

SORGHUM USAGE IN THE SHENANDOAH VALLEY

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Sorghum can be a good alternative to corn as a silage crop in many livestock operations, particularly for beef cattle or dairy heifers. Although it typically does not have as much nutritional energy as corn, it can be planted much later, behind a harvested small grain crop, and is very forgiving of droughty conditions like those seen across much of the Valley this year. Furthermore, in times of high seed corn and fertilizer prices, the opportunity to produce a high yielding forage cheaply is found with sorghum.

We determined yields and nutritional quality of several fields in Augusta and Rockingham Counties this year. Most of these producers harvested barley silage at the soft dough stage followed by sorghum. Two key points were repeated by several producers, as indicated above. Sorghum, unlike corn, will wait patiently for rain. The second point was that it is a very cheap crop to produce. With a price per unit bag at around \$90, planted at an average of 9 lbs/acre (most growers said even this was too high), your seed cost per acre would be \$16. Compare that to corn, pricing at \$200 per unit, planting 3 acres per bag, which would be \$67 per acre in seed. Most of the growers used a standard manure or litter application with minimal use of other fertilizer. One field had no nutrients applied. Grass weed control options are limited, but herbicide safeners are available as a seed treatment and are effective at protecting the sorghum. Plant lodging was also an issue for some, but dwarf varieties are available too.

The following table shows yields found at those farms surveyed and the accompanying forage analyses for each. Each crop followed soft dough barley unless otherwise noted. Recently compiled forage analysis values for corn silage are provided as a reference point.

Yield (tons/acre)	Dry Matter	CP	TDN	NEL	NDF	Pounds of Nitrogen Applied	Planting Method	Planting Date	Notes
23.5	***** unavailable *****					150 lbs N	30" @ 10 lbs	6/8	Dwarf BMR
unavailable	21.6	8.6	66.5	0.69	57.5	50	15" @ 6 lbs	early May	BMR
unavailable	27.1	7.7	66.4	0.69	51.8	50	15" @ 15 lbs	early May	
12.7	28	9.0	66.3	0.68	52.8	none	30" @ 9 lbs	mid June	followed barley grain
16.6	24.3	8.7	65.4	0.67	58.7	60	15" @ 9 lbs drilled	6/9	
17.8	29.3	8.9	67.0	0.69	49.2	160	30" @ 7 lbs	6/27	
19.6	25.3	9.3	66.4	0.68	54	160	30" @ 7 lbs	6/27	
17.5	***** unavailable *****					100	30" @ 8 lbs	6/10	planted w/ corn on row splits
17.95	25.9	8.7	66.3	0.68	54.0	Averages of above samples			
N/A	33.8	7.9	71.2	0.75	42.5	Average corn silage analysis from Cumberland Lab			
N/A	30	9.39	60.0	Unreported		Average grain sorghum analysis reported from VATech			

Pounds of nitrogen estimated from manure and litter application. All forage analyses are presented on a dry matter basis. All sorghum followed soft dough barley unless otherwise mentioned.