

that we usually recommend to graze to three inches stubble height, which means that only 5 inches of growth or 1,250 lbs of dry matter forage is available for grazing. By using this approach pasture can be stock lighter in the fall and much heavier in the spring. Higher stocking rates in the spring will prevent the formation of a dense canopy and the annual ryegrass heading out which can heavily impact nutritive value.

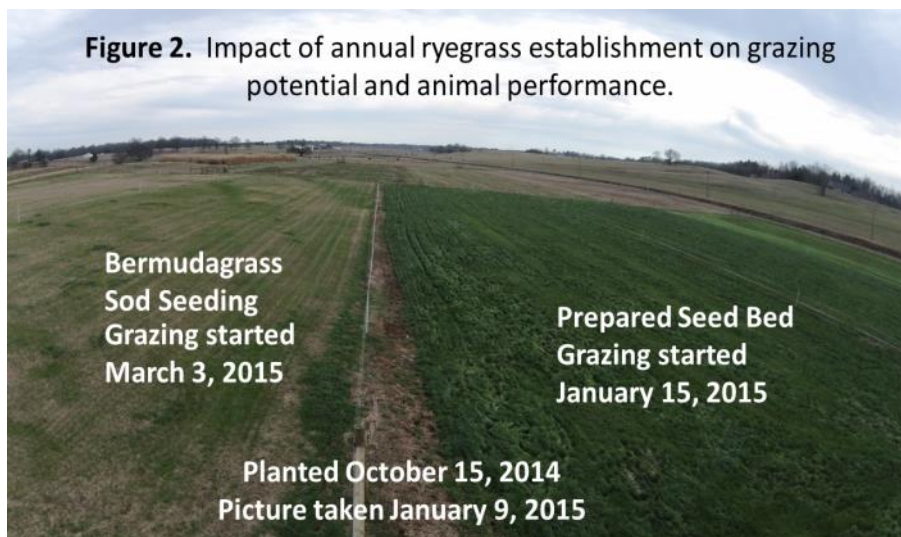
Table 1. Estimated cost of establishment and cost of gain for the grazing demonstration during the 2014-15 grazing season at Starkville, MS.

Establishment	Annual Ryegrass	Clover	Nitrogen (lb/ac)	Calendar days of grazing	Grazing head days	Total gain per acre (lb of beef/ac)	ADG (lb/ac)	Total pasture cost (\$/ac) ¹	Cost of gain (\$/lb)
Prepared Seed Bed	Marshall	Berseem	25	98	98	383.58	3.91	109.85	0.29
	--	Berseem	0	--	--	--	--	--	--
	Marshall	--	100	105	105	423.88	4.04	125.20	0.30
Prepared Seed Bed	Lonestar	Berseem	25	93	117	650.75	5.56	110.45	0.17
	--	Berseem	0	68	64	222.39	3.47	95.20	0.43
	Lonestar	--	100	93	147	689.55	4.69	125.95	0.18
Bermudagrass Sod	Lonestar	Berseem	25	34	34	158.21	4.65	129.20	0.82
	--	Berseem	0	34	34	102.98	3.03	111.20	1.08
	Lonestar	--	100	34	79	216.42	2.74	128.70	0.59

¹Pasture include seed cost and fertilizer cost. Labor, equipment and land rent were not included in the analysis.

Impact of Winter Grazing Systems – It is also important to note that animal performance can be influenced by the type of pasture composition, fertilization and establishment method. A grazing demonstration at Mississippi State during the 2014-15 winter grazing season provided information about the impact of various grazing systems in forage production, grazing days and animal performance (Table 1). The study was set to compare three razing systems: (1) ryegrass + 50 lbs N/ac, (2) ryegrass/bermsee clover mix + 25 lb N/ac, and (3) berseem clover alone. These three treatments were established in a conventional tilled seed bed and in a bermudagrass sod that received a Paraquat burned down. All treatments were established and fertilized at the same time. Annual ryegrass treatment with nitrogen fertilization provided more grazing days and higher gain per acre compared to other treatments. The number of grazing days and gain per acre were largely impacted by planting into the bermudagrass sod (Fig. 2) with lower productivity. This is data from only one year, but it is an excellent example of planting methods and forage species can have large impacts on forage growth, subsequent animal grazing and the cost of gain.

Summary – The most common reason for efficient winter grazing in Mississippi is a lack of dry matter quantity, not forage quality. Annual ryegrass pastures are often stocked for season-long grazing. These season-long stocking rates may be too high during the mid-winter months of November through February, when cooler temperatures restrict plant growth. Conversely, stocking rates may be too low during March and April when rapid plant growth is taking place. The higher season-long stocking rates may reduce the average daily gain on a per animal basis while total pounds of beef produced per acre may be optimized.



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January 10-12, 2016 – American Forage and Grassland Annual Conference, Bouton Rouge, LA

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