

Powdery Mildew gets its name from the early stage growth of a gray-white powdery fungus on the leaf surface. In cases of high incidence, entire turf areas may appear dull white. Prevent fungus growth with 1-2 oz. every 14-28 days.



Spring Dead Spot \*appears as circular, straw-colored patches on Bermudagrass leaves just as they begin to green-up in spring. The rest of the plant is affected with black to brown dry rot. University research indicates preventive control can be obtained with 4 oz. applied in the fall.



Rust shows up first as light yellow flecks on the grass leaves. If left untreated, leaf surface will eventually rupture and yellow-orange or reddish-brown pustules develop. Preventive treatment calls for 1-2 oz. every 14-28 days.



Brown Patch is recognized by a "frog-eye" pattern formed by the diseased turf encircling green, unaffected plants. For prevention, apply 2-4 oz. every 10-21 days. If disease is already present, apply 2 oz. with a registered contact fungicide.

## you treat each disease on its own turf.

inate rate, Banner gives you the precision to treat up to a total of twelve specific turf diseases with their own recommended rates, timing, and frequencies. Rates that, in many cases, are lower than those that are required with other turfgrass fungicides.

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Breeding lessened the amount of coarse fibers in tall fescue and retained and improved its tolerance to heavy traffic. The newer turf-type tall fescues are, in almost every regard, superior to the pasture-types.

### TALL FESCUES FOR DRY, URBAN LANDSCAPES

Successful breeding and selection programs of tall fescues have produced the turf needed to fill in the hot, dry, low-maintenance landscapes where bluegrass often fares poorly.

by Bob Morris and John Van Dam

f the cool-season grasses, tall fescues have become a frequently-planted species for year-round green color in dry urban landscapes.

Originating in Europe, fescues were first introduced as pasture grasses. Gradually, five varieties were developed and used for turf purposes.

Kentucky 31 and Alta are excellent choices for areas that need a yearround green turfgrass cover but do not necessarily demand a high level of quality.

With the expansion of the turfgrass industry, there arose the challenge to develop turfgrass varieties that looked good, were heat tolerant and were capable of survival in dry, urban landscapes. Turfgrass scientists and breeders, attempting to fill the void, turned to the heat and drought tolerant tall fescues. They were known to grow on marginal and heavily com-



A closeup look at leaf blades of Kentucky bluegrass (left), perennial ryegrass (right) and pasture-type tall fescue. Pasture-types were originally developed for animal grazing but found acceptance in less expensive, low maintenance landscapes. pacted soil and sustain themselves at lower levels of nutrition than most other grasses.

In addition, tall fescues are relatively pest-free in low humidity areas. Their good shade tolerance ranks them superior to any other choice. They are recognized as the cool-season grasses most likely to persist in hotter, dry regions of the United States.

Tall fescues do have limitations to their heat tolerance. They have not performed well, historically, in the Palm Springs area where a combination of very hot temperatures for extended periods have caused them to fail. At the opposite end of the thermometer, tall fescues have failed during the winter months in the northern U.S. where temperatures have dropped to sub-zero without a protective snow cover.

Because tall fescues are cool-sea-

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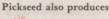
extremely well under low maintenance conditions like minimum fertilization, watering and mowing. National tests and actual applications in parks, golf courses and playing fields have proven it.



MUSTANG TURF TYPE TALL FESCUE

That's why Mustang is becoming the favorite choice of professional turf managers, over K-31 and many other commercially available varieties.

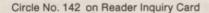
For bluegrass qualities and tall fescue practicality, use the professional's choice—Mustang turf-type tall fescue.







and other fine turf grasses available nationwide from quality seed suppliers.





### ESTABLISHING A TALL FESCUE LAWN

Like other cool-season grasses, tall fescue lawns can be started from seed. The following suggestions will improve the chances of obtaining a successful, high quality stand:

• Even though tall fescues perform well on poor quality soils, they perform better if the soil and seedbed are well prepared to maximize the potential for a stand of high quality.

• Pasture-type and turf-type tall fescue seed should never be mixed for the same turfgrass area. There are some advantages to blending different varieties of tall fescue.

• The preferable time to seed tall fescues in dry climates is in the fall. Spring seeding is the acceptable second choice. The fescue varieties are slower to germinate than perennial ryegrass but faster than Kentucky bluegrass.

• Tall fescue seedlings are relatively slow to mature and establish. Following seeding, traffic should be kept to a minimum until the stand becomes established.

• Low-impact landscapes are usually seeded at six to eight pounds per 1,000 sq. ft. (260 to 350 pounds per acre). The rate for high impact land-scapes is eight to ten pounds per 1,000 sq. ft. (350 to 435 pounds per acre).

If the area is to be sodded, the fescue selection must be turf-type, since the pasture-type is not available as sod. Sod can be purchased either as a blend of several turf-type varieties or as a mixture of Kentucky bluegrass.

Sod producers generally mix tall fescue seed with a mildly aggressive Kentucky bluegrass, at a rate not exceeding five percent by weight. This is done to give the sod strength, improve the sod's recuperative potential and make it easier to handle during installation. Some of the bluegrasses used include: Baron, Merit, Ram I, Nassau, Columbia, Adelphi and Parade.

Maintenance of a tall fescue turf stand after seeding or sodding is similar to that of any cool-season turfgrass. Deep and infrequent irrigation will encourage a deep root system and enable the stand to persist during periods of stress.

Fertilizer applications may be at lower rates and at reduced frequencies in contrast to those for other cool-season grasses, and yet the grass will maintain good color. Herbicide applications should be restricted until the seeding grasses have been mowed at least three times.

Tall fescue lawns are slow to mature so traffic should be kept to a minimum throughout the entire establishment period.

Disease problems on newly seeded lawns generally relate to over irrigation. Frequent watering on slow-draining soils may cause the new lawn to die back in isolated patches. Scheduling deeper, less frequent irrigations usually remedies the problem without the use of fungicides. —The authors □

son grasses, they do have disadvantages (table 1). Their water use rate can exceed that of Kentucky bluegrass as well as that of more heattolerant, warm-season grasses like bermudagrasses and zoysiagrasses. Tall fescues are bunchgrasses. They grow in clumps and do not spread to form a sod, like varieties of bermudagrass and bluegrass. If a stand of tall fescue is not properly maintained, it will begin to bunch. Leaf blades will be noticeably wider and the texture of the stand will become increasingly more coarse. Their recuperative potential is very poor so recovery from injury is slow. To keep a tall fescue lawn dense and

thick, it should be overseeded, ideally, each fall.

#### Sorting the varieties

Tall fescues are further divided into two more groups: pasture-types and turf-types. Fine fescues are very narrow-bladed, shade-loving grasses that do not grow well in hot, desert climates. In contrast, tall fescues do well in such an environment.

Pasture-type tall fescues are coarse-textured grasses represented by varietal names such as Kentucky 31 (K31 or KY31), Alta, Fawn or Goar. Pasture-types were originally developed for animal grazing but found acceptance in less expensive and low maintenance landscapes such as airfields, roadsides, athletic fields and soil conservation projects where their coarse texture was not objectionable.

Among the pasture-types, Kentucky 31 has been the leading performer for turfgrass areas. Pasturetypes are still used for low maintenance turf areas.

#### **Turf-type tall fescues**

Turf-type tall fescue cultivars represent recent advancements in turfgrass characteristics over the pasturetypes. Breeding and selection programs begun in the early 1960s centered on developing fine-leaf textured fescue cultivars that also contained the many favorable characteristics of tall fescues. This breeding effort produced more than 40 varieties, the first of which was released in 1979. Now, a second generation of turf-type tall fescues has been released, as represented by the introduction of Jaguar, Bonanza, Rebel II, Arid, Apache and Monarch. This new, second generation has shown some very significant and dramatic improvements over its predecessor.

#### New and improved

While some turf-types have performed better than others, all have demonstrated marked improvements over pasture types (table 3). When grown side-by-side with pasture types, turf-type varieties have a darker green color, finer texture and denser appearance. This gives the turf an appearance that closely resembles Kentucky bluegrass.

As the turf matures, the stand begins to thin due to losses from crowding, insects, disease, mechanical injury and normal plant senescence. As with pasture-type tall fescues, turf-types are also bunch grasses. They do not spread to fill in open or weak areas like the rhizomatous bluegrasses are able to do. These areas, consequently, must be reapaired by reseeding or resodding. Again, an annual overseeding in the fall will help to maintain the turf as an attractive sward.

Even though tall fescues are relatively pest-free, some diseases are still problems. Diseases such as pythium, brown patch and leaf spots still exist. The newer varieties have shown improved disease resistance. In addition, the newer tall fescues are quite shade tolerant.

In the past, one serious drawback to the use of tall fescues was their appearance after mowing and trimming. The cut ends of the tough, fibrous leaf blades turned brown and ragged. With newer turf-type variSurflan. Roundup. Mix them together, and you've got control that knocks weeds down and keeps them down. Three times longer, in fact, than Roundup alone.

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eties, this problem is substantially reduced. Breeding lessened the amount of coarse fibers but retained and improved their tolerance to heavy traffic. The newer turf-type tall fescues are, in almost every regard, superior to the pasture-types.

#### Landscaping with fescues

In general, tall fescues are extremely well suited for landscape and recreational areas where water availability and quality is not a problem, low maintenance is desired, appearance is not of prime concern, and establishment and maintenance costs must be minimized. They are an excellent choice for athletic, play and recreational areas, commercial landscapes, low maintenance parks or other areas where the grass is subject to a great deal of traffic. LM

Bob Morris is an extra extension specialist, University of Nevada, Reno, John Van Dam is a turf advisor, University of California Cooperative Extension. Next month, part two of this artice will appear under the title "Managing Tall Fescue In Urban Lakescapes."

#### TABLE 1.

#### **ADVANTAGES AND LIMITATIONS OF TALL FESCUE AS A TURFGRASS**

#### **ADVANTAGES**

Deep rooting for drought avoidance Moderate fertilizer use Good recovery from drought Relatively pest free Once established, tolerates foot traffic Tolerates poor soils Good shade tolerance Green all or most of the year

#### LIMITATIONS

Higher water use than warm season grasses Poor mending or recuperative power Moderate salt tolerance Requires good quality water Should be overseeded in the fall of each year to maintain density

Source: The authors

#### TABLE 2.

**RELATIONSHIP BETWEEN FESCUES USED AS TURFGRASS** 

#### **FINE FESCUES**

(Festuca rubra)

#### **TALL FESCUE**

(Festuca arundinacea)

#### Pasture-types

Very narrow-bladed, shade-loving cool-season grasses of the Northern climates. Not recommended for hot desert climates. Wide bladed, cool-season grasses for low maintenance areas. Ex: Kentucky 31, Fawn, Goar, Alta. Turf-types

Narrow-bladed, cool-season grasses for medium to high maintenance turf areas. Ex: Rebel, Mustang, Olympic, Jaguar, Falcon, Adventure, Arid, Monarch, Apache, Bonanza, Rebel II.

Source: The authors

#### TABLE 3.

#### **IMPROVEMENTS IN TURF-TYPE TALL FESCUES OVER PASTURE-TYPES**

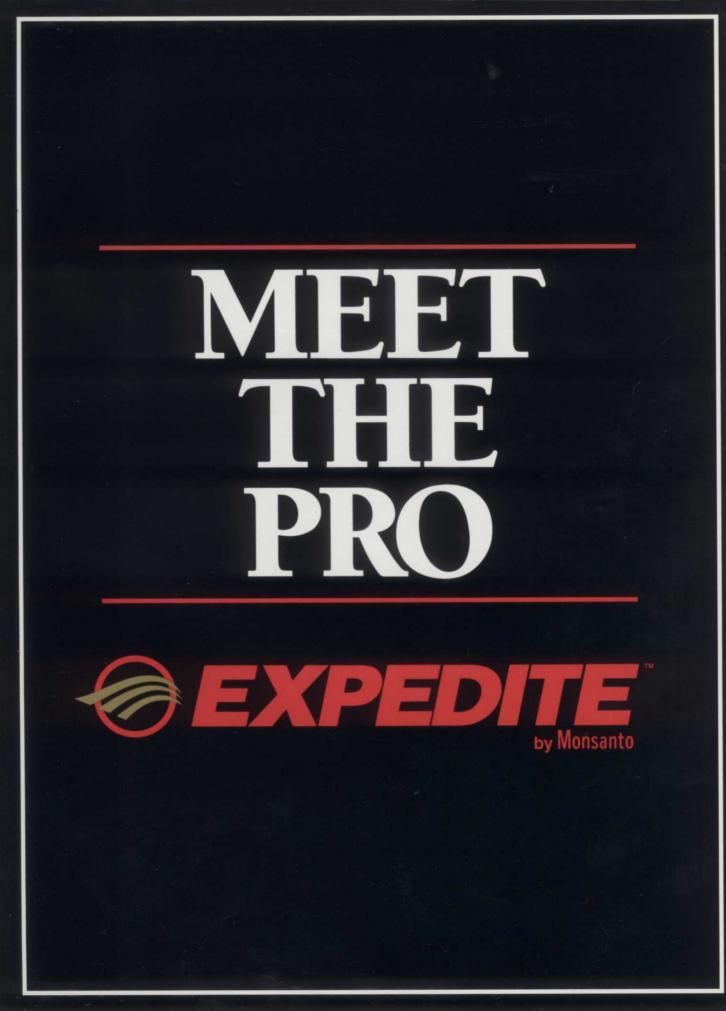
- a darker green leaf color
- 33% finer leaf texture (narrower blade width)
- denser growth habit
- improved persistence (longer life)

- improved disease resistance
- better shade tolerance
- superior tolerance to traffic
- improved mowing qualities

Source: The authors

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#### \*We PROmise

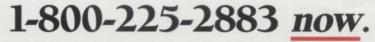
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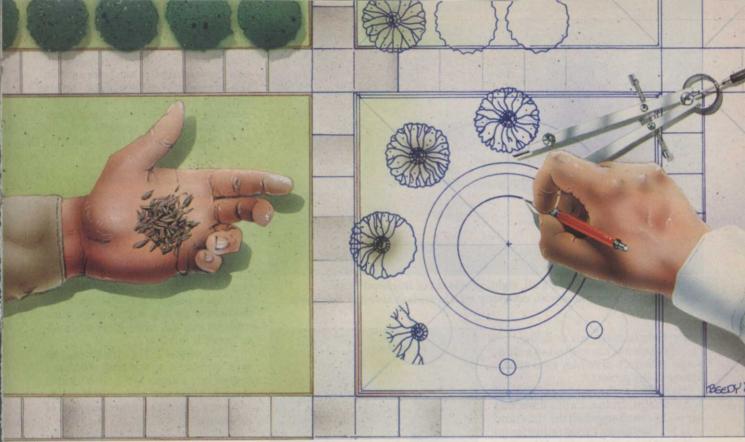
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## PLANNING FOR PROGRESS

In 1981, ambitious contractors and architects, realizing that growth required mutual respect and cooperation, drew up new plans for progress. Have things changed for the better?

By Terry McIver, associate editor

he early 1980s was a period of reflection for professional landscaping. Forward-thinking landscape architects and contractors met to examine the state of the industry. They realized some changes were in order, and made recommendations to their respective memberships.

The annual Associated Landscape Contractors of America (ALCA) "Crystal Ball Conference" of 1981 resulted in "To Serve the Client," a joint report by ALCA and the American Society of Landscape Architects (ASLA). It revealed that too often architects and contractors suffered from lack of leadership and apparent mutual mistrust.

According to the report, "the land-

scape contractor has exhibited something of an inferiority complex in his relationship with landscape architects." The architect was considered timid, behind the times and lacking in forceful supervision.

#### Where to improve

Improvement would depend on the actions of both groups. The landscape architect, the report read, must "...forcefully vocalize his leadership responsibility in the industry." The contractor must "assist in promoting the landscape architect generally and on a project basis, either as a private landscape architect or as part of a design/build team."

Is today's landscape architect a bet-

ter leader than he was 10 years ago? And is the contractor more apt to accept and appreciate the architect's craft?

Tom Lied of Lied's Nursery Company, Inc., Sussex, Wisc., was on the 1981 committee. He says leadership by landscape architects has improved in the country's more progressive areas, such as on the coasts and in certain Chicago-area markets. "These are the pacesetters when it comes to accepting the landscape architect as an important part of what they do," he says.

According to Lied, landscape architects in these markets have benefitted from the progressiveness of those homeowners and developers.

Lied believes there is a prolifera-

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Step 1: communicate. Dave Kull, right, president of Regional Land Systems, discusses plans with company vice president Howard Reynolds.

been made in materials or design.

"If the owner has contacted a landscape architect, give him total supervision of the project."

Harry Kobzeff, president of Kobzeff & Associates, Irvine, Calif., finds that his plans are changed all the time, and says it's "extremely frustrating for an architect who spends a lot of time trying to get things together and to work, then goes out into the field and finds that the contractors are either too busy or too unsophisticated. So they look at the plans and get a general idea and then do it their way."

Architect Walt Young, president of Walt Young Associates, admits that a set of plans may not be as good as they should be. "As far as where some of these problems occur in the field, it probably does start with the plans," he says. But if there's a question, they (contractors) should call us."

#### Experience adds up

Young also realizes that some architects probably have not had as much field experience as certain contractors, so they don't understand how things have to be done.

The solution, once again, is to communicate. "It's very important that there are meetings, and each one understands the other's ability."

"Most of the time," relates Dave Kull, president of Regional Land Systems, Irvine, Calif., "the only time we architects deal with a contractor is if there's a problem. This leads to animosity. There's very little opportunity to interface if there's a problem. We need to build the rapport, to let each one know the other's qualifications. When you deal with people only on a crisis basis, it determines your mindset that way.

"Contractors need to communi-



Tom Lied: Avant-garde, farsighted professionals will move the industry forward.

cate to architects the installation costs. When we estimate a job, we struggle to get current cost estimating information. We need a better forum between architects, contractors and clients."

"We're working toward the same goal," reminds Howard Reynolds of Regional Land Systems. "To complete a project that looks good and satisfies the client, so both the contractor and architect make money."

#### Lack of inspection

Reynolds suggests that architects have done a poor job of promoting field inspections at various times, or going out to pre-bid meetings with contractors, and subsequent meetings throughout the contract's completion. "Work with the contractor," says Reynolds. "Let him know you're going to be inspecting the work. That way, any differences get worked out quickly."

The "Crystal Ball Report" of 1981 described contractors as rugged individualists, but not necessarily good businessmen. Since then however, new types of contractors have entered the market. They are more astute business people with a better understanding of the market and its players. They have a more professional attitude, which should lead them to success.

#### More caring contractors

"Some landscape architects don't feel too strongly about landscape contractors but I do because I teach them and I know they're going to do a good job after (graduation)," says Prof. Edward C. Martin, Jr. of Mississippi State University. MSU students majoring in landscape contracting must take the first three design courses taken by architecture majors, which helps them understand the objectives of landscape architecture.

"That makes a big difference," he says "compared to someone who has a degree in business but doesn't know the principles and elements of art, or anything about the functionalism of its design."

Contractor Robin Tulleners of Irvine, Calif. has learned that a contractor can guide the architect if he understands what the architect is looking for. Architects, too, he feels, can draw some things that are "pretty corny" or "impossible to build or install," which requires contractor input.

"Communication is the most important ingredient. If each group knows the other's requirements, they'll be much better off."

#### **Designers as leaders**

Some contractors believe the industry is best served when its design professionals lead the way. "In fact," says Lied, "if the industry has avant-garde, farsighted, client-sensitive professionals who are willing to take the risk of moving forward, then the industry moves forward."

The big picture indicates that contractors and architects are working well together, much better than in 1981. Accidents happen, things go wrong—just like they do in any profession. But the best in the business adapt, communicate and get on with it. They know that the summer is too short to become mired in contention.

The more contractors and architects continue to experience different working conditions, there is, says Barry Thalden, much to be mutually understood.

"Good landscape architects and good contractors," he says, "still make the best teams." LM

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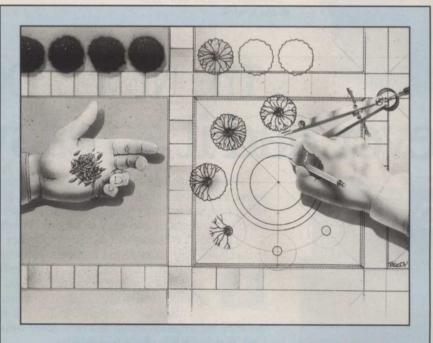
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tion of design/build firms in the areas where the architect's image has been bolstered by the general public.

"This," explains Lied, "enables or requires the progressive contractor to build his own staff to serve his clients in an appropriate manner."

Barry Thalden, a private land-

scape architect in St. Louis, says that during the past eight years clients have become much more familiar with the role of the landscape architect. "As they have worked more with them, their comfort level with that leadership has increased.



### PRESERVATION DEPENDS ON SELF PROMOTION

Apart from what they do to get along with each other, architects and contractors have to be concerned with how they get their message across to the public. Professionals from both groups say part of the struggle for success comes from lack of visibility and image.

#### What they say:

J. Landon Reeve IV: "The market is more competitive. Companies that are more aggressive in marketing are getting the best shot."

Lydia Paneri of Associated Landscapers, Inc., Irvine, Calif.: "We've realized that no two pieces of association literature look the same. We want to make it instantly recognizable as ALCA. Although we hope our members will ascribe to a certain level of ethics, there is no way to say that because they are in ALCA they are a good contractor."

Dave Kull of Regional Land

Systems: "The industry has to do a better job of educating clients and prospective clients of what architects do, why it's important and what it costs. Until there is adequate money out there it's not going to change. Unless a developer understands what his landscape costs are going to be when penciling out his development, and includes those costs in his budget, there's not going to be a lot of change.

"Some people who attend our class on architecture realize the work we do, tell us we're worth every penny, and ask us to do a job for them. We also started teaching at the university, which gives us credibility as professionals.

"Local newspapers call us occasionally for information on what's new in the industry. All those things are subtle and don't cost much."

"We're all trying, to reach those clients who want award winning designs."

—Terry McIver □

#### More opportunity

"Opportunities for landscape architects continue to grow," says Thalden. "Many practice in areas such as planning, historic preservation, administration, research or education where a built project is not the final project."

A disciplined design/build firm is invariably led by the architect. As a multi-disciplined firm, Lied's operates a professional land planning office to serve its professional clients. A design/build staff serves professional clients in the design/build mode, and a retail design staff deals with clients on the retail landscape level. "We cover the market, but try not to confuse the issue by believing that one service is equal to the other," says Lied.

#### A change in plans

A typical complaint of landscape architects—and one which can be used to symbolize the way the two get along—is that contractors alter the original plans without first consulting with the architect. Either the architect can't be reached, or the contractor quite frankly believes he has a better—or less expensive—idea and doesn't need to inform the architect of the change.

Some contractors will substitute materials to save time or money. As one contractor puts it, "as long as there's no one looking over their shoulder to make sure it's done to spec, they basically take the specs and throw them out the window. Once it's underground, who's going to know?"

The architect has a right to see his plans fulfilled as close to what he has drawn, just as a contractor has a right to submit a bid. In an age of advanced communications, failure to confer prior to a plan change is inexcusable.

Unreported plan changes often signal that the architect has lost control of the project. "If the architect has drawn a set of specifications which detail substitutions—which all of them should—it's up to the architect to tell the contractor to remove (anything that was not specified)," says Richard Chiancone of Anthony J. Chiancone Landscape and Nursery, Inc. of South Euclid, Ohio.

#### **Contractor communication**

"Our feeling," says Chiancone, "is that the client has hired a professional landscape architect who must look out for the client's best interest, have the project put out for bid and have it constructed as drawn." Chiancone submits "99 percent" of his invoices to the owner or developer for approval, to insure that no changes have