

# Assessment of Native Warm Season Grasses for Post-Mining Reclamation<sup>1</sup>

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**Abstract:** The Red Hills Mine, located in Ackerman, MS, is an operating large-scale surface strip mine for lignite. Current reclamation practices use browntop millet [*Urochloa ramosa* L.] and bermudagrass [*Cynodon dactylon* (L.) Pers.; BG]. The objective of this study is to evaluate growth, yield, and forage nutritive value of native warm season grasses (NWSGs) compared to BG when managed as a hay crop. Species tested were big bluestem (*Andropogon gerardii* Vitman; BBS), little bluestem [*Schizachyrium scoparium* (Michx.) Nash; LBS], indiagrass [*Sorghastrum nutans* (L.) Nash; IG], upland switchgrass (*Panicum virgatum* L.; USWG), and BG. Whole plots were divided into subplots with 1-cut and 2-cut systems with and without supplemental fertilizer. Tiller counts in 2017 showed replication differences at two and four-week counts. Big bluestem and LBS produced the greatest number of tillers in 2018. Native warm season grasses produced greater yields than BG. Little bluestem out-yielded BG in both years. Mineral concentrations were sufficient for cattle in 2017, and declined in 2018. Native warm season grasses qualified as a hay crop for prime farmland, which is only defined by yield<sup>3</sup>.

**Additional Key Words:** switchgrass, big bluestem, bermudagrass, little bluestem, nutritive value, prime farmland.

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1. Oral paper presented at the 2019 National Meeting of the American Society of Mining and Reclamation, Big Sky, MT. Welcome Back to Montana: The Land of Reclamation Pioneers, June 3–7, 2019. Published by ASMR, 1305 Weathervane Dr., Champaign, IL 61821.
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  3. Work reported here was conducted near 33.3101° N, 89.1728° W.