

nerstone.



Fairway



Green

Two out of three superintendents spray their tees, fairways and greens with Daconil 2787. It's the cornerstone of their disease control program. And for some solid reasons.

Only Daconil 2787 controls 12 major turf diseases on over 90 grasses under various climatic conditions.

And, only Daconil 2787 has a 19-year record for consistently superior performance. Especially on tough diseases like brown patch, dollar spot and leafspot.

What's more, there's never been a

documented case of disease resistance to Daconil 2787.

And remember, you can reduce the chance of a disease developing resistance to other fungicides by tank mixing Daconil 2787 for its labeled diseases, with the other fungicides to which disease resistance may develop.

Daconil 2787. The cornerstone of a solid disease control program.

Fermenta ASC Corporation,
5966 Heisley Road, P.O. Box 8000,
Mentor, OH 44061-8000.



Always follow label directions carefully when using turf chemicals.
® Registered trademark of Fermenta ASC Corporation.

LIKE A GOOD NEIGHBOR

What you don't see on your Sunday drive down the interstate is the behind-the-scenes activity of the nation's roadside managers.

by Terry McIver, associate editor

On any given day, the typical roadside vegetation manager shoulders unseen responsibility for the safety and driving pleasure of the everyday traveler. And although the family out for a Sunday drive (if any families still take Sunday drives) won't see many roadside workers, the industry is becoming more visible in the light of environmental concerns related to pesticides.

For this article, we spoke with some of the country's best roadside vegetation managers and found:

- Most are concerned about how their work impacts the environment.
- They're willing to do what they must to save the environment, yet hope that compromises can be made.
- They take pride in the work they do that is less glamorous but nonetheless satisfying.

Ohio programs varied

Dave Moellenkamp manages 3900 miles and 19 rest areas in northern and central Ohio.

Lately, he's been especially proud of ODOT's wildflower program, which currently covers about two acres of "his" roadsides. A number of states are planting more wildflowers, and Moellenkamp says that experiments have yielded some positive wildflower seeding developments.

"We're using the no-till method," Moellenkamp explains. "Originally, the planting process began by using a dethatcher to scarify the ground. We

found it did a much better job than roto-tilling, and it eliminated a weed problem that was created with roto-tilling. But about halfway through the summer we ended up with a weed patch. The wildflowers did beautifully to begin with, but then the weeds took over."

According to Moellenkamp, a no-till seeder was the solution. It causes less soil disturbance—which minimized weed problems—and minimizes labor. In fact, the idea earned Moellenkamp an "Efficiency in Government" award from the state. The seeder, made by Wild Seed, Inc., of Austin, Tex., plants seed in a 42-inch-wide strip.

Moellenkamp has also conducted recent experiments with turf seed, and he now uses a Triplex seed mix for shady spots at rest areas.

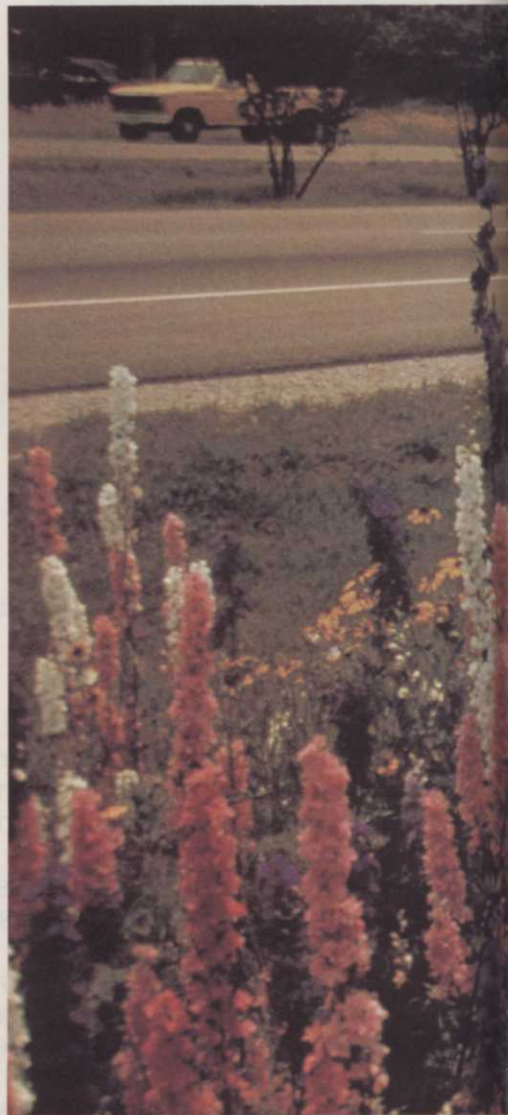
The mix, consisting of Rebel, Bonanza and Olympic, is a narrow-bladed tall fescue that also holds up to lots of foot traffic.

Caught in the middle

Moellenkamp says application of pesticides were cut back over the last six to eight years due to public opinion. But now they're hearing from another group: farmers.

"We're finding that the vegetation has to be managed, and we're going to have to start doing some selective

Dave Moellenkamp of the Ohio DOT is surrounded by wildflowers, which have become a welcome sight for travelers along the Ohio interstate.





As roadway traffic increases, erosion control becomes a more important duty in the manager's daily activity.



The Ohio DOT uses this no-till seeder to plant wildflowers.



Setting standards in applicator training programs

A pesticide applicator training program in the final stages of development at Purdue University could become the national standard for the roadside management industry.

According to Harvey Holt, professor of forestry at Purdue, the program was initiated largely by chemical manufacturers interested in improving the image, efficiency and safety of roadside spraying.

The manufacturers approached the EPA and the Washington, D.C. cooperative extension service, says Holt, for guidance and suggestions about establishing a training curriculum that could easily cross state lines.

As an outgrowth of that discussion, the extension service—under the guidance of Bonnie Poli, national program leader of the extension service pesticide training—put together a national curriculum committee composed of state and landscape supervisors and people in charge of state programs.

The committee drew up an outline of standard material crucial to the performance of all roadside applicators.

Holt says the EPA and USDA have identified standards of certification for labeling, environmental protection and safety, applicator equipment calibration, laws and regulations. Some of the information is "core" material—that is, concepts applicable to every facet of the green industry. The "category" segment is composed of eight disciplines, including forestry, turf & ornamental, and agriculture. "These are well-defined groups of people using particular products in particular ways," says Holt. "They need information to do their job better."

The roadside applicator text includes segments on plant biology; characteristics of plant growth regulators and herbicides; equipment calibration and maintenance; general problems encountered in vegetation management; applicator safety and public relations. The public relations guidelines contain ways to communicate with the public and the media, fielding complaints, and crisis management.

The training program has been modified along the way. In a fine example of cooperation, various industry experts have offered suggestions for improvement.

"The roadside people in most states wear a large number of hats and have a wide range of responsibilities," says Bob Tatman, horticulturist with the state of Ohio, and member of the curriculum committee. "The training program covers all aspects of roadside work, starting from why we spray, and going up through calibration, public relations, and how plants are affected by different types of chemicals."

Tatman and others hope the program becomes the core training material for roadside applicators.

Dan Zay, a consultant from the Indiana DOT, says he's pleased with the support shown by many interested parties.

"In particular," notes Zay, "just the fact that everybody's behind it is important. The videos being developed along with the package will be important tools, educating other people within the department who may oversee herbicide programs or have some influence, yet who don't fully understand application."

Hoyt says the committee plans to present the final training program at the next annual meeting of the National Roadside Vegetation Managers Association in September 1990.

"We want the states to feel they can suggest corrections and additions," says Hoyt. "Our objective is to make it acceptable to the states and the certification and licensing agencies."

—Terry McIver □



Bob Tatman: he and others hope the Purdue program becomes the core training program.

spraying or it's (vegetation) going to take over the right-of-way," explains Moellenkamp.

"We're also finding farmers are becoming aware of the lack of spraying because the weed seeds are blowing into their fields. Before, (the farmers) were all for (reduced spraying); now that we've cut back, we're hearing things."

Most of the state's applications are contracted out, but ODOT crews will do some custom spraying on guardrail broadleaf weeds and cattails. Efficiency and safety are, of course, prime concerns.

"People are more aware of it, and we try to keep it to a minimum," admits Moellenkamp. "We use chemicals that are EPA approved; 14 of our people are licensed to spray, and they also attend training programs every three years to maintain their licenses."

Moellenkamp says the ODOT will soon begin using a computerized spray system designed by Cross Equipment of Albany, GA. The solutions are mixed as they are sprayed. This eliminates leftover solution, and makes for more accurate spraying.

Bob Tatman, horticulturist with the Ohio DOT, continues his own re-research with Ohio's wildflower program. His attempts to obtain native Ohio seed have been moving along slowly but surely.

"We've started our own nursery to grow native wildflowers, which should be much more competitive to vegetation," says Tatman. Other efforts include hand-collecting 65 pounds of seed last year. It's a bidens variety—a stick-like plant with a sunflower bloom, which Tatman hopes to plant on shale to control erosion.

"Caution" signs are up


Dan Zay, landscape specialist for the Indiana DOT, sees a trend of caution in herbicide use as applicators look more closely at spray programs to be sure application is justified.

"In general terms," says Zay, "long-term residual chemicals are scrutinized more closely. If they hang around, there's potential for them to move. I think they give you less flexibility in your program."

Zay and the IDOT are considering centralizing operations more to make sure they have proper control and training among road crews.

Applicator training paramount

Jim Erwin of Oregon's Douglas County Road Department makes training a priority when it comes to application of control products. Six full-timers and three seasonal people work in the county's noxious weed



WE'D LIKE TO TELL YOU ABOUT THE BIRDS AND THE BEES.



We'd also like to tell you about pets and other animals, and hundreds of species of ornamental plants.

Because they are the biggest reasons to use Mavrik Aquaflow.[®]

Mavrik[®] is water-based, effective at very low rates, and gentle on beneficial species. It is a non-restricted product and can even be sent through the mail!

Mavrik won't harm plants either, not even when sprayed on open blooms.

Yet Mavrik has excellent broad spectrum efficacy against most insect pests as well as mites.

So switch to Mavrik. Then if your customers are concerned about the materials you use, you can tell them about the birds and the bees too.



SANDOZ
CROP PROTECTION
CORPORATION
DES PLAINES, IL 60018

Use pesticides effectively. Read and follow label directions carefully.

© 1989 Sandoz Crop Protection Corporation
Mavrik and Mavrik Aquaflow are registered trademarks of Sandoz, Ltd.



control program.

"Once a person gets a license through the state department of agriculture," says Erwin, "we feel it takes two years of training before we can send them out alone to apply herbicides. I've been a supervisor for over 15 years and never had a claim."

On the public relations front, Erwin says people in the county have become well-informed as to what's being done and which chemicals are in use. Still, more than 70 percent of Erwin's job involves personal contact with citizens.

"We try to be a good neighbor with everyone," says Erwin. "But at the same time, we want the public to realize we have a job that we have to get done. We can't jeopardize public safety over a difference of opinion. We try to treat every property owner as if we lived there and believed what they believe. We can't make everybody happy, but we try."

Traveling south

Bill Johnson of the North Carolina DOT has changed the name of his department to the "Roadside Environ-

mental Unit," to emphasize the closer link between the highway system and bordering habitats.

A new emphasis has been placed on sedimentation control, with closer adherence to a revised sedimentation law. The law was amended to include more "high quality" water areas. Standards are being changed dramatically to filter out more sediment in run-off water. The changes include

Safety and concern for the environment are the top priorities of today's roadside managers

golf courses and amenity areas.

"We had been designing sediment basins to meet run-off requirements for a 10-year 'storm event,' which is the maximum storm you can expect every 10 years," says Johnson. "Now they require settling efficiencies in basins, and run-off capacity to handle a more severe 25-year storm event."

Johnson says rocks of various sizes, varied filtration rates, dams, stone traps and stone filter basins are much more effective means of erosion control than strict use of fabrics.

Johnson says the North Carolina DOT was approached recently by zoology professors from North Carolina State University interested in using right-of-way areas for habitat protection. Johnson says the task force would like to see certain areas be held in an "old field successional stage," composed of briars and brushy vegetation.

"The brushy zone is the best stage for these type of wildlife," says Johnson. Although the plans are still in the formative stage, there is expected to be a welcome reduction in mowing.

Johnson, like Moellenkamp, has made some changes in the type of grass seed used along roadsides, to require less mowing. "In warm-season areas, like to the east and south of Raleigh, we're adding centipede grass. In cooler-season areas, like Charlotte and Winston-Salem, we're adding hard fescues and a bluegrass mix to improve the turf species."

As Tatman says, the roadside vegetation manager "wears a number of different hats." The secret to success lies in doing it by the book, fostering efficiency among workers, the ability to adapt to adverse conditions, and the wisdom of experience. **LM**

Stop Erosion!



Add **FiNN** Fiber-Plus to Your HydroSeeder® Slurry.

FiNN Fiber Plus is a synthetic fiber which, when added to standard slurry mixtures, creates a highly tenacious slurry that adheres tightly to the soil surface. This tough, long-lasting mulch mat protects seeds during germination from the damaging erosion of wind and rain and allows the soil to breathe. Fiber Plus is economical and easy-to-use, and improves spraying performance while reducing or even eliminating the need for chemical tackifiers.

Use of Fiber Plus results in a dramatic decrease in the need for costly reseeding of erosion damaged areas, which saves both time and money. Once you experience the results that FiNN Fiber Plus produces you'll agree that it's the best way to stop soil erosion.



"Our hydroseeding jobs always include Finn Fiber Plus, whether we are hydroseeding fairways or residential lawns. We have found it prevents costly reseeding visits due to soil erosion problems that mulch alone cannot control.

"Fiber Plus allows the seeding contractor to shop for the most cost effective mulch, as Fiber Plus dramatically enhances the effectiveness of all mulches."

—Mr. Gary Q. Miller, President, Pittsford Tree and Landscape, Inc., Mendon, New York

For all the facts about Finn's complete line of landscaping, reclamation and erosion control products and equipment call or write us today.

Phone (513) 874-2818
Toll Free (800) 543-7166 • FAX (513) 874-2914
9281 LeSaint Drive, Fairfield, Ohio 45014

FiNN
CORPORATION
The Proven Choice of
Professionals

SHINDAIWA BURIES THE COMPETITION.

At just 8.6 pounds, our Shindaiwa 360 is one lightweight that really packs a wallop. It challenged some of the biggest names in the woods and left 'em in the dust.

THE MOST POWER. THE LEAST WEIGHT.

Our 360 delivers 2.5 horses of raw power right out of the box. Which makes the 360 the most powerful saw of its size on the market—powerful enough to handle 14" to 16" bars with ease. It's a perfectly balanced, lightweight, high-revving machine with an anti-vibe system so well designed that it makes wood cutting positively enjoyable. Even the sound of its exhaust tells you this baby was built to perform.

SMALL ON SIZE. BIG ON FEATURES.

The 360 works like a pro 'cause it's built like one. It's the only saw in its class with every one of these big pro saw features: A one-piece electronic ignition for fast, reliable starts; an adjustable clutch-driven automatic oil pump for better chain oil economy, a 2-ring piston for

long-term performance; a 2-stage air filter for added engine protection; a captivated recoil spring for long service life; a replaceable Micarta rope guide for easy maintenance; a one-piece 4-bolt muffler for added quiet and a fully adjustable carburetor that's boot mounted to absolutely eliminate vapor lock.

SAFETY FIRST.

Safety is enhanced by rear hand guards, safety chain brake, throttle interlock, low kick-back chain, a reversible low-kick sprocket nose bar and a rubber-coated chain catcher. All standard. The 360 also features a full 6-point anti-vibration system, so it's surprisingly comfortable to work with. It's less fatiguing. More productive.

BUILT TO LAST.

Our new 360 is built to log the hours. All of which will

really fly by. Because unlike bulkier saws, the Shindaiwa 360 is actually fun to cut with.

AND SPEAKING OF STRENGTH...

Shindaiwa chain saws are backed by one of the strongest dealer networks in the country. So you'll always have the parts and service you need. When you need them.

EVEN OUR GUARANTEE IS STRONG.

We're so proud of our new Shindaiwa 360 that we back each one with a 7-day money back guarantee: Try our 360 for one full week. If you're not convinced it's the best small saw you've ever used, we'll buy it back. No questions asked.

That's one tough guarantee.

But then again, it's one tough saw.

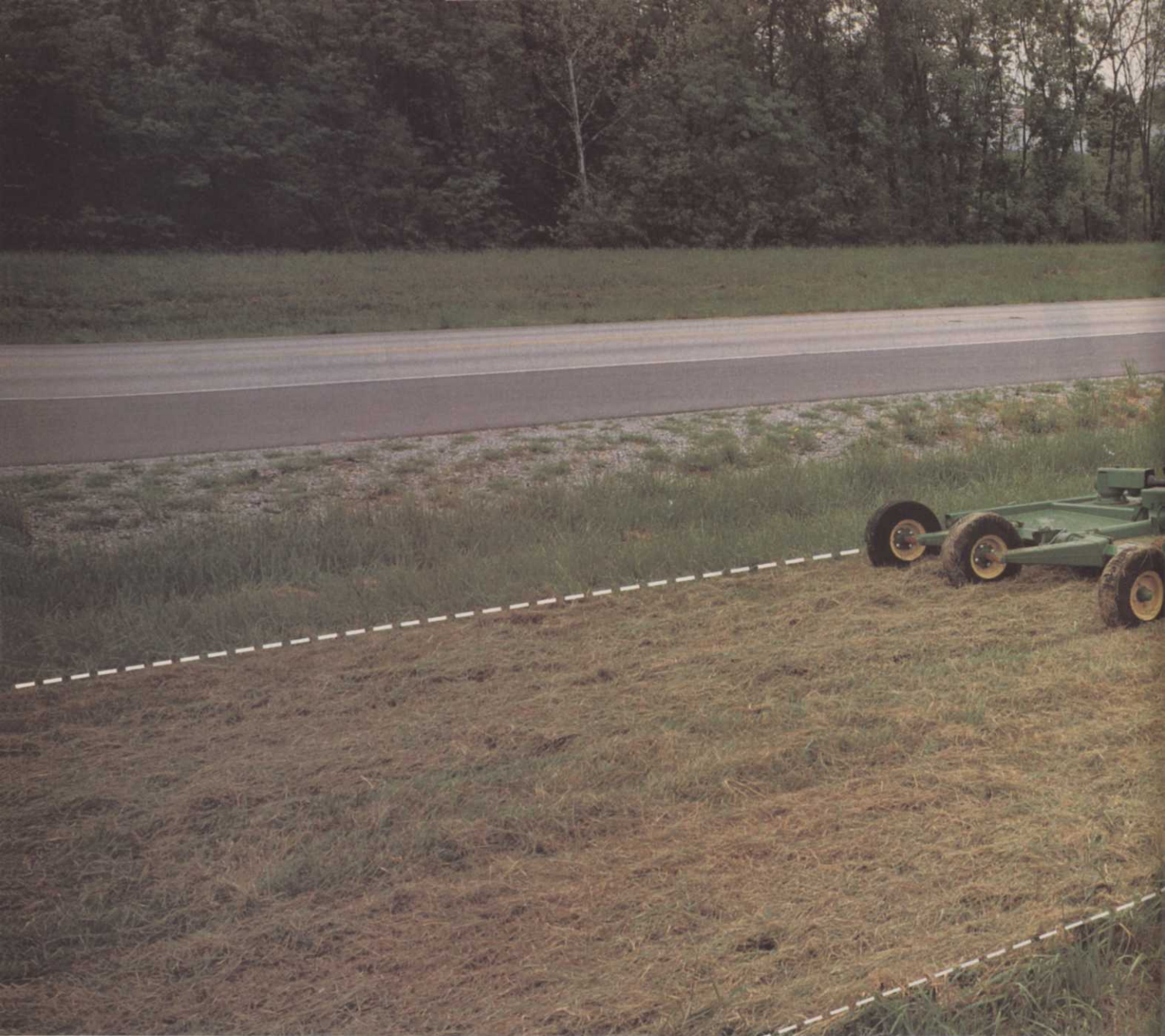
shindaiwa®

WE SIMPLY MAKE THEM BETTER.

11975 S.W. Herman Rd., Tualatin, Oregon 97062

Circle No. 133 on Reader Inquiry Card





Roundup® makes mowing more

Manage more miles.

Complement your mowing and other mechanical vegetation control methods with Roundup® herbicide. Roundup helps you get more done by making mowing faster, easier and more cost-effective.

Crews won't waste time dodging brush every time they mow when brush is controlled — once and for all — with Roundup. A trim and edge or bareground application of Roundup can also save you lots of time. Operators will spend less time backing up and maneuvering around bridge abutments, delineators, signs and guardrails. In fact,

Roundup can actually eliminate labor-intensive string trimming or hand mowing.

And when you use Roundup in a Bermudagrass or Bahiagrass release program, you won't have as many weeds and vines choking your mowers. That means crews can run in a higher gear and complete circuits sooner, or even reduce the number of mowings required.

More efficient use of money and manpower.

Because Roundup saves you time, it can also cut labor and repair costs. Compare the effort and expense of mechanical brush removal with the

ease and speed of one application of Roundup. Or use Roundup in a release program to eliminate a mowing cycle. Think of the money you could save on equipment maintenance.

Another way to keep costs down is to use Roundup instead of string trimmers. When crews no longer need to trim and edge constantly, you'll no longer face string trimmer repairs. And you can channel that manpower into actual road maintenance.

More peace of mind.

No matter how you use it, Roundup can help you increase sight distances



©Monsanto Company 1990

Roundup is a registered trademark of Monsanto Company.

efficient, any way you cut it.

and improve motorist safety. Furthermore, this non-residual herbicide will not wash or leach in the soil. It binds tightly to soil particles and stays where you apply it. So you can streamline your program with confidence.

Find out how Roundup can lower your overall vegetation management costs by making your program "mower" efficient. Call:

1-800-225-2883



Mowing crews save time and effort by treating brush with Roundup.



Use Roundup to release desirable turf and prevent erosion.



Imagine not needing to do string trimming/hand mowing.



Roundup lets you suppress seedheads, which reduces the number of mowings required.

ALWAYS READ AND FOLLOW LABEL DIRECTIONS FOR ROUNDUP HERBICIDE.

RIP-0-271D

Circle No. 125 on Reader Inquiry Card

BUILDING SAFER ATHLETIC FIELDS

Careless planning, construction, or maintenance of a playground is an invitation to an accident and lawsuit.

by Jim Leatzow

So many potential liabilities are created by athletic field design, construction and maintenance that you need to look at each separately to understand them all.

The first liability risks belong to every member and element of the design team. To avoid liability, designers must consider factors such as soil suitability for specialized turf, irrigation, drainage, equipment specification, lighting, plant material in common areas, fencing, signage, training surfaces, traffic and pedestrian walkways.

The second liability exposure

arises during the construction, when the designer's plans are implemented.

Thirdly, the landowner has the final responsibility for an athletic field and the activities exercised on it.

In today's litigious society, the suing party (plaintiff) will attempt to enjoin as many of these original parties involved as possible in order to create a "deeper pocket."

The design stage

The most basic design must begin with an examination of the specific soil. It should be tested by a laboratory to determine if it will support suffi-

cient cushioning material (turf) to keep the field safe.

Drainage is also a very important aspect of the design. If you end up with standing water on a field, plant material cannot survive.

Depending on the field's use, it may be critical to include a crown to enhance water run-off.

Also, specify hardy turf that can withstand the rigors of a sports field environment.

When a sport field has a "tot lot" adjacent to it, it is critical to use the specified equipment, which has been in use for quite some time and proven itself to be safe for children's play.

Cushioning material

All areas, be they tot lots or sport fields, require cushioning material. Specify future maintenance, including specific manufacturer's equipment maintenance instructions.

Irrigation and lighting are also potential liability problems. For example, if the irrigation system is improperly designed, it might not provide sufficient water flow and result in bare spots. Or perhaps the sprinkler heads clog easily or stay in an upright position. Compacted soil around sprinkler heads requires the property owner to keep refilling the soil around it. The designer should include this

