000 sq.ft. per year. Spring fertilization is done in March at the rate of 1/2 lb. of N per 1000 sq.ft.

During the summer, light applications of nitrogen are used to encourage the bermudagrasses.

Aeration: Core aeration is performed once a month from April through November. The crew covers the field in at least two directions each time. They verticut once each summer, and use deep tine aeration every third year as compaction levels warrant.

Pest control: Split applications of Dimension herbicide for preemergent crabgrass control are used in conjunction with a three-way broadleaf herbicide, the first in March and the second in May. The crew monitors for grubs and red thread, and uses IPM methods with control products only as needed.

Mound and skinned area standard maintenance

Daily procedures: The bullpen, practice and on-field pitching mounds are reconditioned, as are the batting boxes. The skinned area is dragged and watered, the warning track is dragged, and the infield turf bordering skinned areas is swept to prevent lip build-up.

Other procedures: Base lines and batter's boxes are chalked for each game; also, the bases, homeplate and the pitching rubbers are painted for each game; foul lines are painted as needed; and infield and warning track turf edges are edged monthly.

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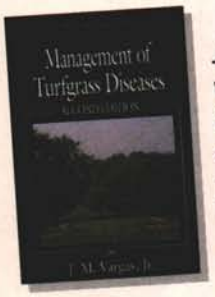

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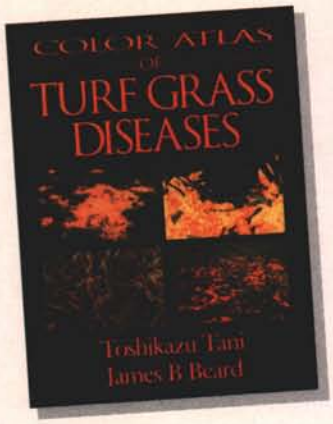

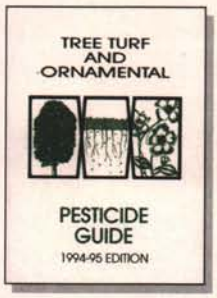

Tree, Turf, and Ornamental Pesticide Guide, *W.T. Tomson.* This is one of the few references today designed as a guideline to pesticide usage in the specialized ornamental field. It lists the major ornamentals grown either in the home or garden, in nurseries, in greenhouses, or in commercial production with a cross reference as to what pesticide may be used on them. Insecticides, herbicides, fungicides, and growth regulators are listed along with what each will control. This is a valuable tool for PCO's, nurserymen, greenhouse operators, grounds superintendents, turf specialists, etc. 200 pgs. **4127 $18.50**

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Weed Identification and Control in sportsTURF

by Jeffrey F. Derr

Spring has arrived, and more people will be outdoors enjoying the warm weather. Managers of sports turf will want the sites they maintain to be in top condition for spring use. One important management concern for spring is weed control.

Weeds affect our recreational activities in a number of ways. Weeds reduce the aesthetic value of our parks, golf courses and ball fields. But they have other impacts besides effects on turf appearance.

Some weeds, such as sandbur, pose a hazard to people walking barefoot in turf areas. Weed flowers can attract bees, posing a hazard to those sensitive to bee stings. Poison ivy causes a skin rash in sensitive individuals. Common ragweed pollen causes allergies in late summer, when the plants are in bloom. Weeds growing on golf greens can affect play by altering ball movement. Weeds growing in cracks are a problem in tennis courts. They block water flow in drainage ditches, and interfere with swimming and boating in our lakes and rivers. Weeds can harbor insect and disease pests, which then can move to desired plants.

For these and other reasons, managers need to develop a weed management plan for properties they maintain. An important component of such a plan is weed identification. One must know the major weeds present at each site.

Why is this important? Weed identification will be our guide when choosing chemical control options and determining time of application. Weed identification can also point us to situations that can be corrected through cultural control strategies.

Weed identification

Weeds can be divided into grasses, grass-like plants and broadleaf weeds. The grass family includes common weeds, such as crabgrass, goosegrass, annual bluegrass and dallisgrass. The grass-like group includes sedges, rushes and certain members of the lily family. Prostrate spurge, common chickweed and dandelion are examples of broadleaf weeds.

One needs to be able to separate these plant groups. The herbicides we use for grass control generally have no effect on sedges; and, conversely, most of our sedge herbicides have no effect on grasses. Further, the postemergence broadleaf herbicides will not control grasses.

Crabgrass is a common weed that belongs to the grass family. It is classified as an annual, and can be controlled quite well with preemergence herbicides.
Courtesy: Bradd Pavur

How do we tell these plant groups apart? Grasses have narrow leaves with parallel veins, and the leaves are two-ranked. Stems are either round or flattened. The root system is fibrous. Sedges are similar to grasses in that their leaves are long and narrow with parallel veins. But sedges have triangular stems, and the leaves emerge from three sides (three ranked). Rushes generally have round stems, and primarily occur in aquatic sites or other moist areas. Weedy members of the lily family include wild onion, wild garlic and greenbrier.

Grasses, sedges, rushes and lilies are all monocots. When these plants germinate from seed, they have one seed leaf (cotyledon). In monocots, the flower parts occur in threes - for example, three petals and three sepals.

Broadleaves are dicots - they have two seed leaves at germination. Dicots generally have broad leaves with netted veins. Don't be fooled by this, certain broadleaves, such as buckhorn plantain, have somewhat narrow leaves. The root system of broadleaves is characterized by a taproot, and flower parts occur in twos, fours or fives.

It's a good idea to have at least one weed identification guide on your shelf. Listed are some of the guides I use:

- *Weeds of Southern Turfgrass*, the Cooperative Extension Service, University of Georgia, Athens, GA.
- *Weeds of the Northeast*, Cornell University Press, Ithaca, NY, ISBN 0-8014-8334-4.
- *Weeds of the West*, Pioneer of Jackson Hole, Jackson, WY, ISBN 0-941570-13-4.

Weed life cycle

While we need to be able to identify our major weeds, we also need to know their life cycle. Weeds can be classified as annuals, biennials or perennials. The ability to distinguish between the different types becomes important when selecting methods of control.

Comparing crabgrass control with bermudagrass control in turf provides a good example. Crabgrass, an annual, can be controlled quite well with preemergence herbicides. Perennial

weeds are generally not controlled by preemergence herbicides. As a general rule of thumb with some exceptions, we use preemergence herbicides to control annual weeds and postemergence herbicides to control perennials.

Annuals must germinate from seed each growing season. This category can be divided into summer annuals and winter annuals. Summer annuals germinate in spring and early summer. They usually die off with the first frost. Winter annuals germinate in fall or early spring, and die off with the onset of hot, dry weather in late spring or early summer.

One needs to know when a weed germinates to set the timing of herbicide application. A crabgrass prevention herbicide applied in March is long gone by the time annual bluegrass is germinating in September. Preemergence herbicide applications for winter annual weed control must be made in August; but for summer annuals, these chemicals must be applied in March or April.

Examples of summer annual grasses include large crabgrass, goosegrass and yellow foxtail. Common summer annuals in turf are prostrate spurge, prostrate knotweed and lespedeza. Annual bluegrass and annual ryegrass behave as winter annuals. Common chickweed, henbit and corn speedwell are examples of winter annual broadleaves.

Biennials take two years to complete their life cycle and spread strictly by seed. They germinate from seed, produce a rosette the first year, and then flower in the second year. Plants die after flowering. There are only a few biennials, and they are broadleaves. Examples include wild carrot, musk thistle and common mullein.

Perennials live for many years. Simple perennials, such as dandelion and plantain, spread strictly by seed. Creeping perennials, like bermudagrass, white clover and yellow nutsedge, spread vegetatively by rhizomes, tubers or stolons, in addition to being spread by seed. Important perennial grass weeds include dallisgrass, quackgrass, nimblewill and bermudagrass. Yellow and purple nutsedge are common perennial sedges in turf, especially in wet sites. Ground ivy, common blue violet and Virginia buttonweed are examples of perennial broadleaves.

Weed management in turf

The three main weed management strategies are cultural, biological and chemical control. At present there are very few biological control options for weeds, so this strategy is essentially not an option for sports turf applications. This is an active area of research, so we may see development of specific insects or diseases to suppress weeds in the future. But for now, turf managers must rely on a combination of cultural and chemical control for weed problems.

The goal of cultural control is to allow turf to compete with weeds more effectively. Choose a turf variety that

Continued on pg. 31

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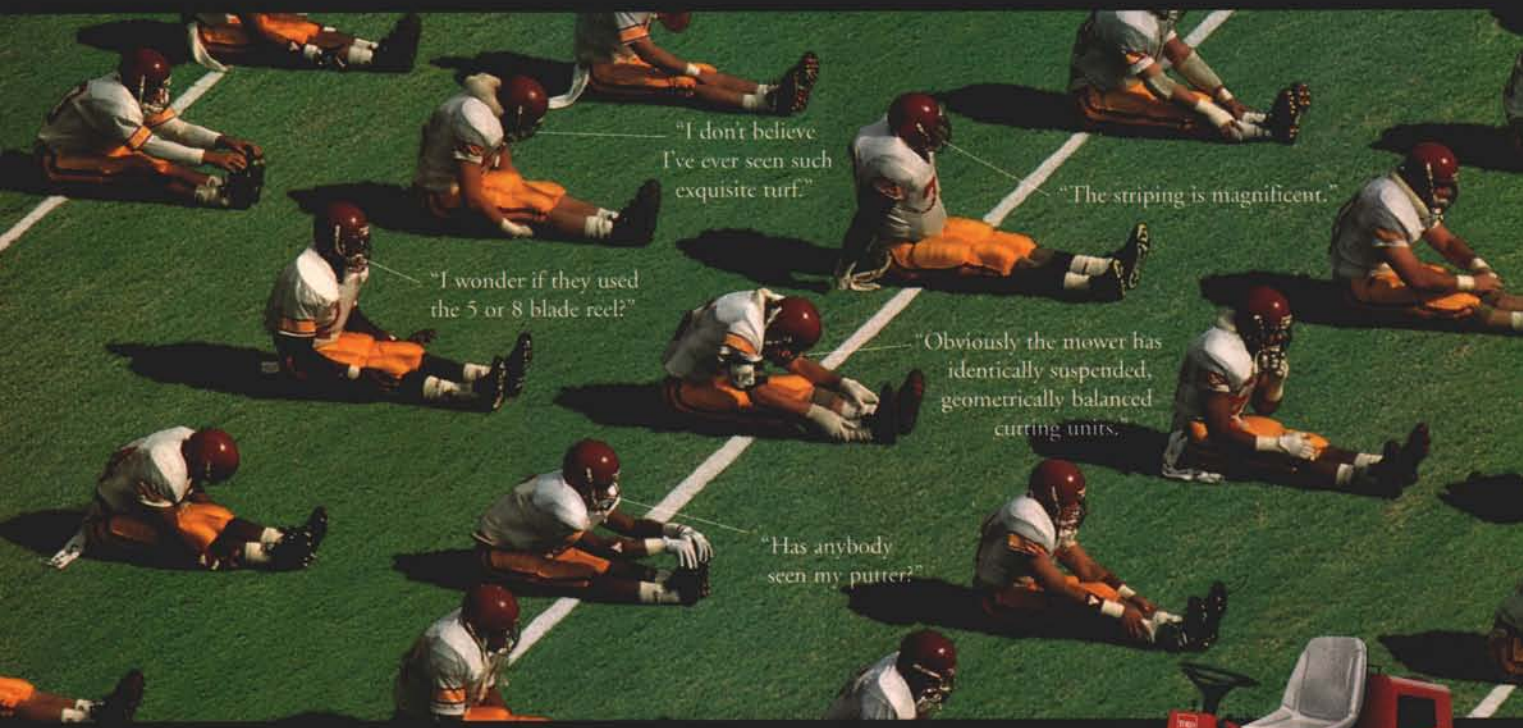

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