

Buying Quality Grass Seed For Lawns, Parks, and Sports Turf in the Northern Great Plains

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Turf establishment from seed or sod is often an unfamiliar process. Whether the expectation and input (e.g.; mowing, fertilizer, irrigation) is modest or great, the hope for turf areas is that they persist from year to year. Informed consumers select grass species and varieties that are best suited to site condition and expected use. It is the first step to planting a new lawn or renovating an old one. Seed company and university plant breeders work to improve turfgrass varieties and bring value and quality to the home consumer and landscape professional marketplace. That value comes from planting certified seed of named grass species and varieties.

However, it is the marketplace where you buy your seed as seed mixtures or blends that is often either an opportunity or obstacle to achieving the desired result.

When the marketplace is an opportunity. It is an opportunity if customers develop an understanding of which grass species and varieties are best suited to their site. Understanding seed labels and taking the opportunity to work with a seed distributor that has a reputation for selling quality certified seed, mixed, blended and marketed for performance based upon use, is always the best practice. Professional markets usually work in that manner. Home consumer decision making could be much improved with a little knowledge about where to get good seed, identifying quality seed suppliers and trusting their well defined product lines (labeled species and varieties) to perform well.

When the marketplace is an obstacle. It can be an obstacle if customers only rely on brand-type labels without further looking at the seed label as to

what grass species and varieties are claimed to be in the package. In some points of sale, only species (sometimes called “kind”) are named without any specific varieties listed and categories such as “common” or “variety not stated” are on the label. So in essence you do not know what you are buying!

The customer that is well informed when purchasing turfgrass seed in mixtures or blends has the best chance of long-term success. This publication will assist you in selecting grass species, blends of grass varieties and grass mixtures that have the best chance to produce, as I like to say, “a lawn to your liking”. It all begins with the seed and if it is appropriate with the buyer’s expectations of what they want from established turf.

Definitions of commonly used terms that matter in choosing the right grass seed:

Grass seed blends:

This is where grass seed products contain at least 2 or more varieties of one species “blended” together in the package. The benefit here is to encourage more genetic diversity with some grass species and have the lawn better tolerate environmental stress or pests. One such grass species where this is highly desirable is Kentucky bluegrass, where blends of 3 to 4 varieties works to strengthen the long-term performance over a single variety. Blending varieties of perennial ryegrass, tall fescue, or fine-leaf fescues has held less advantage as they have not had as much genetic diversity. Yet, there is nothing wrong with blends of these grasses. Blends increase the odds of success and are a starting point. You cannot know which grasses will persist well and at what percent they exist even one-year after

planting. Yet, well planned grass seed ratios, seeding rates and proper establishment lead to the most positive outcomes.

Grass Mixtures:

These products include 2 or more different grass species (Kentucky bluegrass, red fescue, perennial ryegrass, tall fescue and possibly others) to target the mixture for greater chance of persisting in difficult or unique conditions, where a single grass species might find it difficult to persist well on its own. The components that make up the final turf stand will likely change over time in response to management (fertility, mowing, soils, irrigation) and stress (traffic, shade, pests) at each location. Yet, the principals of putting together good grass mixtures help the right grasses persist with good management. Suggested ranges of turfgrass mixtures are listed in Table 2.

Certified seed:

Buying certified seed is highly preferred when it is an option. Certified seed is a guarantee that the species and varieties that are claimed to be in the seed package are actually in the package. Certified seed is usually of high quality, available mostly in larger quantities (50 lb. bags) and it can be what seed companies use to mix or blend smaller consumer packages of seed commonly seen on garden center shelves. Yet, if no certifying inspector is present when the repackaging of certified seed takes place those smaller packages cannot be labeled as certified even though the species and variety names will likely be on the label. This is where the earned trust of your seedsman is important. The best of the certified seed, commonly referred to as “gold tag”, is usually sold to sod producers as they typically proceed with the greatest scrutiny when purchasing grass seed and they will have special certified mixes made specifically for their next sod crop.

Some reasons for selecting seed blends and mixtures.

There are good reasons to consider site conditions and how the turf will be taken care of in deciding what to use. Some basic guidelines include:

Decide on the type of turf quality desired. This can range from a low quality, almost utilitarian-type lawn that

is designed to be useful or practical rather than what we have come to view as attractive. Low maintenance grasses would likely compose such a mixture, and once established, have a greater chance to persist with low inputs (unirrigated, low fertility, little traffic, and infrequent mowing). Moderate to high quality lawns will likely include large percentages of either Kentucky bluegrass or possibly turf-type tall fescue as the predominant species.

Identify any unique turf conditions. These might be reasons to include grass species and varieties in the mix that are adapted to shade (fine fescues), salty areas (alkaligrass), high amounts of traffic (Kentucky bluegrass), little to no irrigation versus irrigated or just a need for a temporary quick cover (perennial ryegrass).

There is a difference in the marketplace for home and professional consumers. Landscape professionals have a greater likelihood to be able to obtain the best in grass seed blends and mixtures than does the average home consumer. Oftentimes they know more, and part of that knowledge is where to get good seed. That does not mean those sources are unavailable to home consumers, only that it might take a bit of effort to find them and to see if they sell the smaller packaging so common on the shelves of garden centers. High quality seed has greater value and will likely be priced higher than low-end mixes or brands.

Looking to work with a seedsman to get a good grass mixture for your site?

Mixtures/blends are best composed of disease resistant varieties, varieties that are similar in appearance (color, growth rate, texture) and at least one variety should be well adapted to any unique conditions. Professional seed distributors are a resource for grass seed and customer service about what they sell and grasses that best suit any situation. Work with them and they will work with you.

Why let your seedsman do it?

Grass seed breeding companies test new varieties in regional and national testing programs, many in cooperation with university turf programs to obtain unbiased performance information, to evaluate if their newer grass varieties will be competitive in the marketplace. The National Turfgrass Evaluation Program

(<http://www.ntep.org>) was organized to independently test experimental grasses (those not yet marketed) and recently marketed varieties for seed companies. The new grasses are compared in replicated trials against varieties that have been industry standards of quality for each grass species at the time the tests are run. Tests are run for 4 to 5 years at multiple national locations (for different climates) with varied management regimes (e.g.; mowing height, irrigation, fertility levels). Seed companies gather data to justify placing a brand name on the experimental grass variety, move them into certified seed production, and to market (see Figure 1).

Many grasses are tested and many companies participate in the NTEP program. Landscape professionals, like sod producers and golf course superintendents, might be interested in looking through all of that test information which is available at the NTEP website. Yet, that is what the seedsman does when working with the companies that they represent, on behalf of their customers. The seedsman blends or mixes grasses together to produce their own line of grass seed products (blends and mixtures). Some large national and regional companies will bring their own products to market if they have the distribution network to do so.

To obtain an idea how many companies and different varieties are actually in the marketplace refer to Table 1 (below). The table lists the most recent NTEP tests by species, the number of individual testing sites, the number of individual states that hosted the test, the number of grasses tested and the number of commercially available varieties that were in production and on the market at the completion of each test.

Each participating company (also listed in the table) has a wealth of information on how to best market their grasses to both professional and consumer markets. Rarely will companies produce blends that include other company's varieties unless they have a cooperative agreement in place.

So what is the best grass?

That question comes up quite often! Actually, when looking at the NTEP test data it will depend on the grass species, region of the country, and the level of management at each site. Statistical analysis of the test data does not typically show one grass outperforming the rest for all traits, but groupings of grasses that are similar in performance. There is great seed available, you just have to find it and recognize its value.

What seed quality can I expect to find at a local garden center/store?

This question is very difficult to answer as it depends on that store's level of commitment to provide quality grass seed mixes with named varieties that will match your needs in establishing your turf. It is highly likely you will not find certified seed as mentioned above. It is also likely that the choices will likely be limited as these stores typically represent only 1 or 2 seed company product lines.

Therefore, it is very much a "buyer beware" marketplace. Often grasses appear on the garden shelves of hardware stores, "big box" stores and garden centers that vary greatly in 1) their packaged name brands (names like "Sun/Shade Lawn Mix", "Premium Lawn Grass Seed", "Sunny Lawn Seed" or "Best In Shade Blend"; 2) the grass species (kind), grass varieties, 3) the percentages of each component; and

Table 1. A summary of the most recent completed NTEP turfgrass trials for number of grasses tested, the number of individual test sites, the number states where tests were held, number of commercially available varieties at the trials completion and the number of companies participating in the trial.

Grass Species	Trial Dates	Individual Test Sites	Number of States	Grasses Tested	Commercially Available Varieties	Companies Participating
Kentucky bluegrass	2005-10	28	23	129	71	27
Tall fescue	2006-11	31	25	113	95	27
Perennial ryegrass	2004-09	32	23	120	96	32
Fine fescue	2003-07	28	22	53	40	21

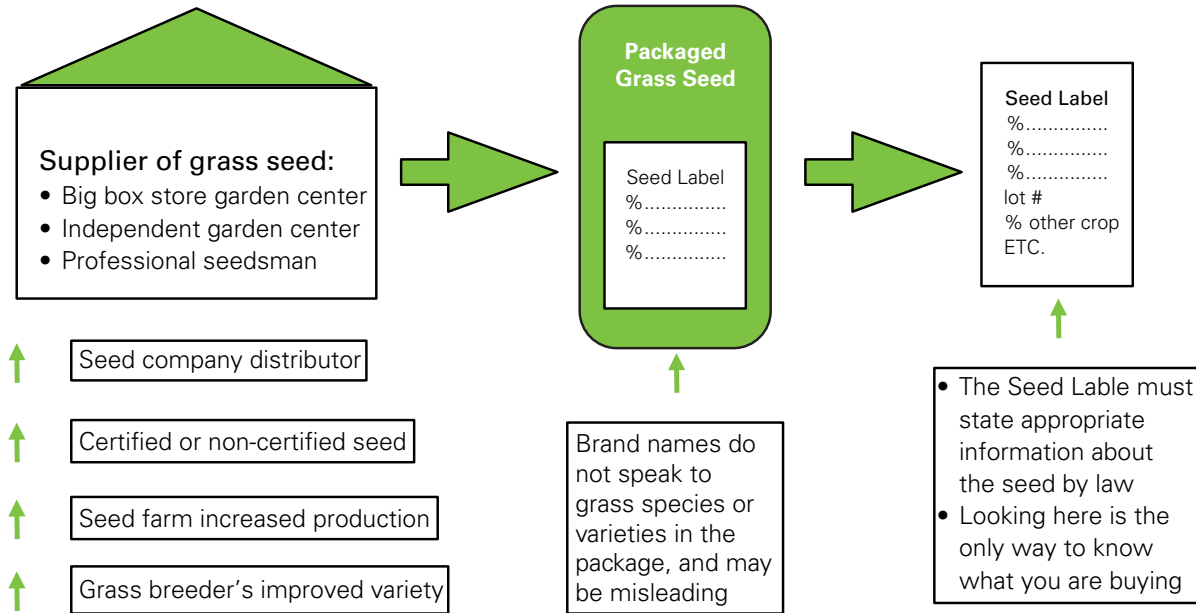


Figure 1. A diagrammatic overview on how grass seed makes it way from the turfgrass breeder to the end user and the opportunity to evaluate seed quality based upon grass kind and variety listed on the seed label.

4) the price per pound of grass seed. Look to the seed label for important information about the contents in the packaged seed prior to purchase.

How to use the seed label to better understand the turf seed contents.

By law there is certain information that must be on the seed label. Much of the information is obtained by submitting the seed to a seed testing lab for lab analyses. Test are performed according to the "Rules for Testing Seeds" (when applicable) published by the Association of Official Seed Analysts. Upon completion of testing, an official report is issued for each sample submitted. That is the origin of the information on the seed label. In buying seed some items are more useful than others. A review of each basic item that must be stated on the seed label includes:

1. Name and address of the seedsman or seed producer who labeled the seed or who sells the seed in the state.
2. Seed lot number. To be able to trace the seed back to the seed lab to confirm the seed test information or the location of where the seed was grown.

3. The name of kind (species) and variety for each lawn and turf seed component in excess of five percent (5%) and listed in order of predominance.
4. Percentage by weight of pure seed by species and variety (percent purity). Suggested % purity standards for Kentucky bluegrass are 90%; while 95% is suggested for fine fescues, tall fescue and perennial ryegrass.
5. Germination percentage (percent viable seed) for each named lawn and turf seed. The minimum suggested % germination for Kentucky bluegrass, tall fescue and fine fescue is 80%, while perennial ryegrass should be 85%. Germination percentages are determined under controlled ideal lab environments for the grass species. It likely represents a maximum % germination that may not be reached during normal turf establishment.
 - A note about Pure Live Seed: Multiplying the % by weight of each grass by its % germination calculates the "pure live seed" (PLS) for each grass in the package. When the PLS for all grasses are added together it equals a total PLS for the seed your buying. Seeding rates per

Lot # BR549-98-0254 Very Good Grass Buddies Grass Seed Mixture				Lot # OOPS-98-0254 Mystery Mix Grass Seed			
Pure Seed	Variety/Kind	Germination	Origin	Pure Seed	Variety/Kind	Germination	Origin
32.3%	AOK Kentucky bluegrass	85%	OR	78%	Kentucky bluegrass*	85%	OR
23.2%	BeGood Kentucky bluegrass	85%	OR	10%	Perennial ryegrass*	95%	OR
22.5%	Forevermore Kentucky bluegrass	85%	WA	10%	Red fescue*	90%	OR
10%	Quickdraw perennial ryegrass	95%	OR	*DENOTES VARIETY NOT STATED			
10%	Creepy creeping red fescue	90%	OR	0.8%	% Crop Seed		
0.8%	% Crop Seed			1.1%	% Inert matter		
1.1%	% Inert matter			0.1%	% Weed seed		
0.1%	% Weed seed				Noxious weed seed per LB: none		
	Noxious weed seed per LB: none			"Origin: OR tested 10/12 sell by 7/13 John Doe Seed Company, Somewhere USA"			
"Origin: OR tested 10/12 sell by 10/13 John Doe Seed Company, Somewhere USA"							

Figure 2. An example of information available on a grass seed label affixed to the seed package. The label on the left displays grass variety/kinds in a mixture, but also a blend of three different Kentucky bluegrasses and other grasses that are all named varieties. The label on the right only states grass kinds as VNS (variety not stated) and it would diminish the value of the mix.

- 1,000 square feet or per acre are often based upon pure live seed since that is what can germinate and develop into the established turf.
- Percentage by weight of other crop seeds. To fall under "other crop" this component must be less than 5% by weight and as such does not need to be named. In some instances another normally grown, but less desirable grass species may found in the grass labeled for sale, but it would not have to be individually listed if less than 5% by weight. Some grass species can be problematic even in small amounts. Some states (MD, VA, WV, PA, NJ, NH and DE) require undesirable grass seeds (UGS) to be listed if found present by a seed testing laboratory. The UGS include bentgrass, bermudagrass, annual bluegrass, rough bluegrass, meadow fescue, tall fescue, orchardgrass, redtop, timothy, and velvetgrass.
 - Percentage by weight of all weed seed. Seed producers aim for very low amounts or no weed seed at all. Weeds in this category are likely controlled or managed.
 - Percentage by weight of inert matter. This percentage is typically quite small and includes some processing byproducts (seed chaff).
 - For each named lawn and turf seed: Percentage of dormant seed, if present. This is usually not an issue with cool season turfgrasses.
 - The calendar month and year the germination test was completed. This test must have been completed within a twelve-month period in South Dakota, exclusive of the calendar month in which test was completed, immediately prior to sale.
 - Seed origin. Where the seed was grown.
 - Noxious weeds. None found or name and rate of occurrence (e.g.; annual bluegrass 5/lb.)

Factors affecting blends and mixes in the marketplace.

There are also non-agronomic reasons influencing the composition of turfgrass seed blends and mixes. Some occur without much consequence as the final products are marketed to various industry markets. Others may have some impact which varies with each consumers expectations.

- Surplus production. Those that have been overproduced, or have not been sold from the past year. These grasses may reduce seed cost.
- Grass species or kind are sold as "Variety Not Stated".

- Developing “brand name” seed mixes/blends. They can be marketed across a large climatic region of the United States without necessarily meeting the specific needs of individual sites.
- Relying on ‘brand names’. They can be advertised year after year while the grasses in the package may change each year based upon supplies or finding better grasses to put in the product.
- Shortages of varieties. This can occur in years of poor harvest, or if production cannot meet demand. This may result in a “rationing” of popular varieties as small percentages of the final mixture.
- Cost of production on some varieties is greater than others. Grasses can vary greatly in how much seed is produced per acre. High yielding varieties are often less expensive while lower yielding varieties carry a higher seed cost.
- To reduce cost of the final mix/blend. Less expensive grasses can bring down the cost per pound to be more competitive in the marketplace.
- “Infomercial” grass brands. Each year it seems there are television infomercials or magazine ads touting a new “breakthrough” and the best grass mix/blend ever that works everywhere for all situations. Often the price is quite high compared the best grasses in the professional market, and you would pay more in shipping and handling fees than you would for a pound of some very good grass seed from your local seedsman. And in most cases there is no mention as to species or varieties at all, only the ‘brand name’!
- Marketing “Elite” grasses. Seedsman may market their latest high quality and high performance “elite” grass varieties as a part of a blend/ mixture; especially for sites that demand certain performance characteristics.
- Big Box store price points. With the advent of the high volume “big box” stores, the pricing structure of many products has changed. This is especially true for grass seed as the big box stores require products that can be marketed across a wide region.
- Demand for corn ethanol and its competition with wheat. Ethanol, made primarily from corn, is increasingly being used in fuel blends. As a result corn prices have increased leading to an increased demand for wheat as a feed substitute for corn. This increased wheat demand has elevated wheat prices and in western Oregon, where the majority of grass seed is produced, farmers are shifting to more wheat production. Less land in grass seed production places upward pressure on grass seed prices for the seed company, and ultimately the end user.

Traditional Components In Turf & Lawn Seed Mixes of Cool-Season Grasses

Kentucky bluegrass

A fine-leaved, rhizomatous perennial turfgrass widely used for lawns in the northern states. There are common types that are suitable for lower maintenance lawns and there are improved varieties that are best suited to moderate to high maintenance lawns and/or unique conditions. In unirrigated sites and during dry times or periods of drought, Kentucky bluegrass can enter summer dormancy where growth stops and its leaves turn straw colored. Once consistent amounts of rainfall or irrigation returns it can re-grow from dormant growing points at (crowns) or below (rhizome nodes) the soil surface. Summer dormancy capability is a desirable trait.

Typical Kentucky bluegrass mixtures include the following as starting points:

- 100% Kentucky bluegrass on sports turf, moderate to high quality lawns where shade is not much of an issue or golf course fairways.
- Mixture of Kentucky bluegrass (70 to 80%) with creeping red fescue (20 to 30%) make up the common “Sun/Shade” mixtures where the Kentucky bluegrass does well in open sun to very light shade and the fine fescue is a greater component of the lawn in moderate to more densely shaded areas. Over time the amount of annual nitrogen fertilizer can favor one grass over the other. Moderate to high nitrogen rates favor Kentucky bluegrass persistence while low annual nitrogen rates will eventually shift the stand of

grass to being more creeping red fescue than Kentucky bluegrass.

- Low maintenance lawn mixtures commonly include more common-type Kentucky bluegrass varieties (e.g.; ‘Kenblue’) and fine fescues.
- The above grasses mixed with up to 15% perennial ryegrass by weight as a nursegrass.

Kentucky bluegrasses are genetically diverse!

Turfgrass breeders and seedsman categorize Kentucky bluegrass varieties by groupings of traits which include: level of maintenance, growth habit (upright versus compact), aggressiveness, seasonal performance and color, texture, and density. With so many Kentucky bluegrasses on the market their classifications can be important clues as to where they perform best and how they might be best blended for unique situations. The classifications can be viewed on-line as summarized charts presented by Dr. Leah Brilman, Seed Research of Oregon (http://www.sroseed.com/resources/pdfs/KentBlueClass_06.pdf), from her personal observations and Rutgers University Turfgrass Proceedings. However, grasses within the same classification can vary in performance based upon growing region. This information is inserted here for turfgrass professionals to aid their understanding on how Kentucky bluegrass varieties are grouped according to genetic traits. Kentucky bluegrasses can bring many good traits to turfgrass sites with varied use and management levels.

Fine-leaf Fescues

This group of grasses includes creeping red fescue, hard fescue and chewings fescue. Sheep fescue is also included in this category but some sheep fescue varieties have a bluish-green color that make it somewhat incompatible in blend or mixtures. Fine fescues are fine-leaved, almost needle-like in texture. Creeping red fescue has underground stems called rhizomes that make them compatible in mixtures with Kentucky bluegrass. Fine-leaf fescues are the most shade tolerant grasses available and they are also tolerant of low maintenance and periods of drought. Fine fescues may be injured by prolonged summer heat stress. They are often used in mixtures with Kentucky bluegrass and marketed as “sun/shade” grass mixtures.

Tall Fescue

Improved tall fescue varieties are commonly referred to as “turf-type” tall fescues due to their much finer texture than the forage-type tall fescues. Yet, the leaf texture is wider than Kentucky bluegrass. Tall fescue is moderately drought and shade tolerant. On a deep soil tall fescue’s deep root system can help it hold its green color longer than Kentucky bluegrass. Its use had been limited in the North Central Plains states due to a concern over winter survival. Winterkill seems to be more of a problem in poorly developed late summer/fall plantings going into winter, when planted in poorly drained sites and under prolonged winter ice cover. Therefore, spring plantings are favored over late summer plantings to aid in surviving its first winter as a reasonably well established turf. It is adapted to a wide range of soil conditions and management programs. It is not well suited to heavily trafficked areas. These turf-type tall fescues can offer improved heat and shade tolerance over older types. There are many varieties (>70) of turf-type tall fescues in the marketplace.

Typical tall fescue mixtures:

- A 100% tall fescue as an individual variety or blend of a few tall fescue varieties may be a desirable option for added drought resistance on deep soils. Using perennial ryegrass should be avoided as it is not needed as a nursegrass with tall fescue and its seedling vigor may be too competitive with the tall fescue.
- Planting 90 to 100% tall fescue and 0 to 10% Kentucky bluegrass is a common mixture used on light to moderately trafficked sports turf.

Perennial Ryegrass

Perennial ryegrass has a texture similar to Kentucky bluegrass. It is a grass that germinates quickly from seed and has good seedling vigor to establish quickly. It tolerates traffic well and can be overseeded into existing turfs with a good chance for success. Once injured, its bunch-type growth habit limits its ability to repair itself and it will then require reseeding. Quick establishment is the reason it is used as a nurse-grass (10 to 15%) in mixtures with Kentucky bluegrass. In more humid areas it can have issues with turfgrass fungal diseases. Be wary of grass mixtures that include greater than 15 to 20% perennial ryegrass. Turfgrass

seed mixes containing up to 50% perennial ryegrass are often sold at retail outlets. Adding a greater amount of perennial ryegrass while decreasing the proportion of Kentucky bluegrass, reduces seed mixture costs to attract customers along with providing a quick establishment with its fast germination and seedling vigor. However, in excessively cold and open winters perennial ryegrass winterkills and for that reason is not viewed as a grass that is well suited as a predominant grass in a mixture in the northern great plains. High percentages of perennial ryegrass can also be overly competitive with the more desirable and slower to germinate components of the mixture (Kentucky bluegrass or fine leaf fescue), leaving a mostly perennial ryegrass stand.

Increasing the perennial ryegrass component (above 15 to 20%) in a mixture is desirable when quick turf establishment is needed to repair excessively trafficked or worn sports turf. This is due to the short growing season in the Northern Great Plains, coupled with the need to re-grass as quickly as possible. It makes the use of higher mix percentages of perennial ryegrass a great tool in re-seeding and overseeding to improve sports turf to get the areas back in use sooner than could be obtained with a mix that is predominantly Kentucky bluegrass. In such instances up to 80% perennial ryegrass is mixed with Kentucky bluegrass (see Table 2).

Table 2. Suggested species combination percentages for grass seed mixtures of the more commonly used turfgrass species.

Grass In Mixture	% of Mix	Suggested Seeding Rate lb per 1000 sq. ft.	Site descriptions: OS (open sun); MPS (moderate or partial shade); MHS=moderate to heavy shade; HM (high maintenance); MM (moderate maintenance); LM (low maintenance)
Kentucky bluegrass	100%	2-3	OS, MM to HM,
Kentucky Bluegrass Perennial ryegrass	80-90% 10-15%	3-4	OS, MM to HM,
Kentucky bluegrass Fine Fescue Perennial ryegrass	65-75% 10-30% 0-15%	3-4	OS, MPS, MM
Kentucky bluegrass Fine Fescue Perennial ryegrass	40-50% 40-50% 0-15%	4-5	OS, MPS, MM
Fine Fescue	100%	4-6	MPS, MHS, LM
Tall fescue Kentucky bluegrass	90-100% 0-10%	6-8	OS, MPS, MM to HM
Perennial ryegrass Kentucky bluegrass	60-90% 10-40%	5-7	For trafficked areas in need of shorter establishment period to enable recreational use. May require periodic seeding. OS, HM to MM

Grass growth characteristics.

How a grass grows and competes with other grasses plays a role in why some grasses might be mixed together into a final product.

Rhizomes: Underground lateral stems that originate at the base of some turfgrass plants. Rhizomes have dormant nodes (potential growing points) that can help a turf recover if it is thinned out from drought or traffic. This is a desirable trait and grasses that have rhizomes are said to be “sod forming” as they can spread laterally and hold together well as sod, once harvested. Species of grasses with rhizomes are Kentucky bluegrass and creeping red fescue. Some recent varieties of tall fescue have been marketed as having rhizomes.

Stolons: Above ground lateral stems that also originate at the base of some turfgrass plants. They too have nodes that can bud out and produce new plants. Creeping bentgrass (the golf putting green grass) has stolons. Buffalograss, a warm-season native species also has stolons.

Bunch-type: This growth habit is a trait of grasses that do not have either rhizomes or stolons. These grasses only spread very slowly by producing “tillers” which are new plants with leaves and roots that develop adjacent to the parent plant. These grass types need

to be seeded at rates that provide a dense stand and if areas are damaged, these grasses will not spread out to fill in the bare areas. To recover from such damage these grasses will need to be overseeded. Species included in this category are perennial ryegrass, hard fescue, chewings fescue, sheep fescue, and tall fescue.

Texture: Leaf texture may be a consideration in arriving at compatible mixtures. Lawn grass textures (listed from finest to coarsest) are: fine-leaf fescues < Kentucky bluegrass and perennial ryegrass < tall fescue.

Time to seedling emergence: Under the most ideal growing conditions after planting the commonly used turfgrasses vary in the time it takes for the seed to germinate and become visible as green shoots. Grasses also differ in how aggressive the seedlings are in developing once they do germinate. The average time to germinate for turfgrass seeds listed from fastest to slowest are: perennial ryegrass (5-9 days), tall fescue (7-10 days), fine fescues (7-14 days) and Kentucky bluegrass (14-21 days). Results will be much slower in cooler than ideal conditions. Once germinated, the seedling vigor (a measure of how quickly a grass species can grow together as a new turf) ranks from greatest to least as: perennial ryegrass > tall fescue > fine fescue > Kentucky bluegrass.

Nursegrass: Since perennial ryegrass germinates much quicker than Kentucky bluegrass and has a similar texture to that of Kentucky bluegrass, it is often used in small percentages (10-15% by weight) in the seed mixture so it can establish and hold the soil in place until the Kentucky bluegrass can germinate. Those planting such mixtures should be careful to 1) continue watering beyond the nursegrass germination to make certain that the Kentucky bluegrass also

becomes well established and 2) not to increase the perennial ryegrass percentage beyond nursegrass levels as it will likely become very competitive with the Kentucky bluegrass. Even small percentages of perennial ryegrass can become a large percentage of the final turf stand.

Maintenance level: This is how much care the grass needs to allow it to persist under a low, moderate or high level of quality or ground cover from year to year. Turfgrass mixtures are best evaluated by the amount of annual nitrogen fertilizer needed to maintain the grasses at an acceptable level of quality for any given use. Once the lawn grasses are established it is the annual management program, using various inputs of mowing, fertility and supplemental irrigation suitable for the site that will help the lawn persist under normal and stressful conditions. Much like the trees in our landscapes our goal is to have the lawn be around for a very long time!

When Is a New Seeding A Fully Established Turf?

A turf is well established when the grass can express the true characteristics of the species. It is often assumed that a lawn is “established” when it covers the ground completely. However, grass planted from seed can reach total ground cover, under good care, in 60 days but still be more at risk from drought (undeveloped root system) or heavy traffic than more mature grass stands. It takes about a year from the date of planting, with good post-planting care throughout that period, to consider a seeded turf fully established and able to exhibit the most desirable characteristics of the species used (e.g.; tolerance to drought, traffic, shade, cold, heat and recovery from damage). Planting sod significantly speeds up the establishment process.



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