COLORADO STATE UNIVERSITY EXTENSION

2023 Irrigated Forage Sorghum Variety Performance Trial at Rocky Ford

Crops Testing
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		Yield										Forage Quality[a]												
Variety	Brand	Forage[b]	Dry Matter	Yield	3-Year Forage Avg.	Moisture	Brix	Plant Height	Forage Type[c]	Relative Maturity[d]	Traits[e]	RFQ	CP	aNDFom	Lignin	WSC (Sugar)	Starch	Ash	Fat	NDFD 30hr	NDFD 240hr	TDN	NEL	Milk/Ton
		tons/ac		% of test avg.	tons/ac	% at harvest	percent	in				percent											Mcal/cwt	lb/ton
Danny Boy II BMR	Dyna-Gro Seed	31.4	11.0	155%	31.1	80	11	135	SS	ME	BMR	122	9.4	61	4.5	4.5	0	9	2	57	70	56	60	2611
Fullgraze II	Dyna-Gro Seed	27.3	9.5	135%	32.0	64	7	122	SS	ML	-	127	8.1	61	5.2	4.8	6	6	2	50	65	56	63	2790
Fullgraze II BMR	Dyna-Gro Seed	26.1	9.1	129%	27.1	62	12	111	SS	ML	BMR	146	8.1	50	3.8	6.4	14	7	3	53	64	62	69	3177
Drylander	Star Seed	25.4	8.9	126%	-	80	8	122	SS	PS	BMR	117	7.0	65	4.6	3.9	2	7	2	56	71	56	61	2671
Dynagraze II BMR	Dyna-Gro Seed	23.1	8.1	114%	24.6	70	7	76	SS	ME	BMR	131	7.5	51	4.3	6.4	13	7	2	49	67	59	66	2969
Super Sile 20	Dyna-Gro Seed	22.9	8.0	113%	28.9	69	4	63	FS	ML	-	148	8.3	49	4.1	5.8	18	6	2	50	66	62	70	3203
SweetTon MS	Dyna-Gro Seed	22.3	7.8	110%	24.4	73	14	113	GS	ML	SCA	131	6.4	48	3.6	12.6	10	5	2	45	65	60	70	3154
Excell II	Star Seed	22.2	7.8	110%	-	70	9	122	SS	L	-	144	8.2	52	4.4	9.1	11	6	2	50	65	61	69	3162
ADV F8484IG	Alta Seeds	21.8	7.6	108%	-	69	6	66	FS	ML	IG, BD	154	8.1	46	3.9	6.0	23	7	3	52	66	63	71	3291
Super Sweet 10	Dyna-Gro Seed	20.2	7.1	100%	-	65	14	62	SS	M	-	136	7.6	46	4.7	6.5	16	8	2	45	59	60	69	3068
F75FS13	Dyna-Gro Seed	20.2	7.1	100%	-	71	4	103	FS	M	-	147	7.5	48	4.0	6.9	17	6	2	50	64	63	71	3281
Dynagraze II	Dyna-Gro Seed	19.6	6.9	97%	22.3	65	10	58	SS	ME	-	162	8.4	41	4.0	8.9	21	5	3	45	58	65	75	3500
Super Sile 30	Dyna-Gro Seed	19.3	6.8	95%	26.1	64	6	93	FS	ME	-	150	8.1	37	3.0	10.1	30	7	2	45	59	66	75	3487
Packer HGY	Star Seed	17.8	6.2	88%	-	63	13	61	FS	ML	-	138	7.1	41	3.1	8.8	25	7	2	45	62	63	72	3313
F71FS72 BMR	Dyna-Gro Seed	17.5	6.1	86%	18.5	66	6	70	FS	E	BMR	150	7.7	32	2.5	10.7	30	8	3	41	57	67	77	3566
ADV F8322	Alta Seeds	16.9	5.9	84%	22.8	59	7	59	FS	M	SCA	150	7.1	38	3.0	8.6	29	6	3	47	62	67	76	3599
F72FS25 BMR	Dyna-Gro Seed	16.4	5.7	81%	18.8	66	8	54	FS	M	BMR	121	7.5	48	3.6	5.5	16	11	2	48	62	57	64	2791
F72FS05	Dyna-Gro Seed	16.2	5.7	80%	22.7	61	11	133	FS	ME	-	125	7.3	46	4.1	5.9	20	8	2	43	59	58	67	2978
ADV F7424	Alta Seeds	15.4	5.4	76%	-	68	8	64	FS	L	BMR, SCA	142	7.6	33	2.0	10.0	32	7	3	40	55	66	76	3511
F74FS72 BMR	Dyna-Gro Seed	14.7	5.1	73%	16.9	65	2	75	FS	M	BMR	170	9.1	33	2.5	9.3	31	7	3	53	62	69	78	3732
F74FS23 BMR	Dyna-Gro Seed	14.4	5.0	71%	17.5	66	13	62	FS	M	BMR, BD	161	8.1	33	2.3	11.5	29	7	3	47	58	69	78	3689
ADV F7232	Alta Seeds	14.1	4.9	70%	-	67	4	99	FS	M	SCA	156	8.4	41	3.2	7.5	23	8	3	52	64	65	72	3389
	Average	**20.2**	**7.1**	**100%**	**23.8**	**67**	**8**	**87**				**142**	**7.8**	**45**	**3.6**	**7.7**	**19**	**7**	**2**	**48**	**63**	**62**	**70**	**3224**
	[f]LSD (0.30)	1.4	0.5																					
	[f]LSD (0.05)	2.7	0.9																					
	Coefficient of Variation (CV)	10.4																						

[a]All forage quality analyses results are dry basis values. CP=crude protein; aNDFom=ash free neutral detergent fiber; WSC=water-soluble carbohydrates; NDFD=neutral detergent fiber digestibility; TDN=total digestable nutrients; NEL=net energy for lactation; Milk/ton=predicted amount of milk produced per ton of silage dry matter calculated using MILK2013.

[b]Forage yield adjusted to 65% moisture content based on dried samples.

[c]Forage Type: GS=grain sorghum; FS=forage sorghum; SS=sorghum sudangrass.

[d]Relative maturities are provided by the companies. E=early; ME=medium-early; M=medium; ML=medium-late; PS=Photoperiod sensitive; L=late.

[e]Traits are provided by the companies. Dashes mean conventional (no traits) or information isn't available. BD=brachytic dwarf; BMR=brown mid-rib; IG=iGrowth herbicide technology; SCA=sugar cane aphid.

[f]If the difference between two variety yields equals or exceeds the LSD value, the difference is significant. Farmers selecting a variety based on yield should use the LSD (0.30) to protect from false negative decisions. Companies or researchers may be interested in the LSD (0.05) to avoid false positive conclusions.

Site Information

Collaborator:	CSU Arkansas Valley Research Center (Kevin Tanabe)
Planting Date:	May 16, 2023
Harvest Date:	September 20, 2023
Fertilizer:	Pre-plant: N at 8, P at 21, and K at 2.6 lb/ac; Side-dress: N at 106 lb/ac
Herbicide:	None
Soil Type:	Rocky Ford silty clay loam
GPS Coordinates:	38.0389, -103.6933
Trial Comments:	Planted into good moisture, excellent plant stands and hand-weeded once to control volunteer dry beans and camelina. Trial was irrigated three times, each time receiving 2 inches of water.