Evaluation of cool-season forage species as decision tool for forage and livestock producers in South Carolina

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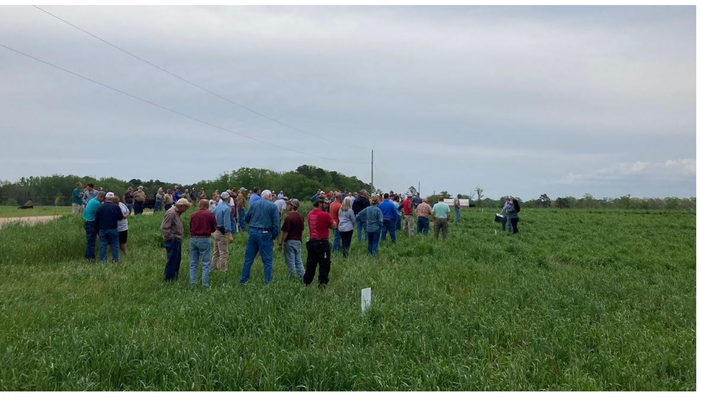

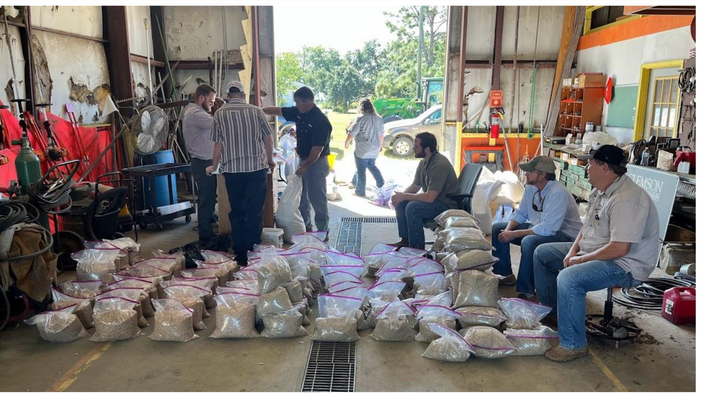

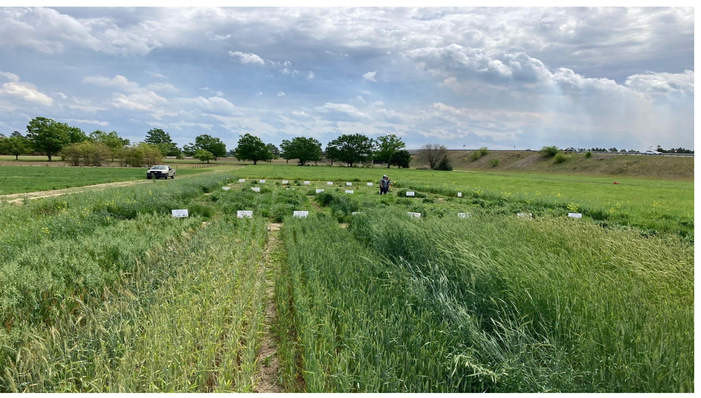

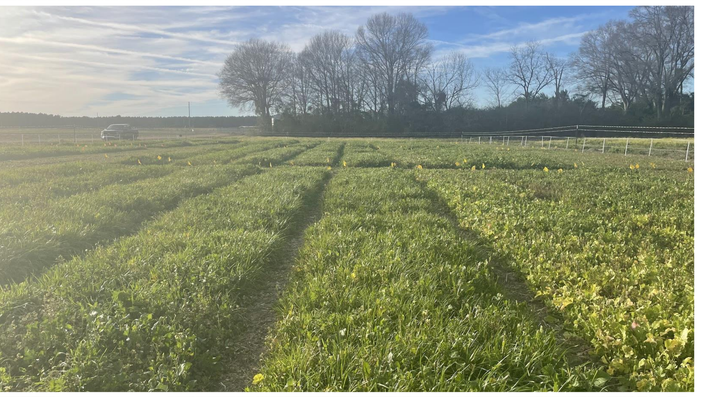

Overview and needs assessment

Annual cool-season forages can extend forage production and distribution and decrease reliance on supplemental feeding during cooler months in the Southeast region. The planting window for annual cool-season forages ranges from late September through November in South Carolina, and management is required to achieve adequate establishment and production. Choosing forage species adapted to each location, weather, and management skills is crucial for the success of the operation.

Material and methods

In 2023, a study evaluating cool-season grasses was conducted at the Clemson Research and Education Centers in Blackville (EREC) and Columbia (SREC). Triticale (xTriticosecale Wittmack), wheat (*Triticum aestivum*), rye (*Secale cereale*), and ryegrass (*Lolium multiflorum*) cultivars were managed under two harvest strategies: simulated grazing (three harvests) or baleage production (single harvest). Visual ratings for cold damage were taking in January and February, prior to each harvest. Forage samples were collected to determine forage accumulation and nutritive value.

Results and discussion

Trical 344 triticale yielded 3,372 vs 4,371 lbs/a at the EREC and SREC, respectively (Fig. 1). Ryegrass cultivars ranged from 2,284 to 4,603 lbs/a among locations. Crude protein concentrations were up to 23%. Field days were held at both locations and approximately 90 people attended. In addition, Dr. Silva presented the data in meetings and developed educational online content (n>200 views). Results emphasize the high quality of cool-season annual forages and the interest from producers for additional information for variety selection.

Table 1. 2023 cool-season forages demonstration data from EREC (Blackville) and SREC (Columbia).

Species	Varieties	Edisto REC		Sandhill REC	
		lbs/A	CP (%)	lbs/A	CP (%)
Triticale	Trical 344	3372	19.4	4371	16.1
Wheat	Gore	3336	22.6	1873	15.6
Rye	Winter Graze	3087	22.0	4264	16.2
Rye	Abruzzi	4211	23.0	4282	15.3
Ryegrass	Big Boss	3190	18.5	3747	15.2
Ryegrass	Lonestar	2963	23.4	4193	15.5
Ryegrass	Passerel Plus	3204	21.4	4603	18.3
Ryegrass	Rapido	2285	16.7	3390	13.1
Ryegrass	Marshall	2284	23.6	4246	14.5
Ryegrass	River	2284	22.1	2337	13.2
Ryegrass	Prine	3087	21.4	3586	13.1
Ryegrass	Attain	3497	21.6	2516	20.8

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