

**Winter Annual Small Grain Forages, 2003-2004, Agricultural Science Center at Clovis**

**Investigators:** R.E. Kirksey, J.N. Irwin, C.A. Werner, A. Scott, G. Lucero, K. Phipps, C.M. Biship and F. Williams

**Test Description**

<p><b>Location:</b>                  County/Area: Curry                  Longitude: -103.22                  Latitude: 34.60                  Elevation: 4435 ft.                  Soil Name: Olton                  Soil Texture: silty clay loam                  Soil Depth: &gt;60 in.</p>	<p><b>Management Practices:</b>                  Previous Crop: fallow                  Planting Date: 16-Sep  <u>Forage Harvest - Single harvest per plot</u>                  Harvest Dates: 31-Mar to 17-May                  (Mechanically harvested north end of each plot based on stage of maturity. Clipping height was 1 to 2 in.)  <u>Grazing Simulation - Multiple harvests per plot</u>                  1st Harvest: 16-Dec                  2nd Harvest: 11-Mar                  3rd Harvest: 28-Apr                  (Hand harvested 1 m length from the south end of each plot. Clipping height was 0.5 in.)</p>	<p><b>Growing Conditions:</b></p> <table border="1"> <thead> <tr> <th></th> <th>Average Temp.</th> <th>Precip.</th> <th>Irrigation</th> </tr> <tr> <th></th> <th>°F</th> <th>in.</th> <th>in.</th> </tr> </thead> <tbody> <tr><td>September</td><td>69.2</td><td>1.3</td><td>3.0</td></tr> <tr><td>October</td><td>62.5</td><td>2.4</td><td>3.0</td></tr> <tr><td>November</td><td>50.0</td><td>0.2</td><td></td></tr> <tr><td>December</td><td>42.5</td><td>0.0</td><td></td></tr> <tr><td>January</td><td>39.5</td><td>0.1</td><td>3.0</td></tr> <tr><td>February</td><td>37.7</td><td>1.6</td><td></td></tr> <tr><td>March</td><td>51.5</td><td>1.4</td><td>4.5</td></tr> <tr><td>April</td><td>54.1</td><td>2.7</td><td>6.0</td></tr> <tr><td>May</td><td>66.9</td><td>0.4</td><td>1.5</td></tr> </tbody> </table>		Average Temp.	Precip.	Irrigation		°F	in.	in.	September	69.2	1.3	3.0	October	62.5	2.4	3.0	November	50.0	0.2		December	42.5	0.0		January	39.5	0.1	3.0	February	37.7	1.6		March	51.5	1.4	4.5	April	54.1	2.7	6.0	May	66.9	0.4	1.5		
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<p><b>Test Design:</b>                  Replications: 3                  Plot Length: 30 ft.                  Beds per Plot: 2                  Bed Spacing: 40 in.                  Row Spacing: 5.5 in.                  Seeding Rate: 90 lb/a</p>	<p><b>Production Inputs</b></p> <table border="1"> <thead> <tr> <th></th> <th>Rate</th> <th>Date</th> </tr> </thead> <tbody> <tr><td colspan="3"><b>Fertilizer:</b></td></tr> <tr><td>Nitrogen</td><td>38 lb/a</td><td>4-Sep</td></tr> <tr><td>Nitrogen</td><td>34 lb/a</td><td>8-Jan</td></tr> <tr><td>Nitrogen</td><td>51 lb/a</td><td>16-Mar</td></tr> <tr><td>P2O5</td><td>19 lb/a</td><td>4-Sep</td></tr> <tr><td>K2O</td><td>0 lb/a</td><td></td></tr> <tr><td>S</td><td>13 lb/a</td><td>4-Sep</td></tr> <tr><td>Micronutrients (B, Fe, Mn, Zn)</td><td></td><td>4-Sep</td></tr> <tr><td colspan="3"><b>Herbicides:</b></td></tr> <tr><td>Harmony Extra XP</td><td>1/3 oz/ac</td><td>24-Mar</td></tr> <tr><td>LV6 (2,4-D)</td><td>5 oz/ac</td><td>24-Mar</td></tr> <tr><td colspan="3"><b>Insecticides:</b></td></tr> <tr><td>Lorsban 4E-SG</td><td>1 pt/ac</td><td>24-Mar</td></tr> </tbody> </table>		Rate	Date	<b>Fertilizer:</b>			Nitrogen	38 lb/a	4-Sep	Nitrogen	34 lb/a	8-Jan	Nitrogen	51 lb/a	16-Mar	P2O5	19 lb/a	4-Sep	K2O	0 lb/a		S	13 lb/a	4-Sep	Micronutrients (B, Fe, Mn, Zn)		4-Sep	<b>Herbicides:</b>			Harmony Extra XP	1/3 oz/ac	24-Mar	LV6 (2,4-D)	5 oz/ac	24-Mar	<b>Insecticides:</b>			Lorsban 4E-SG	1 pt/ac	24-Mar	<table border="1"> <tbody> <tr><td>Seasonal Precipitation</td><td>10.0 in.</td></tr> <tr><td>Total Irrigation</td><td>21.0 in.</td></tr> </tbody> </table>	Seasonal Precipitation	10.0 in.	Total Irrigation	21.0 in.
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**Forage Harvest (Single) - Winter Annual Small Grain Forages - Various Dates - NMSU Agricultural Science Center at Clovis**

Company Name	Variety Name	Species <sup>†</sup>	Harvest Date	Green Forage T/ac	Dry Forage T/ac	Moisture	Canopy Height in	Feekes Scale <sup>‡</sup>	Lodging %	Milk/Ton lb/ton	Milk/Acre lb/ac
						at Harvest %					
Curtis & Curtis	Beardless	W	5-May	22.4	6.4 ***	71.6	40.1	10.1	7	2815	17777 ***
Curtis & Curtis	60/40 Blend	WxT	5-May	23.3	5.7 *	75.2	43.7	10.2	0	2707	15200 *
Curtis & Curtis	Scout 66	W	5-May	20.1	5.6 *	72.4	35.8	10.3	53 ***	2706	15233 *
Kelly Green	Pound Plus B	WxTxO	5-May	23.2	5.4 *	76.9	45.7 *	10.2	2	2803	14959 *
Curtis & Curtis	Master Blend	WxTxO	5-May	20.2	5.1	74.7	45.1 *	10.2	0	2853 *	14596 *
AgriPro	TAM 111	W	28-Apr	20.1	4.9	75.3	33.1	10.1	0	2822	13891
AgriPro	Cutter	W	28-Apr	19.5	4.9	74.8	34.8	10.2	0	3079 *	15146 *
AgriPro	Jagalene	W	28-Apr	19.1	4.9	74.4	29.9	10.1	0	3202 ***	15560 *
AgriPro	Longhorn	W	28-Apr	19.0	4.8	74.4	37.9	10.1	0	2773	13397
Kelly Green	Triplecale	T	28-Apr	25.0	4.8	80.7	44.4 *	10.1	3	2621	12526
Curtis & Curtis	Maximizer	TxW	5-May	20.6	4.7	76.9	47.1 ***	10.1	0	2775	13184
Curtis & Curtis	Wintri	T	5-May	22.5	4.6	79.5	44.8 *	10.0	0	2582	11923
AgriPro	Dumas	W	28-Apr	20.7	4.5	78.0	31.6	10.1	0	3080 *	13927
Curtis & Curtis	Lockett	W	28-Apr	20.1	4.5	77.5	35.0	10.2	12	2679	12189
Curtis & Curtis	Walken	O	17-May	21.0	3.8	81.9	34.8	10.1	20	2761	10396
Seed Resource	Winter Master II	T	19-Apr	22.9	3.7	83.7 *	31.8	10.1	0	3105 *	11577
Seed Resource	Winter Master I	T	19-Apr	21.2	3.4	84.2 ***	31.4	10.1	0	3066 *	10328
Seed Resource	WinterMore	R	31-Mar	16.6	3.3	80.0	35.6	10.2	8	3142 *	10429
Trial Mean				21.0	4.7	77.3	37.9	10.1	6	2865	13458
LSD (0.05)				4.6	1.2	2.2	2.9	0.1	9	362	3649
CV				13.35	14.76	1.70	4.59	0.80	96.64	7.61	16.34
F Test				ns	0.0003	<.0001	<.0001	ns	<.0001	0.0156	0.0074

<sup>†</sup>O=oat; R=rye; T=triticale; W=wheat

<sup>‡</sup>10.0=sheath of flag leaf completely grown out, ear not visible; 10.1=first spiklet of head just visible; 10.3=half of heading process complete

\*\*\* Highest numerical value in the column.

\* Not significantly different from the highest numerical value in the column based on the 5% LSD.

**Forage Harvest (Single) - Winter Annual Small Grain Forages - Various Dates - NMSU Agricultural Science Center at Clovis**

Company Name	Variety Name	Harvest Species <sup>†</sup>	Harvest Date	dNDF							Milk/d from forage	N removal
				CP	ADF	NDF	Dig. 48h	Ash	TDN	NEI		
				% of DM	% of DM	% of DM	% of NDF	% of DM	% of DM	Mcals/lb	lb	lb N/ac
Curtis & Curtis	Beardless	W	5-May	12.85	38.60 *	57.80 *	68.34	7.87	59.45	0.61	36.83	259
Curtis & Curtis	60/40 Blend	WxT	5-May	12.66	40.42 *	59.76 *	68.97	8.65	57.89	0.59	35.31	228
Curtis & Curtis	Scout 66	W	5-May	13.55	39.98 *	59.09 *	69.35	9.41 *	57.83	0.59	35.29	242
Kelly Green	Pound Plus B	WxTxO	5-May	12.99	38.84 *	58.66 *	69.26	8.26	59.19	0.61	36.64	220
Curtis & Curtis	Master Blend	WxTxO	5-May	12.61	38.57 *	58.03 *	69.16	7.54	59.89 *	0.61 *	37.48	207
AgriPro	TAM 111	W	28-Apr	12.97	39.07 *	57.81 *	70.44	8.58	59.35	0.61	38.51	204
AgriPro	Cutter	W	28-Apr	13.92	34.92	54.34	72.75 *	7.92	62.69 *	0.64 *	44.59 *	220
AgriPro	Jagalene	W	28-Apr	14.17	33.60	52.56	74.68 *	7.97	64.22 ***	0.66 ***	48.87 ***	219
AgriPro	Longhorn	W	28-Apr	13.76	39.44 *	58.82 *	70.09	8.61	58.70	0.60	37.57	213
Kelly Green	Triplecale	T	28-Apr	13.46	42.07 *	61.37 *	69.66	9.92 *	56.62	0.58	33.24	203
Curtis & Curtis	Maximizer	TxW	5-May	12.76	39.42 *	59.76 *	68.90	7.85	58.84	0.60	35.52	194
Curtis & Curtis	Wintri	T	5-May	12.90	42.43 ***	62.74 ***	68.60	9.37 *	56.17	0.57	31.64	190
AgriPro	Dumas	W	28-Apr	14.85	35.25	53.94	73.99 *	9.02	62.59 *	0.64 *	45.78 *	215
Curtis & Curtis	Lockett	W	28-Apr	13.15	41.44 *	59.43 *	68.23	9.06	57.57	0.59	34.22	191
Curtis & Curtis	Walken	O	17-May	12.41	41.47 *	60.16 *	72.11 *	10.44 *	58.32	0.60	36.85	150
Seed Resource	Winter Master II	T	19-Apr	17.50 ***	34.22	52.46	75.21 ***	10.61 *	62.82 *	0.65 *	47.53 *	209
Seed Resource	Winter Master I	T	19-Apr	16.87 *	35.23	53.38	75.01 *	10.64 ***	62.30 *	0.64 *	46.37 *	182
Seed Resource	WinterMore	R	31-Mar	16.84 *	34.08	53.81	73.56 *	8.45	63.49 *	0.65 *	46.64 *	179
Trial Mean				13.90	38.28	57.44	71.02	8.90	2.12	0.61	39.38	207
LSD				2.41	5.63	5.78	3.47	1.50	4.74	0.05	9.24	55
CV				10.44	8.86	3.48	2.94	10.16	10.49	5.20	5.57	16.08
F Test				0.0007	0.0199	0.0110	0.0001	0.0007	<.0001	0.0201	0.0031	ns

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Grazed Harvest Totals - Winter Annual Small Grain Forages - NMSU Agricultural Science Center at Clovis											
Company Name	Variety Name	Species <sup>†</sup>	Dec. 16, 2003 Harvest		Mar. 11, 2004 Harvest		Apr. 28, 2004 Harvest		Total for 3 Harvests		Total N removal lb N/ac
			Dry Forage T/ac	Crude Protein lb/ac	Dry Forage T/ac	Crude Protein lb/ac	Dry Forage T/ac	Crude Protein lb/ac	Dry Forage lb/ac	Crude Protein lb/ac	
Curtis & Curtis	Maximizer	TxW	1.5 *	747 *	0.8	448	4.6 ***	1683	6.8 ***	2877 ***	460 ***
Curtis & Curtis	60/40 Blend	WxT	1.1	601	0.8	467	4.2 *	1208	6.2 *	2276	364
Curtis & Curtis	Wintri	T	1.4	701 *	0.8	467	4.0 *	1530	6.2 *	2698 *	432 *
Seed Resource	WinterMore	R	1.7 *	761 *	1.2 ***	588 ***	3.2	729	6.1	2077	332
Kelly Green	Pound Plus B	WxTxO	1.4 *	691 *	0.7	367	4.0	1272	6.0	2330	373
Curtis & Curtis	Scout 66	W	1.2	599	1.1 *	558 *	3.5	1019	5.8	2176	348
AgriPro	TAM 111	W	1.4	617	0.8	446	3.6	1132	5.8	2195	351
Kelly Green	Triplecale	T	1.3	743 *	0.8	427	3.5	1249	5.7	2420	387
Curtis & Curtis	Lockett	W	1.3	650 *	0.7	392	3.6	1109	5.6	2151	344
AgriPro	Jagalene	W	1.5 *	712 *	0.8	405	3.3	1112	5.5	2230	357
AgriPro	Longhorn	W	1.2	557	0.8	428	3.4	1110	5.4	2095	335
Curtis & Curtis	Beardless	W	1.2	610	0.7	379	3.4	1041	5.3	2030	325
Curtis & Curtis	Master Blend	WxTxO	1.5 *	735 *	0.6	332	3.2	1152	5.3	2220	355
AgriPro	Dumas	W	1.2	590	0.7	407	3.3	1035	5.2	2031	325
AgriPro	Cutter	W	1.1	553	0.9	462	3.1	1028	5.1	2042	327
Seed Resource	Winter Master II	T	1.3	655 *	0.5	277	3.2	1171	5.0	2104	337
Seed Resource	Winter Master I	T	1.2	630	0.4	248	3.2	1141	4.9	2019	323
Curtis & Curtis	Walken	O	1.7 ***	795 ***	0.1	61	0.9	403	2.7	1258	201
		Trial Mean	1.3	664	0.7	398	3.4	1118	5.5	2179	349
		LSD (0.05)	0.3	153	0.2	89	0.6	289	0.7	354	57
		CV	13.83	13.90	16.05	13.56	10.87	15.57	7.84	9.79	9.79
		F Test	0.0225	0.0498	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001	<.0001

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