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

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Introduction

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 proper management is required to achieve adequate establishment and production. Choosing adapted forage species for specific locations, weather, operation goals, and management skills is crucial for the success of the operation.

Figure 1. Cool-season demonstration area under harvest (left and middle) and field day (right).

Material and methods

In 2024, cool-season grasses were evaluated 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 taken in January and February, before each harvest. Forage samples were collected to determine forage accumulation and nutritive value. Harvest dates were: 1) Blackville: 01/22, 02/20 and 03/18, 2)Columbia: 01/24, 02/21, and 03/18.

Results and discussion

Forage mass data is presented from both the Blackville and Columbia sites.

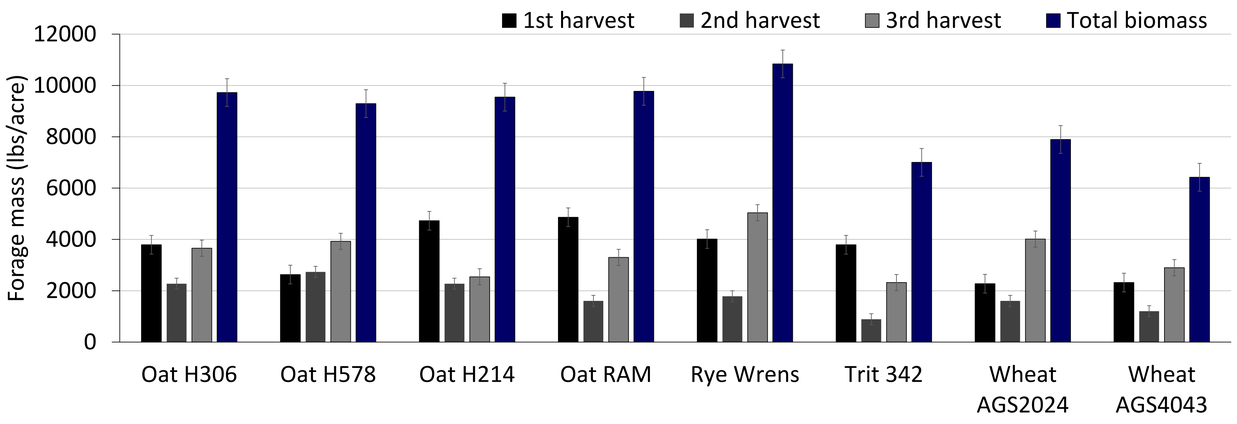

Figure 2. Small grains forage mass at the Blackville location.

Results and discussion (contin.)

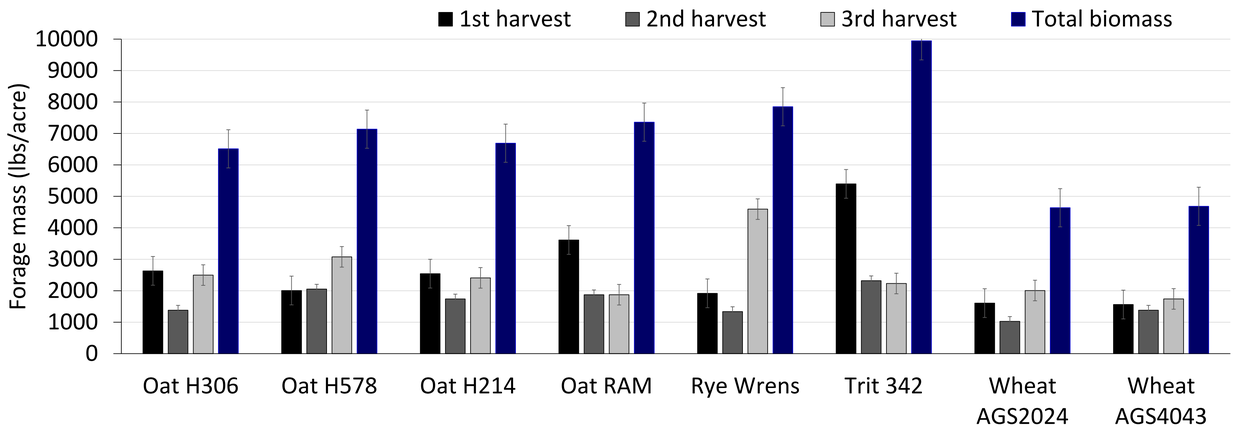

Figure 3. Small grains forage mass at the Columbia location.

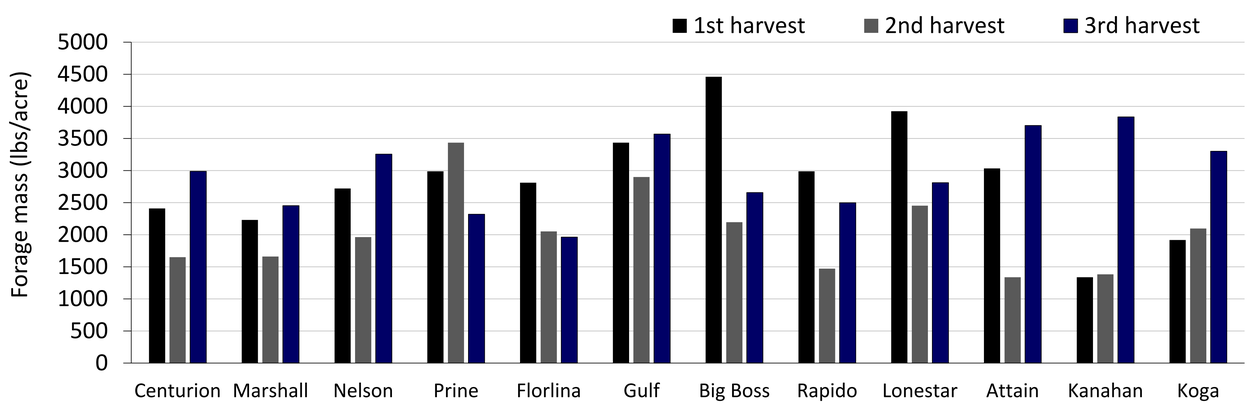

Figure 4. Ryegrass forage mass at the Blackville location.

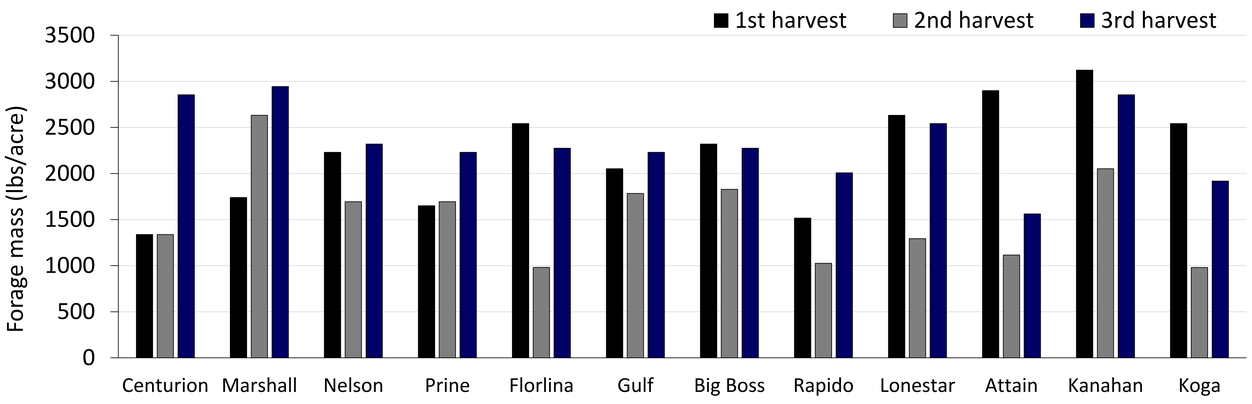

Figure 5. Ryegrass forage mass at the Columbia location.

Average neutral detergent fiber (NDF) and acid detergent fiber (ADF) concentrations of forage crops ranged from 35 to 50% and 19 to 31%, respectively. Several industry partners and the South Carolina Forage and Grazing Lands Coalition (SCFGLC) have donated seeds and supplies to the establishment of these sites. Multiple educational activities to address the selection of species, establishment and management, and soil health were carried out in each experimental site.

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