



Effect of mowing height on the appearance and persistence of tall fescue turf

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TALL FESCUE (*Festuca arundinacea* Schreb.) is a long-lived perennial grass used as a turf or pasture grass in much of the United States. Tall fescue is adapted to a wide range of soil types but is best adapted to fertile, moist, fine textured soils.

Tall fescue grows well in northern Alabama and can be grown in shady areas in central Alabama because of its good heat tolerance relative to most cool season turfgrasses. The recommended mowing height for tall fescue maintained as a turfgrass is 1.5 to 3.0 inches in areas where it is well adapted (1). However, recent research has suggested that tall

fescue could be mowed at much lower cutting heights without affecting its persistence (2). An experiment was conducted to determine the effect of mowing height on the appearance and persistence of tall fescue in central Alabama where the environmental stress is severe enough to limit its use as a turfgrass.

The experiment was conducted on a 2-year-old stand of 'Kentucky 31' tall fescue at the Turfgrass Research Area at Auburn University Agricultural Experiment Station. Phosphorus and potassium were applied in spring and fall in amounts necessary to maintain adequate fertility levels. One pound of nitrogen per 1,000 square feet was applied in March, May, July, and October during 1976 and in March, May, and July during

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1977. The grass was mowed weekly at 0.5, 1.0, 1.5, or 2.0 inches throughout the growing season. Supplemental irrigation was applied during periods of drought. The plots were rated several times for general appearance of the turf during 1976 and 1977. Characteristics considered in evaluating the overall appearance of the turfgrass were (1) uniformity, (2) density, and (3) color.

During both years the 1.5-inch mowing height produced the best turfgrass appearance, see table. Less desirable turf appeared in plots mowed at 2.0, 1.0, or 0.5 inches. The superiority of a tall fescue mowed at 1.5 inches was primarily due to a more uniform appearance. The 2-inch cutting height gave a more irregular growth habit to the grass while the lower mowing heights decreased the density and caused a lighter color in the coarse textured tall fescue. Appearance at lower cutting heights probably would have been even less desirable if the invasion of crabgrass (*Digitaria* sp.) and centipede grass (*Eremochloa ophiuroides*) had been prevented.

Long-term persistence is a highly desirable characteristic in a turfgrass. After

2 years of mowing treatments, the percentage of tall fescue remaining was estimated visually in September of 1977. Plots mowed at the greatest mowing height showed the best tall fescue persistence, and the amounts of tall fescue remaining in the plots was significantly less at each successively lower mowing height.

Results of this study indicate that mowing heights below 2.0 inches should be avoided in tall fescue grown for turf. Although the 1.5-inch mowing height may initially produce a more uniform appearing turf, the subsequent loss of stand density would soon result in an inferior turf subject to invasion by weeds or other grasses. Stands which have become too thin for acceptable turf may be reseeded in the fall to increase density.

LITERATURE CITED

- (1) Beard, J. B. 1973. Turfgrass science and culture. Prentice-Hall, Inc., Englewood Cliffs, N.J. p. 96-98.
- (2) Burns, R. E. 1976. Tall fescue turf as affected by mowing height. Agron. J. 68:274-276.

EFFECT OF MOWING HEIGHT ON THE APPEARANCE AND PERSISTENCE OF 'KENTUCKY 31' TALL FESCUE AT AUBURN, ALABAMA

Mowing height	Appearance ¹								Stand
	1976				1977				Sept. 1977
	June	July	August	Av.	March	May	August	Av.	
<i>In.</i>									<i>Pct.</i>
0.5	3.3 ²	3.0	3.0	3.1	4.3	4.0	2.0	3.4	30
1.0	5.0	3.7	4.0	4.2	4.7	5.0	3.0	4.2	47
1.5	7.0	6.0	5.3	6.1	5.7	6.7	4.7	5.7	60
2.0	6.3	4.3	6.0	5.5	4.7	6.0	4.3	5.0	73

¹Appearance rated 1 through 9; 9 = best.

²Averages of 3 replications.

Information contained herein is available to all without regard to race, color, or national origin.