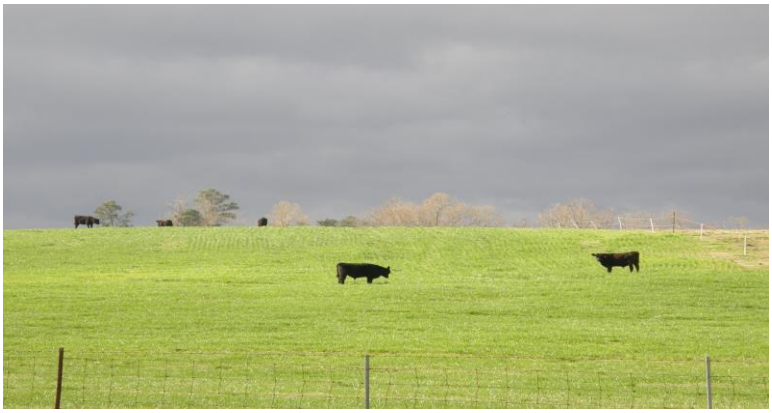

2016

Annual Ryegrass Performance in Mississippi: Five-year Yield Summary

MISSISSIPPI STATE UNIVERSITY
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Annual Ryegrass

Annual ryegrass is the most important and versatile cool-season annual grass for livestock producers in Mississippi. In pasture and hay systems, annual ryegrass is a popular forage because of its ease of establishment, high nutritive value, high yields, good reseeding ability, and adaptability to a wide range of soil types. Annual ryegrass can be established in pure stands or mixed with small grains and/or clovers for cool-season forage production. For these reasons, annual ryegrass is a staple for many cool season grazing programs in Mississippi. Planting date varies with location. Overall, the best planting time is mid-September for prepared seedbed or late October if overseeded on a warm-season perennial grass pasture. Seeding rates are 25-30 lb/A for pure stands (higher rate for sod seeding) and 20 lb/A for mixtures with small grains and/or clovers. Annual ryegrass grows best at a soil pH of 6.0 to 7.0. Phosphorus and potassium levels should be above the medium range for optimum yields. Annual ryegrass is very responsive to nitrogen fertilizer and its use should be split into two to four applications during the growing season. The first nitrogen application should occur when the seedlings have germinated and are 2 to 3 inches tall. When established with clovers, a single nitrogen application in early winter is often recommended to limit annual ryegrass competition with the clover. Reasonable productivity can be expected from mid-November to mid-May in the southern part of Mississippi and February to early May in the northern part of Mississippi. Annual ryegrass should normally be allowed to reach a height of 8 to 10 inches before grazing begins. Typical stocking rates are 700 lb live weight per acre in winter and 1,400–2,000 lb live weight per acre in spring.

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Variety	Ploidy Level	Holly Springs	Starkville	Newton	Poplarville	State Avg.	RY (%)
Bulldog Grazer	Diploid	4305	5041	5032	5799	**5044**	**-5.8**
Ed	Diploid	3309	4611	6237	5897	**5014**	**-6.4**
Flying A	Diploid	4913	4977	5874	6785	**5637**	**5.2**
Fria	Diploid	5079	5554	5766	6923	**5831**	**8.8**
Jackson	Diploid	4726	4903	5852	5775	**5314**	**-0.8**
Lonestar	Diploid	4696	5411	5856	7120	**5771**	**7.7**
Marshall	Diploid	4046	5885	6839	6660	**5858**	**9.3**
Winterhawk	Diploid	4972	5552	5835	6892	**5813**	**8.5**
Attain	Tetraploid	4291	4937	6706	6929	**5716**	**6.7**
Big Boss	Tetraploid	4865	4843	5397	6367	**5368**	**0.2**
Diamond T	Tetraploid	4181	5950	5531	5918	**5395**	**0.7**
Earlyploid	Tetraploid	3462	4386	5726	5600	**4793**	**-10.5**
Jumbo	Tetraploid	4396	4579	5743	5941	**5165**	**-3.6**
Maximus	Tetraploid	4301	4969	5904	6642	**5454**	**1.8**
Meroa	Tetraploid	3718	4944	5343	4368	**4593**	**-14.3**
Nelson	Tetraploid	4389	4849	5314	6974	**5382**	**0.5**
Prine	Tetraploid	3927	4774	6073	6418	**5298**	**-1.1**
TAMTBO	Tetraploid	4449	4600	5103	6459	**5153**	**-3.8**
Tetrastar	Tetraploid	4355	4626	5729	6015	**5181**	**-3.3**
Location Avg.		**4336**	**5021**	**5782**	**6289**	5357	--
Relative Yield (%)		**-19.1**	**-6.3**	**7.9**	**17.4**	--	--

Note: This summary contains commercial varieties that have been tested in the performance trials for a minimum of two years across all locations from fall of 2011 to spring of 2016.

Ploidy level refers to the number of chromosome sets in a biological cell and is often used in characterizing ryegrass varieties as either diploid (2x) or tetraploid (4x). Whether ploidy level is advantageous to a specific variety in regards to performance is more dependent on location.

Relative Yield (RY) is the potential of annual ryegrass to perform well at a specific location when compared to the overall state average biomass production. Relative yield (RY) was calculated as the percent increase in yield when comparing the average state performance of a variety to the overall state average, RY = ((Agv. Var - Avg. State)/Avg. State)*100

Citation: Lemus, R. and J.A. White. 2016. Annual Ryegrass Performance in Mississippi: Five-year Yield Summary. Mississippi State University Agricultural and Forestry Experiment Station. September.

Classificatoin of Annual Ryegrass Varieties Based on Ploidy Level

Annual Rygerass Variety	Ploidy Level
IS-LWD 8*	Unkown
07-WW*	Diploid
Abundant	Diploid
Alamo	Diploid
Assist	Diploid
Avance	Diploid
Bounty	Diploid
Brigadier	Diploid
Bruiser	Diploid
Bulldog	Diploid
DH-3	Diploid
Ed	Diploid
Fantastic	Diploid
Florida 80	Diploid
Florlina	Diploid
Flying A	Diploid
Fria	Diploid
GA-101-M*	Diploid
GALM1401*	Diploid
GALM1403*	Diploid
GO-15-LN2*	Diploid
Grazer	Diploid
Graz-N-Go	Diploid
Grits	Diploid
Gulf	Diploid
Jackson	Diploid
King	Diploid
Lonestar (Diploid)	Diploid
M2GVS*	Diploid
Magnolia	Diploid
Marshall	Diploid
ME4*	Diploid
ME-94*	Diploid
Passerel	Diploid
Passerel Plus	Diploid
PS12*	Diploid
PS15*	Diploid
Ration	Diploid
Ribeye	Diploid
Rio	Diploid
Sirloin	Diploid
Soutern Star	Diploid
Stampede	Diploid
Surrey II	Diploid
TAM 90	Diploid
WD-40	Diploid
Winterhawk	Diploid
Andes	Tetraploid
Attain	Tetraploid
BAR LM 09124*	Tetraploid
BAR LM 09129*	Tetraploid
BAR LM 09137*	Tetraploid
BAR LM 10200*	Tetraploid
BAR LM 10202*	Tetraploid
BAR LM 15425*	Tetraploid
BAR LM 15426*	Tetraploid
BAR LM 15427*	Tetraploid
Big Boss	Tetraploid
Big Daddy	Tetraploid
Credence	Tetraploid
Diamond T	Tetraploid
Double Diamond	Tetraploid
Earlyploid	Tetraploid
Jumbo	Tetraploid
Maximus	Tetraploid
Meroa	Tetraploid
Nelson	Tetraploid
Prine	Tetraploid
TAMTBO	Tetraploid
Tetragold	Tetraploid
Tetrastar	Tetraploid
Verdure	Tetraploid

*Experimental varieties

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