



2018 South Dakota Dryland Forage Sorghum Trial Results Vale, SD

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Cooperator:	Darrel and Doug Cox
Location:	Vale, SD
Soil Type:	Sandy Loam
Fertilizer:	NA
Previous crop:	Sorghum
Tillage:	Till
Row spacing:	30"
Seeding Rate:	60,000 PLS/acre
Herbicide:	Brawl II
Fungicide:	NA
Date seeded:	6/6/2018
Date harvested:	September/October, 2018

Table 1. 2018 forage sorghum entry information sheet.

Entry Hybrid Name/Number	Sorghum Subspecies (FS, SS, SU)†	Brown Midrib	Germ (%)	Maturity Group (E, M/E, M, F)‡	Male Sterile	Days to 50% Bloom	Dryland Entry?	Irrigated Entry?	Company
ADV XF372	FS	Y	85	M	N	-	1	1	Advanta
AF8301	FS	N	85	M	N	-	1	1	Advanta
ADV XF033	FS	N	85	M	N	-	1	1	Advanta
AS6402	SS	Y	85	M	N	-	1	1	Advanta
ADV XS007	SS	Y	70	M	N	-	1	1	Advanta
ADV XS008	SS	Y	70	M	N	-	1	1	Advanta
F70FS71 BMR	FS	Y	85	E	-	52	1	1	Dynagro
F71FS72 BMR	FS	Y	85	E	-	55	1	1	Dynagro
705F	FS	-	85	ME	-	58	1	1	Dynagro
Super Sile 30	FS	-	85	ME	-	58	1	1	Dynagro
FX18878 BMR	FS	Y	85	ME	-	59	1	1	Dynagro
F74FS23 BMR	FS	Y	85	M	-	61	1	1	Dynagro
TopTon	FS	-	85	M	-	61	1	1	Dynagro
FX18851 BMR	FS	Y	85	M	-	61	1	1	Dynagro
FX18317	FS	-	85	M	-	62	1	1	Dynagro
Danny Boy BMR	SS	Y	85	M	Photo	62	1	1	Dynagro
Fullgraze BMR	SS	Y	85	MF	-	64	1	1	Dynagro
GX16921	FS	-	85	MF	-	66	1	1	Dynagro
F76FS77 BMR	FS	Y	85	MF	-	67	1	1	Dynagro
Fullgraze II	SS	-	85	MF	Y	68	1	1	Dynagro
Fullgraze II BMR	SS	Y	85	MF	Y	68	1	1	Dynagro
NK300	FS	N	85	ME	N	63	1	1	Sorghum Partners
SP4555	SS	Y	85	M	N	68	1	1	Sorghum Partners
SS405	FS	Y	85	F	N	72	1	1	Sorghum Partners
95BMR	FS	Y	85	ML	N	85	0	1	La Crosse
96BMR	FS	Y	85	L	Y	90	1	0	La Crosse
Bruiser BMR	SS	Y	85	ME	N	65	1	0	Star Seed
Nutrimaxx BMR	SS	Y	85	L	N	90	1	0	Star Seed
Excel	SS	N	85	L	N	90	1	0	Star Seed

† Type: FS = Forage Sorghum, SS = Sorghum x Sudan, SU = Sudangrass

‡ Maturity: E = Early, M/E = Medium Early, M = Medium, F = Full Season

Table 2. 2018 dryland forage sorghum performance trial results (average of 4 replications) at Vale, SD§. Yield is adjusted to 65% moisture

Hybrid	Height (in.)	Harvest Moisture (%)	Yield (tons/a)
705F	60	75	16.2
96BMR	75	79	14.8
ADV XF033	65	72	18.5
ADV XF372	56	77	12.7
ADV XS007	103	79	17.6
ADV XS008	75	77	14.5
AF8301	67	77	17.5
AS6402	64	77	15.6
Bruiser BMR	85	77	15.6
Danny Boy BMR	95	79	14.8
Excel	95	78	15.4
F74FS23BMR	82	77	17.8
F76FS77 BMR	65	79	16.3
Fullgraze BMR	83	78	11.5
F70FS71 BMR	80	74	14.5
F71FS72 BMR	61	65	19.2
FX18317	89	78	13.9
TopTon	100	77	20.6
Fullgraze II	109	71	16.9
Fullgraze II BMR	109	73	20.3
FX18851BMR	63	77	18.5
FX18878BMR	87	78	17.3
GX16921	50	75	13.6
NK300	53	76	14.1
Nutrimaxx BMR	103	77	17.4
SP4555	106	59	20.5
SS405	105	76	21.7
Super Sile 30	83	77	15.0
Trial Average	81	76	16.5
LSD (0.05)†	-	-	7.1
C.V. %‡	-	-	21.1

§ Values in bold rank in the top third of all varieties for each category

† Value required (\geq LSD) to determine if varieties are significantly different from one another.

‡ C.V. is a measure of variability or experimental error, 15% or less is acceptable.

Table 3. 2018 dryland forage sorghum performance trial results - forage quality

Hybrid	CP (%)	ADF (%)	NDF (%)	RFV	TDN (%)	NE Maint (MCal/cwt)	NE Gain (MCal/cwt)	NE Lact (MCal/cwt)
705F	11.8	35.6	60.4	94.3	61.9	62.2	36.0	64.8
96BMR	12.2	36.3	59.5	94.7	61.2	61.1	34.9	64.0
ADV XF033	11.6	35.3	58.1	98.3	62.3	62.8	36.4	65.2
ADV XF372	12.2	36.7	61.0	92.3	60.7	60.4	34.3	63.5
ADV XS007	13.1	38.0	58.2	95.0	59.3	58.3	32.4	61.9
ADV XS008	12.5	36.4	59.7	94.7	61.0	60.9	34.7	63.8
AF8301	11.6	36.6	59.2	94.7	60.8	60.7	34.5	63.6
AS6402	12.7	36.7	61.6	91.3	60.7	60.4	34.3	63.5
Bruiser BMR	9.9	38.4	61.4	89.3	58.8	57.5	31.7	61.4
Danny Boy BMR	11.6	38.0	59.8	92.7	59.2	58.2	32.3	61.9
Excel	11.6	37.7	60.8	91.0	59.6	58.9	32.9	62.3
F74FS23BMR	12.2	33.9	57.9	100.3	63.9	65.2	38.6	66.9
F76FS77 BMR	11.8	37.7	61.4	90.7	59.6	58.8	32.8	62.3
Fullgraze BMR	11.3	36.5	59.9	94.0	61.0	60.9	34.7	63.8
F70FS71 BMR	9.7	38.1	62.9	87.7	59.1	58.1	32.2	61.8
F71FS72 BMR	10.6	28.9	48.2	128.3	69.6	73.5	46.1	73.2
FX18317	12.3	36.8	58.5	96.0	60.6	60.3	34.2	63.4
TopTon	8.9	37.9	61.0	90.7	59.4	58.5	32.6	62.1
Fullgraze II	9.6	37.8	63.2	88.0	59.5	58.5	32.6	62.1
Fullgraze II BMR	10.2	37.5	62.2	89.3	59.8	59.0	33.1	62.5
FX18851BMR	12.0	35.5	59.7	96.0	62.0	62.4	36.1	64.9
FX18878BMR	10.5	32.6	55.1	107.3	65.3	67.4	40.6	68.5
GX16921	12.0	32.8	55.9	105.7	65.2	67.1	40.3	68.4
NK300	13.2	35.8	58.9	96.7	61.7	62.0	35.7	64.6
Nutrimaxx BMR	9.9	38.3	61.2	90.0	58.9	57.8	31.9	61.5
SP4555	9.8	31.4	48.8	123.0	66.7	69.4	42.4	70.0
SS405	11.8	37.3	60.7	92.0	60.1	59.5	33.5	62.8
Super Sile 30	10.5	38.0	66.4	83.0	59.3	58.3	32.4	61.9
Trial Average	11.3	36.2	59.3	96.0	61.3	61.4	35.1	64.2
LSD (0.05)†	2.2	3.06	3.54	10.8	3.5	5.24	4.76	3.8
C.V. %‡	9.7	4.2	4.1	5.6	2.8	4.2	6.7	2.9

§ Values in bold rank in the top third of all varieties for each category

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Table 4. 2018 dryland forage sorghum performance trial results - mineral nutrition

Hybrid	Ca (%)	P (%)	K (%)	Mg (%)
705F	0.63	0.22	2.13	0.50
96BMR	0.80	0.23	2.55	0.51
ADV XF033	0.65	0.22	2.23	0.48
ADV XF372	0.63	0.24	2.07	0.51
ADV XS007	0.84	0.25	2.48	0.56
ADV XS008	0.76	0.25	2.05	0.47
AF8301	0.52	0.21	2.00	0.42
AS6402	0.73	0.26	2.24	0.51
Bruiser BMR	0.77	0.17	2.25	0.47
Danny Boy BMR	0.77	0.21	2.39	0.55
Excel	0.73	0.22	2.57	0.51
F74FS23BMR	0.67	0.25	1.96	0.41
F76FS77 BMR	0.64	0.22	2.50	0.48
Fullgraze BMR	0.72	0.20	2.38	0.44
F70FS71 BMR	0.70	0.20	2.31	0.44
F71FS72 BMR	0.60	0.26	1.97	0.41
FX18317	0.74	0.23	2.89	0.49
TopTon	0.54	0.18	2.26	0.39
Fullgraze II	0.60	0.19	1.91	0.40
Fullgraze II BMR	0.59	0.17	2.09	0.34
FX18851BMR	0.71	0.25	2.07	0.49
FX18878BMR	0.65	0.26	2.01	0.39
GX16921	0.70	0.24	1.98	0.40
NK300	0.73	0.24	2.27	0.55
Nutrimaxx BMR	0.68	0.21	2.54	0.47
SP4555	0.64	0.18	2.00	0.45
SS405	0.61	0.24	2.60	0.37
Super Sile 30	0.65	0.20	2.36	0.50
Trial Average	0.68	0.22	2.25	0.46
LSD (0.05)†	0.14	0.07	0.72	0.08
C.V. %‡	10.0	15.1	15.6	8.4

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