

Although Aidala says the green industry and its critics seem to be approaching common ground on posting and chemical registries, preemption will be difficult to pass this year.

Last year, industry's lobbying effort to get federal preemption legislation ran out of time.

The 102nd Congress ended before the full House Agriculture Committee could act upon a bill to prevent local governments from regulating the use of pesticides. Almost 100 cosponsors in the House and 22 in the Senate had signed onto the "National/State Pesticide Regulation Partnership Act of 1991" which also set strict standards for certification and verifiable training.

Most green industry associations willingly supported the proposed bill's certification and training provisions.

Although legislation for federal preemption could get another legislative push this year, "it's not the sort of thing that's going to get worked out easily," warns Stan Ray, staff director for The House Department Operations and Nutrition House sub-committee.

"Preemption is going to be the one issue where members divide," adds fellow staffer Aidala, "It will get swept up in larger politics, especially agricultural uses of products."

Although 12 states passed new preemption legislation in 1992, industry suffered setbacks in Maryland, Kentucky and Washington. This year could see Alabama, Illinois, Massachusetts, and Texas consider the issue also.

On another front, Senator Joseph Lieberman (D-CT) will "probably be reintroducing" his "Notification of Chemical Application Act of 1992," says top Lieberman aide Sara E. Walzer.

Although no lawn care hearings had been planned as of mid March, Walzer said hearings will take place as the bill goes through committee.

Posting, notification and registry provisions in Lieberman's newest proposal are toned down from the Senator's first effort in 1990. Even so, industry remains uneasy with its intent.

Lieberman's proposed amendment to The Emergency Planning and Community Right-To-Know Act sets stiff fines and jail terms for lawn pros who willingly don't notify—also, homeowner posting.

PLCAA, for its part, has its own "lawn care bill" which it threatens to push should Lieberman's bill surface.

—Ron Hall

LC pesticide advisory board gave industry and its critics their say

■ We may not have the LCPAC to kick around much longer.

LCPAC? Few turf/landscape professionals know of the Lawn Care Pesticide Advisory Committee (LCPAC). Ostensibly, its purpose has been to explore ways "to reduce the public's risk to exposure by lawn care chemicals," said Vic Kimm of the U.S. EPA. But, in reality, it's been a protracted debate with representatives from specialty chemicals and allied user groups versus pesticide critics, with the EPA and regulators acting as referees.

Indeed, the LCPAC itself hasn't agreed on whether its deliberations are fueled by safety concerns, a view sought by anti-pesticide members of the board but hotly denied by industry.

"People continue to buy and use our products," said William Chase, Jr., a LCPAC member representing Chevron Chemical. "The sales information sends us a positive message that there's no overwhelming concern by the public."

The LCPAC, formed by the U.S. EPA last spring, has met twice near the capital. It's advisory. Its charter expires in May.

Some of its 28 members represent the chemical and lawn care industries. Others represent public interest groups that seek stricter regulation and less use of pesticides.

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A plan to save our world

■ Vice President Albert Gore would save the world.

He would start by mobilizing the world's governments to cooperatively attack the earth's environmental woes, he writes in his book, "Earth in the Balance, Ecology and the Human Spirit" (Houghton Mifflin Company). The United States will spearhead this environmental crusade to save society from its headlong rush to ecological suicide.

Of interest to anyone involved with ag or specialty chemicals: somewhere among the ecological ills—and apparently down the list since Gore mentions it only in passing—is modern agriculture's profligate use of pesticides.

"The huge amounts of fertilizer and pesticides now routinely used in agriculture frequently drain off into the groundwater beneath the fields, contaminating them for many centuries to come," he says.

This is the kind of generalization that Gore, a former newspaperman, likes to lean on throughout the book. There are many others.

"Earth in the Balance..." is a call to

action. Indeed, it covers a lot of real estate, an entire global environmental rescue plan in just over 400 pages.

Gore wrote the book while he was Sen. Al Gore from Tennessee, and after he'd failed in his 1988 Presidential run. It appeared on bookstands during 1992 when Gore was again blistering the campaign trail. The book takes some sharp jabs at former-opponent and former-president George Bush and his environmental policies.

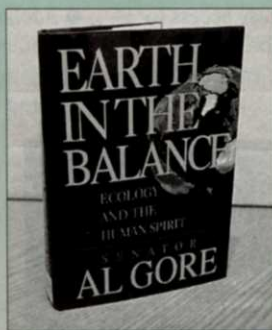
(Who cares now?)

Political jabs aside, Gore's oft-repeated bigger message is the listing of the Earth's largest environmental catastrophes-in-the-making. Then he tells how to solve them.

Gore's book is earnest and his concerns seem genuine. But, he stretches a little bit of science over an awful lot of ground. Even that little bit of science is hotly disputed.

For better or worse, Gore, as vice president, probably won't get a chance to reshape modern civilization in 1993.

—Ron Hall



HARDSCAPING: A one-time project that's great for referrals

Hardscaping projects, whether done in-house or by a sub-contractor, are stylish add-on services.

■ If your company has the resources, you might want to tackle a hardscaping project this summer.

Besides being a good one-time project—and one that you don't have to water and weed afterwards, hardscaping, in this case, paving stones, can really lead to referrals in the right neighborhoods.

The surface earth should be well-compacted before you lay the stone, advises Phil Walters, a production manager for Ruppert Landscape's Chantilly, Va. office. "Place pavers with drainage in mind," says Walters. "Have a way for the water to run off, and tamp the material as it's installed."

Walters also suggests that easy access to the site is important due to the weight of the materials. It should be an easy in and out pathway.



These Terra-Pavers, from Wausau Tile, can be installed over bituminous sand or mortar beds. They hold up well under pedestrian and moderate vehicular traffic.

Hard construction includes a wide variety of materials. Selecting the proper materials while balancing aesthetics and cost effectiveness requires skill and ingenuity. Paving materials can be made of asphalt, brick, concrete, stone, tile or wood.

- Brick is easy to manufacture and is easy to find in a variety of sizes, shapes colors and textures. Brick pavers are made specifically for outdoor walkway and floor surfaces. They are sized to permit a wide variety of paving patterns (some of which are shown at right).

Their thickness ranges from 1-1/8-inches to 2-1/4 inches. Thin pavers are a cost-effective choice when specifications call for brick walks to be set in a mortar bed.

- Turf blocks are a type of concrete paver with openings or slots for growing turfgrass.

- Glass block is available in a range of styles and functions.

- Adobe, a kind of mud brick, is also a good choice for decorative use or special effect. Many concrete materials can be used for paving and other landscape applications. Concrete toppings or coatings are presented by manufacturers as solutions to problems generated by certain uses or conditions.

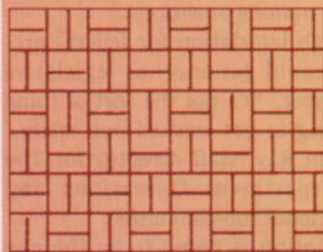
Patterned concrete may be cast in place by a number of proprietary systems in the industry. One is Bomanite, a specially finished concrete paving system. Concrete pavers can be formed in a wide range of textures and finishes. Interlocking concrete pavers can be formed in a wide range of textures and finishes.

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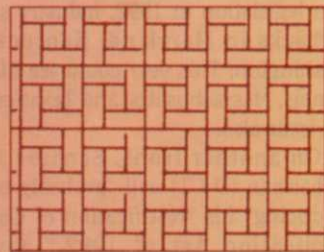
BRICK

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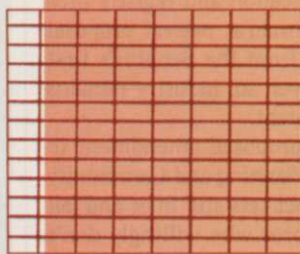
HERRINGBONE



BASKET WEAVE



BASKET WEAVE, VAR.



S
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courtesy The Brick Institute, Reston, Virg.

Granite pavers give authentic look to racing monument

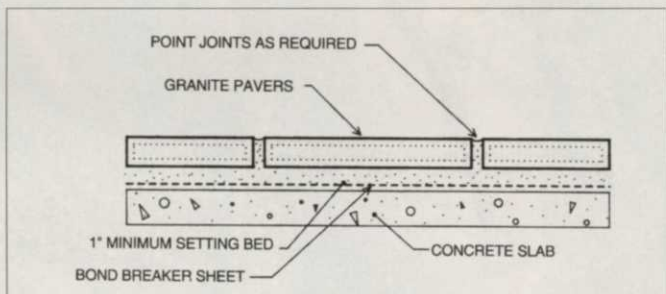
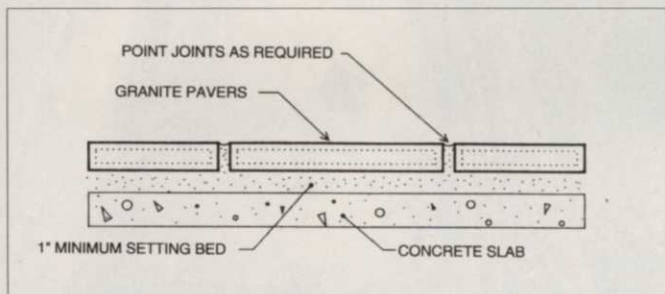
■ Thoroughbred Park, a new public park in Lexington, Ky., includes detailed and ornate design elements of granite and bronze which are meant to capture the spirit of racehorses, owners and breeders. But creating the park required unique design, technical and fabricating capabilities from a variety of product suppliers. Cold Spring Granite Co. provided the paving and other granite details for the project.

The park is divided into five areas representing an aspect of the world of horseracing. Highlights include bronze statues depicting champion racehorses and jockeys. The center of attention is a simulated granite racetrack featuring seven life-size bronze thoroughbreds and jockeys barreling down the home stretch.

"The entire racetrack is created from granite. We worked with the project architects to select the appropriate color of granite and cut the stone at just the right angles to replicate an actual horseracing track," according to Jodie Moore, structural sales representative

for Cold Spring. Carnelian, a mahogany-colored granite, matches the reddish-hued earth found on racetracks. Cold Spring fabricated thermal-finish, split-faced pavers and set them side by side to create the rough surface on which the bronze statues stand. "Having a split-faced showing is very unusual," says Moore, "but it was the unique design element that allowed us to create just the look we were after."

The project required 9000 square feet of 1-1/2 inch thick, and 12,600 square feet of 3-inch thick thermal Carnelian paving.



Installing granite pavers on slab, left and on slab with bond breaker. Courtesy Cold Spring Granite Specialties.

1. A dry pack mortar bed is laid on a concrete slab and granite pavers are tamped into the bed.
2. The mortar may be hydrated with a latex additive in lieu of water to increase bond strength and add moisture resistance.
3. In this system, the expansion joints in the concrete must be carried through to the granite pavers at the same locations.
4. The joints may be pointed dry, fogged with water, or pointed with wet grout.

1. A bond breaker is placed on a concrete slab to separate from the setting bed.
2. The setting bed is applied on top of the bond breaker sheet.
3. Granite pavers are tamped into a dry pack setting bed.
4. Latex additive may be added to mortar in lieu of water. This will increase bonding strength and provide moisture resistance.
5. In this system, the expansion joint pattern in the concrete does not have to be duplicated in the granite paving pattern breaker allows the paving system to "float" on the concrete slab.

Some paving material suppliers

Cold Spring Granite Specialties, 202 South Third Ave., Cold Spring, MN, 56320.	300
Hanover Architectural Products, Inc., 240 Bender Rd., Hanover, PA 17331.	301
Pave Tech, Inc., Advanced Paving Technology, P.O. Box 31126, Bloomington, MN, 55431.	302
Stonwurks, Inc. 314 Lincoln Ave., Clay Center, KS 67432-2806.	303
Vespro, Inc. 40 Belvedere St., Suite 2, San Rafael, CA 94901; makers of Control-A-Root, a barrier which prevents roots from growing up into hardscaping.	304
Wausau Tile, Inc., Terra-Paving Division, P.O. Box 1520, Wausau, WI 54402-1520	305



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Athletic fields: renovation or reconstruction?

■ All too often, the blast of an official's whistle at the start of a sporting event brings two opposing teams together on a barren field speckled with ragged tufts of green. Many of these tufts are the sad remnants of a once-proud turfgrass cover, intermingled with coarse, aggressive weeds.

In dry weather, the playing surface is hard from compaction, rough from previous activities, and dusty from a lack of turf cover. If it rains a week before the event—or worse, during the event—the surface is slippery, muddy and soft, with virtually no traction.

Such conditions give natural turf playing surfaces a bad reputation. However, criticism of natural turf fields should be aimed at weaknesses in construction or maintenance, not the limitations of natural turf.

Success in providing superior natural turf playing surfaces often means overcoming or correcting errors in construction. Neglect, for even a relatively short period of time, jeopardizes previous investments.

Though turf appearance is undoubtedly important, durability to intensive use under a wide range of conditions is more critical.

Though athletic field renovation may seem successful, an improperly constructed field will rapidly decline again.

by Henry W. Indyk, Ph.D.

Costly mistakes—Successful athletic fields are based upon similar principles in design, planning, construction and maintenance. Failure of these surfaces also is based upon a set of similar mistakes:

● **Drainage considerations:** Poor drainage not only affects playability, but negatively influences turfgrass growth and increases maintenance costs. (See sidebar.)

● **Improper specifications:** Too often, in the original construction of an athletic field, standard specifications are used. Each site should be evaluated critically before formulating accurate specifications to avoid a field with “built-in” problems that are difficult or impossible to correct, even with excellent maintenance procedures.

● **Lack of specification enforcement:** The best of specifications are of little or no value unless construction procedures adhere to them.

● **Maintenance deficiencies:** A well-planned maintenance program should include equipment, materials, personnel, and an adequate budget. The supervisor should be conscientious and knowledgeable in turfgrass management principles and techniques.

The single most important factor: drainage

■ The single most influential factor in the failure of natural turf fields is improper drainage.

Perhaps the most important reason for overlooking drainage as a critical factor in athletic field construction is not understanding or appreciating its importance. Unfortunately, in many instances, adequate drainage is negatively affected by cost-cutters who do not realize the future cost of improper drainage.

In some cases, efforts to improve drainage are to no avail. Such failures most likely can be attributed to improper specifications and/or other deficiencies in construction. Some of the common faults of ineffective performance of drainage systems include:

● **Provision for surface drainage only.** A crowned or turtle-backed field with a few catch basins on the sidelines can facilitate removal of surface run-off, but will do little for improving internal drainage.

● **Improper design** of the drainage system involving pipe spacing, depth, grade and outlet.

● **Improper grade** for installation of drainage pipe.

● **Heavy-textured material in backfill** that restricts percolation of water to the drainage pipes.

● **Improper physical properties of topsoil** above the drainage system. Soils containing too much silt, clay and very fine sand as the growing medium for the turf tend to restrict proper drainage due to slow percolation of water. Consequently, during rainy conditions, such soils tend to be soft and soggy in spite of a properly installed drainage system. These soils compact readily when subjected to traffic. Air porosity is reduced by both moisture saturation and compaction, resulting in a less favorable environment. This is reflected by a shallow root system, weakened top growth, reduced wear tolerance and turf deterioration.

—Dr. Indyk



Somebody made a big mistake with this newly-constructed field when they did not allow for proper drainage.

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An athletic field after stripping and stockpiling of topsoil shows promise for the future.

● **Abuse in field use:** There are limits to how much you can use turf—even good turf. Damage will be most serious where proper construction procedures have been bypassed, particularly with excessive soil moisture.

● **Inadequate facility-to-use ratio:** The surging interest in outdoor athletic activities has increased pressure on existing facilities. Because money or space is not always available to add fields, the use of existing facilities is intensified. Improperly constructed fields are less able to accommodate more intensive use without serious deterioration of the turf cover.

Temporary renovation—Near miraculous results can be achieved by temporarily restoring improperly constructed or maintained fields. Superior varieties of turfgrasses (particularly among the Kentucky bluegrasses, turf-type tall fescues and turf-type perennial ryegrasses adapted for athletic fields) can be effectively established in existing fields by

- a) core aeration to relieve compaction and
- b) verti-grooving to prepare a seedbed without destruction of grade or established turfgrasses.

The new seedlings introduced during renovation can be nurtured to a mature, dense turf with adequate provision for proper pH, nutrients, supplemental irrigation, mowing and restrictions on use.

To fully restore a field in this way, you

must restrict use for six months, at the least. If this amount of time cannot be sacrificed, restoration with a high quality sod can provide instant results.

As impressive and effective as a successful renovation effort may seem, an improperly constructed field will rapidly decline again. Repeated renovation efforts will follow the same costly and discouraging pattern until inherent construction problems are corrected.

Reconstruction—For a successful natural turf field, essential planning, design, construction, maintenance and use principles must be followed.

Experts in field reconstruction, such as Turfcon/GSI Consultants of the Greenway Group based in Horsham, Pa., evaluate each field. Their planning and design, coupled with overseeing all reconstruction processes, and establishing a sound maintenance program, can convert problem-laden fields to high quality natural turf.

Natural grass has been, and will continue to be, the best playing surface for a wide variety of outdoor sports and playground activities. Its characteristic resiliency and cushion not only contribute to the enjoyment of a specific sport, but also provide superior footing and reduction in sports surface-related injuries. These advantages, combined with aesthetic and economic considerations, make natural turf and its management high priorities for sports in coming years.

What field consultants offer:

✓ On-site inspection for specific deficiencies in:

- grade,
- drainage,
- soil characteristics,
- turfgrass conditions and
- any other factors conducive to athletic field problems.

✓ Topsoil and subsoil samples are taken for physical and chemical analyses.

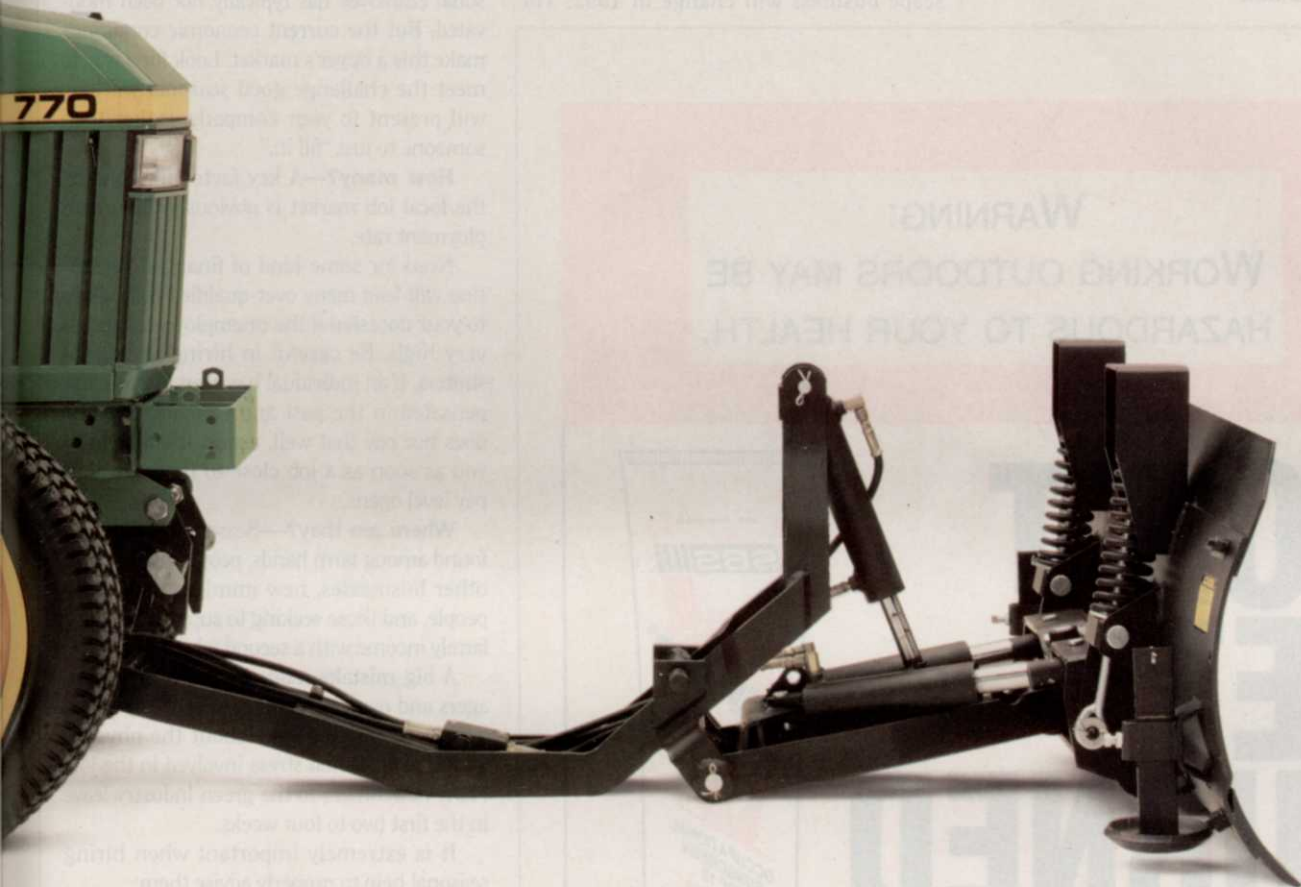
✓ Individual site-specific specifications for each field. They may include:

- provision for stripping, stockpiling, and processing of existing topsoil, for use in the rootzone mix;
- selection of the sand used in the modification process;
- the quality of sod; and
- the characteristics of the soil in which the sod is grown.



—Dr. Henry W. Indyk is turfgrass consultant with Turfcon/GSI Consultants of the Greenway Group, Horsham, Pa. and extension specialist emeritus in turf management, Rutgers University. He serves on the board of directors of the national Sports Turf Managers Association.

Watch closely.



We're about to
show you how easy
it is to hook up
a John Deere.

Best seasonal help can easily be yours

Seasonal workers can make welcome contributions. Determine your needs, and how they can fit into the picture.

by E.T. Wandtke

■ Using seasonal, temporary workers lets companies avoid extra costs which come with full-time personnel, and at the same time bring new enthusiasm into the lawn or landscape company.

Why they'll work—The skills and quality of potential seasonal employees applying for jobs with your lawn or landscape business will change in 1992. The

applicant will possess more skills, be more performance driven, and may be an overall better potential employee than you have seen in the past.

Generally, these people are looking for more than just a job; they are seeking the opportunity to learn more skills and a way to apply their knowledge. In the past, the seasonal employee has typically not been motivated. But the current economic conditions make this a buyer's market. Look for a way to meet the challenge good seasonal workers will present to your company, rather than someone to just "fill in."

How many?—A key factor influencing the local job market is obviously the unemployment rate.

Need for some kind of financial restitution will lead many over-qualified individuals to your doorstep if the unemployment rate is very high. Be careful in hiring these job-shifters. If an individual has been highly compensated in the past and your job opening does not pay that well, expect them to leave you as soon as a job close to their previous pay level opens.

Where are they?—Seasonal workers are found among farm hands, people laid-off from other businesses, new immigrants, retired people, and those seeking to supplement their family income with a second job.

A big mistake made by personnel managers and owners is failing to properly advise a prospective employee about the physical and environmental stress involved in the job. Many newcomers to the green industry leave in the first two to four weeks.

It is extremely important when hiring seasonal help to properly advise them:

- the job is physically demanding
- they will be expected to work in almost all weather conditions; and
- the hours are sometimes longer than usual.

When to recruit?—Establish how many extra people you need two months before you advertise. Let current employees know of your needs, and perhaps they can recruit for you.

Post notices at local churches. The quality of those applicants, their integrity and highly dedicated work ethic often has resulted in higher-than-expected performance from all of the employees they come in contact with.

Consider hiring retired people. They may not be capable of performing all of the jobs, but they may surprise you. In addition, their dedication is unbelievable.

continued on page 96

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