



— Soil Fertility Note 4 — Cool-Season Grasses

October 1999

N.C.D.A. & C.S. Agronomic Division

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Cool-season grasses grow primarily during spring and fall. They become dormant during the hottest part of the summer and the coldest part of the winter. They are usually green year round but may turn brown under extreme heat and cold. Cool-season grasses include tall fescue, bluegrass, turf-type fescue, perennial ryegrass, and mixtures of any of these grasses.

In western North Carolina, the most common cool-season grasses are bluegrass, tall fescue, and bluegrass-fescue mixtures. In the piedmont, bluegrass-fescue blends and tall fescue are most common. In the eastern part of the state, tall fescue is the only cool-season grass that should be considered for a permanent lawn.

In the mountains and piedmont, a mixture of 80 percent fescue and 20 percent bluegrass is popular. Mixtures of grasses are more adaptable to varying growing conditions, such as shade, soil moisture, and temperature. Planting a mixture of grasses also improves the chances of survival from turf diseases since mixtures have varying levels of resistance to different diseases. Even if only fescue is being planted, it may be wise to plant a mixture of three or four cultivars (Table 1).

Seeding rates of bluegrass are 1.5–2.0 lb/1000 ft². Fescue-bluegrass blends and fescue blends should be seeded at a rate of 6.0 lb/1000 ft².

In North Carolina, it is best to seed cool-season grasses from mid-August to mid-October, depending on the location in the state. Seeding in the spring is generally not satisfactory since young seedlings do not have enough time to develop a root system capable of providing needed moisture before hot, dry summer weather arrives. If you must seed in the

spring, consider using a temporary cover, such as annual ryegrass, until fall. Another option would be to seed the cool-season grass with the intent of coming back in fall and overseeding the areas that do not survive.

To establish a lawn properly, begin by submitting a soil sample to evaluate the pH and nutrient status of the area to be sown. Collect soil samples to a depth of four inches from various locations in the area to be seeded. After thoroughly mixing the samples together, take a subsample from the mixture to be analyzed. Detailed sampling information and sampling materials are available from your local agricultural advisor.

Best results will be achieved if the recommended lime and fertilizer are thoroughly mixed into the soil prior to planting. Proper root development and survival of the grass depends upon even distribution of the lime and fertilizer throughout the root zone.

Apply half the seed in one direction and the remaining half at a right angle to the first direction. Lightly rake the seed into the soil. Good seed-to-soil contact is critical for adequate germination. After seeding, covering the area with straw will help prevent the soil from drying out quickly. Use one or two bales of straw per 1000 ft².

Lightly water the soil to a depth of 0.5 inch until the seeds germinate. More than one application a day may be needed. Continue watering regularly until the grass is tall enough to be mowed, about four inches high. Do not attempt to remove the straw after the seeds germinate. Over time, it will degrade into the soil.

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Table 1. Cultivar (commercially available) performance in North Carolina‡

Tall Fescue				
Very Good	Adventure II**	Lancer	Safari	Thoroughbred
	Barlexus	Marksman**	Shenandoah***	Tomahawk
	Bonanza***	Mini-mustang	Southern Choice**	
	Fine Lawn Petite**	Phoenix***	Tarheel	
	Genesis	Rebel 3D	Taurus***	
Good	Adventure***	Finelawn	Olympic***	Titan
	Amigo***	Finelawn 5GL	Olympic II***	Twilight
	Apache***	Houndog	Rebel Jr	Vegas
	Avanti***	Jaguar II***	Rebel II***	Wrangler***
	Barnone	Mesa	Rebel III	
	Crossfire***	Murietta***	Richmond	
	Emperor***	Mustang	Shortstop***	
Fair	Arid***	Bonsai	Ky-31	Silverado***
	Aztec	Era	Monarch	Trailblazer
Kentucky Bluegrass				
Very Good	A34 Ben Sun*	Classic*	Georgetown**	Parade
	Aspen	Coventry*	Kelly	Ram I*
	Blacksburg	Eclipse	Monopoly	Rugby
	Bristol*	Explorer*	Nassau	Suffolk
Good	Abbey	Baron	Gnome	Nuglade*
	Able-I	Challenger	Huntsville	Princeton
	Alene	Chateau	Jefferson*	Unique*
	Amazon	Cheri	Kenblue	Victa
	America*	Chicago*	Livingston*	Washington**
	Ascot*	Cynthia	Merit	
	Asset	Glade*	Midnight*	
Fair	Merion			
Fine Fescue				
Very Good	Aurora	Salem	Scaldis	Spartan
Good	Cindy	Flyer	Reliant	SR3000
	Eureka	Herald	Shadow	Valda
Fair	Banner II	Center	Jamestown	Mary
	Biljart	Enjoy	Marker	Waldorf

‡ These ratings are based on the results of trials conducted at N.C. State University. Very Good = significantly improved growth characteristics; Good = improved growth characteristics; Fair = minimally acceptable growth characteristics.

* Shade tolerant cultivars.

** Cultivars exhibiting superior performance in the mountain region.

*** Cultivars demonstrating good drought tolerance in greenhouse studies.

Questions or comments should be directed to the Soil Testing Section of the NCDA&CS Agronomic Division. Information on soil testing, nematode assay, and plant/waste/solution analyses is also available from the Division.