



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

Of 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 year-round 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-

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 landscapes 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 □

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. Pasture-types 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 pasture-types. 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 repaired 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 vari-

son grasses, they do have disadvantages (table 1). Their water use rate can exceed that of Kentucky bluegrass as well as that of more heat-tolerant, 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

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 recrea-

tional 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**

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TABLE 1.

ADVANTAGES AND LIMITATIONS OF TALL FESCUE AS A TURFGRASS

ADVANTAGES	LIMITATIONS
<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 <i>(Festuca rubra)</i>	TALL FESCUE <i>(Festuca arundinacea)</i>	
	Pasture-types	Turf-types
<p>Very narrow-bladed, shade-loving cool-season grasses of the Northern climates. Not recommended for hot desert climates.</p>	<p>Wide bladed, cool-season grasses for low maintenance areas. Ex: Kentucky 31, Fawn, Goar, Alta.</p>	<p>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.</p>

Source: The authors

TABLE 3.

IMPROVEMENTS IN TURF-TYPE TALL FESCUES OVER PASTURE-TYPES

<ul style="list-style-type: none"> • a darker green leaf color • 33% finer leaf texture (narrower blade width) • denser growth habit • improved persistence (longer life) 	<ul style="list-style-type: none"> • improved disease resistance • better shade tolerance • superior tolerance to traffic • improved mowing qualities
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Source: The authors