

# Summary of EARS

Emo Agricultural  
Research Station

2011

By

Kim Jo Bliss

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## EARS 2011~

Well I certainly cannot complain about what a wet year we had for a change! Early this spring it certainly made me wonder since the fall of 2010 was wet and we had our fair share of snow! Our spring was cool and seemed summer was a long time coming but once it came it was a darn good one. I was extremely behind on my bookwork since we spent more time outside than most years. No complaints, it was great to work continually on a trial and not have to wait for plots to dry.

My students this year were David Donaldson (returning student) and Josh Boven. The boys were excellent and I felt we had a great year. David attends University of Ottawa and Josh is at Olds College and has a strong interest in being a part of Agriculture so that was a real asset. I am hoping the boys will consider returning next year.

Seeding was delayed slightly but luckily Dave and I came in on a Saturday and planted our performance trials. We had to wait for seed for some of our other trials but this allowed plots to dry up nicely. Our forage harvest was super! We had all our first cut finished by mid-June and despite dry conditions we had good 2<sup>nd</sup> cut for the end of July and beginning of August. We could have easily cut 3<sup>rd</sup> cut in our Alfalfa plots but it wasn't so great for some of our pasture trials. The lack of moisture certainly caught up to them.

The combine worked great and I once again realized and appreciated how much nicer plot harvest is with the combine. We narrowed up our row spacing on our drill to make it a bit easier for combine harvest and that and myself being a bit more confident in driving made harvest quick and enjoyable. The little wheels on the combine did find it difficult in some of the deep cracks in our plots!

It was difficult to tell if our tile repairs solved all our problems on such a dry year, but I am not complaining it was a great year to get our jobs done.

Thanks again to everyone that supported us throughout the year. I really appreciate when you take the time to visit us and attend our Open House and see just what we are doing. Special thanks to John Gerber, Larry Lamb and the Nighswander family for your continued support.

As always I look forward to next year and another great (warm) summer.

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Weather Summary - Emo Agricultural Research Station										
Crop Heat Units	May	June	July	August	September	October	TOTAL	Beginning Date	Ending Date	
	2000	352	466	693	658	188	0	2357	Apr-27	15-Sep-00
2001	366	577	681	656	195	0	2475	Apr-28	14-Sep-01	
2002	41	503	706	638	289	0	2177	May-30	15-Sep-02	
2003	299	588	687	747	301	0	2622	May-09	15-Sep-03	
2004	0	437	671	530	312	0	1950	Jun-03	15-Sep-04	
2005	243	655	763	649	505	0	2815	May-09	15-Sep-05	
2006	408	606	780	686	163	0	2643	Apr-16	08-Sep-06	
2007	464	658	717	656	185	0	2680	Apr-22	11-Sep-07	
2008	183	541	683	700	186	0	2293	May-01	12-Sep-07	
2009	205	514	587	619	322	0	2247	May-01	15-Sep-09	
2010	368	550	738	720	161	0	2537	May-01	15-Sep-10	
2011	307	536	747	665	238	0	2493	May-01	14-Sep-11	
We stop collecting CHU's whenever we reach -2.5 or September 15 - which ever comes first.										
Rainfall										
	May	June	July	August	September	October	TOTAL			
2000	55	108	56	97	48.5	54.2	418.7			
2001	134	83.5	122.5	137	42.5	110.6	630.1			
2002	63	301.5	97	99	42	16.6	619.1			
2003	32.5	133.5	83	57.5	59	25.6	391.1			
2004	185.7	52.9	114.1	83.7	138.5	112.1	687.0			
2005	127.6	224.5	98	107.3	67	77.2	701.6			
2006	79.6	40	57.3	37.6	35.4	26.8	276.7			
2007	113.5	170.4	72	27.25	76.5	116	575.7			
2008	84.5	129.5	104	53	113	112.5	596.5			
2009	53.5	52.5	76.5	105.5	48	61.7	397.7			
2010	117.2	133.7	152	105.5	171	38	717.4			
2011	34	110	41.5	31	63.9	27.3	307.7			
Normal's from Environment Canada - (rainfall amounts)										
	67.3	113.8	99	84	79.4	50.4	493.9			



Emo Soybean Population & Row Spacing 2011  
Emo Agricultural Research Station  
(ESP&R11)

Seeded: 25-May-11  
Fertilization: 11-52-0 @ 20 kg/ha  
Herbicide: Round Up @ 1.25 l/ha

Entry	Code	Variety	Yield		1000 Seed		Test Wt.	Lodging	Height	Days to Flower	Days to Harvest	Straw		Plant Population (m <sup>2</sup> )	Pod Height (cm)	Grain Index	Straw Index
			kg/ha	kg/ha	weight (g)	kg/hl						(0-9)	(cm)				
1		5.5 - 150,000	1782.9	115.4	66.1	0	69.5	50	111	387.9	51.8	11.6	100	98			
2		5.5 - 175,000	1657.2	117.9	66.7	0	67.0	50	111	378.2	49.8	13.4	93	96			
3		5.5 - 200,000	1840.7	119.0	66.4	0	71.3	50	111	397.4	59.5	12.1	103	101			
4		11 - 150,000	1805.0	121.7	65.5	0	71.0	50	111	379.4	42.0	12.0	101	96			
5		11 - 175,000	1907.3	119.7	65.8	0	73.0	50	111	388.3	45.8	11.0	107	99			
6		11 - 200,000	1867.2	122.1	67.0	0	74.3	50	111	365.9	48.8	12.1	105	93			
X		5.5 - 200,000	1564.8	121.6	65.2	0	68.3	50	111	452.1	58.3	13.2	88	115			
Y		5.5 - 200,000	1849.0	116.1	68.3	0	70.0	50	111	402.7	55.5	11.4	104	102			
Average			1784.3	119.2	66.4	0	71	50	111	394	51	12					
LSD (0.05)			179.176	6.626	2.423					60.06							
C.V.			6.57%	3.69%	2.43%					10.41%							

Notes:

Plant population was done on June 14, 2011 - we counted 3 different locations of plants per metre of row.  
Pod height was done on August 26, 2011 and we measured 3 different plants and the height of their lowest pod.

Emo Soybean Starter Fertilizer 2011  
Emo Agricultural Research Station  
(ESSF11)

Seeded: 25-May-11  
Fertilization: 11-52-0 @ 20 kg/ha  
Herbicide: Round-Up @ 1.25 l/ha

Entry	Code	Variety	Yield		1000 Seed weight (g)	Test Wt. kg/hi	Lodging (0-9)	Height (cm)	Days to Head	Days to Mature	Straw Yield	Plant Population (m <sup>2</sup> )	Pod Height (cm)	Grain Index	Straw Index
			kg/ha	kg/ha											
1		0 kg/ha	1632.9	120.9	67.6	0	70.3	50	111	379.3	52.8	12.5	101	86	
2		15 kg/ha	1691.7	126.1	63.9	0	75.3	50	111	497.6	55.5	11.6	105	112	
3		30 kg/ha	1552.7	120.8	61.4	0	74.8	50	111	535.0	57.3	11.8	96	121	
X		0 kg/ha	1815.8	124.5	67.6	0	75.8	50	111	411.6	46.5	13.2	113	93	
Y		0 kg/ha	1354.5	118.5	64.8	0	67.0	50	111	393.3	55.8	12.4	84	89	
Average			1609.5	122.1	65.1	0	73	50	111	443.4	53.6	12.3			
LSD (0.05)			167.363	22.388	3.218					90.51					
C.V.			5.95%	10.56%	2.89%					11.12%					

Notes:

Plant population was done on June 14, 2011 - we counted 3 different locations of plants per metre of row.  
Pod height was done on August 26, 2011 and we measured 3 different plants and the heights of their lowest pod.



## ROSCO SOYBEAN

LOCATION: Emo  
 PLANTING: 26-May-11  
 FERTILIZER: 11-52-0 @ 20 kg/ha  
 HERBICIDE: Round-Up @ 1.25 l/ha  
 HARVEST: 13-Sep-11

VARIETY	YIELD (kg/ha)	1000 KW (g)	TEST WT. (kg/hl)	HEIGHT (cm)	LODGING (0-9)	DAYS TO FLOWER	DAYS TO HARVEST
ROSCO	1839.1	102.2	68.6	63	0	50	110
ROSCO	2190.7	101.7	67.3	54	0	50	110
MEAN	2014.9	101.95	67.95	58.5	0	50	110

SOYBEAN DEMO BLOCKS

LOCATION: Emo  
 PLANTING: 19-May-11  
 FERTILIZER: 11-52-0 @ 20 kg/ha  
 46-0-0 @ 45 kg/ha  
 HERBICIDE: Round-Up @ 1.25 l/ha  
 HARVEST: 13-Sep-11

VARIETY	YIELD (kg/ha)	1000 KW (g)	TEST WT. (kg/hl)	HEIGHT (cm)	LODGING (0-9)	DAYS TO FLOWER	DAYS TO HARVEST
OAC MONTCALM	1882.8	108.2	66.1	80	0	53	117
OAC MONTCALM	1697.7	104.7	66.1	79	0	53	117
ROSCO	1346.6	100.2	67.3	83	0	53	117
ROSCO	1310.6	98.9	68.6	71	0	53	117
MEAN	1596.7	103.6	67.4	75.5	0	53	117



EMO Barley Performance 2011  
 EMO Agricultural Research Station  
 (EBPT11)

Seeded: 7-May-11  
 Fertilization: 11-52-0 @ 20 kg/ha  
 46-0-0 @ 70 kg/ha  
 Herbicide: Mextrol @ 1.4 l/ha

Entry	Code	Variety	Yield	1000 Seed	Test Wt.	Lodging	Height	Days to	Days to	Disease	Straw	Index	Index
			kg/ha	weight (g)	kg/hl	(0-9)	(cm)	Head	Mature	(0-9)	Yield	Grain	Straw
1	1083	CH9929n-3	4708.8	35.2	69.8	0.0	98.5	51	86	3.8	4287.5	91	106
2	1085	HS5432-35	5003.8	43.9	62.0	0.0	109.3	51	86	3.3	3994.6	97	99
3	1092	Bentley	5336.0	43.1	62.7	0.0	95.3	53	85	3.0	3479.7	104	86
4	1030	Cyane	5213.1	41.2	60.2	0.0	100.8	53	88	3.3	4284.2	101	106
5	1073	Rhea	5301.9	43.1	61.4	0.0	102.5	58	92	3.8	4669.4	103	116
6	1082	UL138	5400.6	42.8	61.1	0.0	102.0	58	89	4.0	4398.1	105	109
7	1089	UL147	4889.8	41.2	63.0	0.0	105.0	58	88	3.8	4024.1	95	100
8	1042	Yielder	5239.1	40.4	61.7	0.0	108.8	60	88	3.5	3240.2	102	80
9	1009	Bornholm	5231.6	43.7	67.6	0.0	88.8	53	86	4.0	3675.4	102	91
10	1080	C621-013	4927.3	44.9	62.6	0.0	108.3	51	86	4.0	4347.5	96	108
11	1063	HY 435-2R	5227.9	43.3	66.1	0.0	96.0	58	85	3.0	4901.9	101	121
12	1071	HY 460-6R	4625.7	39.2	63.3	0.0	93.8	56	88	3.5	3540.5	90	88
13	1038	HY 481-6R	5121.9	39.0	62.3	0.0	97.8	51	85	3.0	3055.3	99	76
14	1064	HY101-6R	5722.1	43.1	62.0	0.0	88.3	51	85	4.0	2931.9	111	73
15	1059	Amberly	4542.4	44.5	60.2	0.0	105.5	58	92	4.0	4154.6	88	103
16	1026	Encore	5218.1	40.3	59.9	0.0	102.8	58	91	4.0	5476.2	101	136
17	1088	OS06-253	5499.3	41.4	61.4	0.0	106.8	53	87	3.5	5043.0	107	125
18	1091	SQO003L	4929.5	39.8	59.9	0.0	100.8	58	90	4.0	3780.9	96	94
19	1090	SQO005L	5144.4	38.3	60.5	0.0	100.8	58	91	3.8	4094.3	100	101
20	1056	Harmony	4719.6	41.3	60.5	0.0	112.5	58	88	3.5	5214.3	92	129
21	1049	OCEANIK	5090.4	42.1	60.2	0.0	105.3	53	87	4.0	3911.3	99	97
22	1072	Pandora	5599.0	45.1	65.8	0.0	95.5	53	86	3.8	3795.0	109	94
23	1043	SYNABELLE	5461.9	43.9	61.4	0.0	108.3	53	87	4.0	4886.3	106	121
24	1057	Synasolis	5431.0	39.2	60.2	0.0	91.5	58	91	3.5	3597.9	105	89
X	0	Guard-HY 481-6R	4872.5	36.8	59.2	0.0	90.0	51	85	3.5	3374.8	95	84
Y	0	Guard-HY 481-6R	5498.0	39.1	62.3	0.0	97.2	51	85	3.3	2797.8	107	69

Average 5152.2 41.4 62.2 0.0 100 55 87 3.6 4036.8  
 LSD (0.05) 843.500 1.610 1.720 1410.9  
 C.V. 11.61% 2.74% 1.96% 24.30%



EMO Spring Wheat Performance 2011  
 EMO Agricultural Research Station  
 ( ESWPT11 )

Seeded: 7-May-11  
 Fertilization: 11-52-0 @ 20 kg/ha  
 46-0-0 @ 70 kg/ha  
 Herbicide: Mextrol @ 1.4 l/ha

Entry	Code	Variety	Yield	1000 Seed	Test Wt.	Lodging	Height	Days to	Days to	Disease	Straw	Grain	Straw
			kg/ha	weight (g)	kg/hl	(0-9)	(cm)	Head	Mature	(0-9)	Yield	Index	Index
1	5009	Norwell	3914.9	31.3	74.0	0	101	51	94	4	4595	105	81
2	5010	Sable	3995.0	34.6	73.3	0	91	53	96	4	5489	108	97
3	5014	Orleans	3513.3	34.8	72.3	0	102	53	94	5	4454	95	79
4	5019	Megantic	3909.8	36.0	74.2	0	112	53	94	4	5852	105	103
5	5020	Kane	2969.3	31.9	72.9	0	100	51	94	4	4532	80	80
6	5024	HY 124-HRS	3442.1	35.0	72.3	0	93	53	95	3	6394	93	113
7	5025	98S017-01	3380.8	31.3	72.6	0	83	53	96	4	4551	91	80
8	5026	Touran	4075.5	39.8	74.6	0	107	53	95	5	5737	110	101
9	5028	HY 162-HRF	4315.0	38.9	71.7	0	99	53	93	5	4890	116	86
10	5030	BS03-244	3540.9	35.1	72.7	0	110	58	100	3	8401	95	149
11	5031	MAJOR	3608.8	33.9	72.4	0	105	60	102	4	8375	97	148
12	5032	RICHELIEU	4049.0	37.8	72.6	0	113	58	96	4	5682	109	100
13	5033	Helios	3922.5	35.3	73.0	0	103	51	93	4	4720	106	83
14	5034	Batiscan	4313.8	43.1	73.6	0	114	58	95	4	6458	116	114
15	5038	Glenn	3343.5	30.5	75.1	0	94	51	94	4	4530	90	80
16	5041	Wilkin	3391.3	29.9	66.8	0	86	53	95	4	6284	91	111
17	5042	AW625	3839.3	36.4	71.7	1	112	58	96	3	6088	103	108
18	5043	KINGSEY	4374.3	37.8	73.9	0	113	58	96	4	6545	118	116
19	5046	CFB0601	3862.5	33.9	74.8	0	99	51	95	4	6371	104	113
20	5050	SQB004	4215.0	33.0	73.6	0	107	51	94	4	5854	114	104
21	5051	SQB001	4033.3	29.7	72.3	0	97	58	95	4	5152	109	91
22	5052	Tokson	3039.8	30.8	68.6	0	90	51	97	3	5846	82	103
23	5053	Carberry	2570.9	34.4	74.8	0	89	60	94	3	5477	69	97
24	5054	MAGOG	3898.8	35.3	72.3	0	104	53	94	4	4195	105	74
25	5055	BS05-173	3392.3	32.0	73.4	0	112	58	97	4	7152	91	126
26	5056	BS06-236	3102.3	31.3	70.7	0	108	60	103	3	8557	84	151
27	5057	07SW04	3262.3	32.3	72.1	1	107	53	94	4	4797	88	85
28	9999	FILLER-Norwell	4153.0	32.9	73.6	0	107	52	93	4	4527	112	80
X	x	Guard-Norwell	3586.3	33.5	73.6	0	104	51	93	5	3838	97	68
Y	y	Guard-Norwell	4347.0	31.5	73.9	0	102	51	93	5	4271	117	76
Average			3712.1	34.1	72.8	0.0	102	54	95	4	5654		
LSD (0.05)			597.888	1.876	1.592						1486.785		
C.V.			11.49%	3.89%	1.55%						18.30%		



EMO Oat Performance Test 2011  
 EMO Agricultural Research Station  
 (EOPT11)

10

Seeded: 7-May-11  
 Fertilization: 11-52-0 @ 20kg/ha  
 46-0-0 @ 70 kg/ha  
 Herbicide: Mextrol 1.4 l/ha

Entry	Code	Variety	Yield	1000 Seed	Test Wt.	Lodging	Height	Days to Head	Days to Mature	Disease (0-9)	Straw Yield	Index Grain	Index Straw
			kg/ha	weight (g)	kg/hl	(0-9)	(cm)						
1	3037	OA1228-1	5081.8	31.9	41.5	0.8	104.5	60.0	88.8	2.0	4579.1	121	84
2	3048	OA1271-3	4979.3	35.3	41.5	0.0	103.0	51.0	88.8	1.5	6770.5	119	124
3	3008	Prescott	4494.0	30.6	42.4	0.0	98.0	53.0	88.0	1.8	4802.2	107	88
4	3042	AC Gwen	1928.1	33.2	43.6	0.0	105.5	58	95	1.3	6772.7	46	124
5	3016	Bia	4710.3	31.1	41.2	0.0	114.5	60	89	2.5	6146.5	112	112
6	3041	CFA0607	3140.4	30.2	42.9	0.0	101.3	58	90	1.8	6145.1	75	112
7	3034	OA1174-3	4140.5	34.4	43.6	0.5	105.3	51	91	2.0	5292.2	99	97
8	3032	SO04278	4281.2	34.0	43.4	0.0	100.8	60	92	2.0	4890.1	102	89
9	3025	RC Amaze	3767.8	32.5	43.6	0.0	87.3	51	88	2.8	3489.9	90	64
10	3015	Robust	2717.0	29.9	44.3	0.0	95.8	58	93	1.8	4703.0	65	86
11	3047	06ANS28	3832.3	25.2	55.5	0.0	104.5	64	92	2.3	5266.0	91	96
12	3019	Canmore	5093.9	39.0	44.9	0.0	107.0	58	89	2.0	5815.7	121	106
13	3044	CANTAL	4739.0	35.4	45.8	0.0	109.5	58	88	2.5	6364.6	113	116
14	3028	Navaro	2688.1	30.2	50.8	0.0	99.0	64	92	2.3	6403.8	64	117
15	3043	Bradley	3682.2	35.1	40.5	0.0	103.3	58	90	1.8	6260.1	88	114
16	3031	Dieter	5520.3	38.7	43.6	0.0	109.0	58	89	2.3	6256.7	132	114
17	3012	Lachute	5180.8	34.4	40.6	0.0	101.3	53	90	3.0	5007.8	124	92
18	3046	OA1251-1	4297.9	36.6	44.6	0.0	98.5	53	88	2.5	4652.3	102	85
19	3038	SA04213	4790.6	32.9	42.4	0.8	101.8	60	90	2.8	5466.8	114	100
20	3026	Synextra	4528.6	34.6	44.9	0.0	106.8	58	89	2.3	6138.0	108	112
21	3039	Vitality	4666.7	37.7	41.2	0.0	103.5	58	90	1.8	4328.8	111	79
X	0	Guard-Prescott	3444.0	32.2	41.2	0.0	88.0	53	88	2.3	4822	82	88
Y	0	Guard-Prescott	4753.8	30.5	40.5	0.0	94.0	53	88	2.0	5428	113	99

Average	4193.8	33.3	43.7	0.1	102	57	90	2.1	5469.6
LSD (0.05)	725.984	1.474	1.709						1177.565
C.V.	12.21%	3.11%	2.75%						15.13%

Emo Cereal Bio Mass Trial 2011  
 Emo Agricultural Research Station  
 ( ECBMT11)

Seeded: 7-May-11  
 Fertilization: 46-0-0 per plot  
 11-52-0 @ 20 kg/ha  
 Herbicide: Mextrol 1.4 l/ha

Entry	Code	Variety	Yield	1000 Seed	Test Wt.	Lodging	Height	Days to Head	Days to Mature	Straw Yield	Grain Index	Straw Index
			kg/ha	weight (g)	kg/hl	(0-9)	(cm)					
1		Sable-70	2912.6	33.4	73.0	0	91.0	53	106	3461.4	114	119
2		AC Alma-70	2907.6	38.5	57.4	0	88.5	51	87	2408.5	114	83
3		Prescott-55	2333.5	31.1	40.9	0	90.8	53	94	3023.1	91	104
4		Triticale-0	2128.9	35.4	65.1	0	97.0	51	106	2269.5	83	78
5		Triticale-35	2898.5	37.3	64.2	0	106.5	51	106	2956.5	114	102
6		Triticale-70	3417.7	38.1	65.1	0	105.8	51	106	4610.3	134	159
X		Guard-Triticale-0	2277.5	32.3	64.5	0	101	51	106	2409.9	89	83
Y		Guard-Triticale-0	1534.3	32.5	63.2	0	91	51	106	2041.2	60	70

Average 2551.3 34.8 61.7 0.0 96 52 102 2898  
 LSD (0.05) 675.239 1.944 1.604 678.72  
 C.V. 16.19% 3.62% 1.75% 14.43%



Emo BCW11

Seeded: 10-May-11  
Fertilization: 46-0-0 @ 70 kg/ha  
11-52-0 @ 20 kg/ha  
Herbicide: Mextol @ 1.4 l/ha

Entry	Code	Variety	Yield	1000 Seed	Test Wt.	Lodging	Height	Days to Head	Days to Mature	Straw Yield	Grain Index	Straw Index
			kg/ha	weight (g)	kg/hl	(0-9)	(cm)					
1		Sable - 0	4080.5	34.7	74.8	0	85.3	50	104	3714	105	101
2		Sable - 2.4 t/ha	4141.8	34.6	74.5	0	85.8	50	104	3906	107	106
3		Sable - 4.7 t/ha	3979.8	34.1	74.5	0	85.5	50	104	3775	103	102
4		Sable - 7.1 t/ha	3895.4	35.2	74.2	0	87.8	50	104	3541	100	96
X		Guard	3285.3	34.8	73.9	0	87.3	50	104	3521	85	95
Y		Guard					84.8	50	104		0	0

Average	3876.6	34.6	74.4	0.0	86	50	104	3691
LSD (0.05)	331.0	0.817	0.640					576.927
C.V.	5.14%	1.47%	0.54%					9.66%

Emo BCWWET11

Seeded: 13-May-11  
 Fertilization: 46-0-0 @ 70 kg/ha  
 Herbicide: Mextrol @ 1.4 l/ha

Entry	Code	Variety	Yield	1000 Seed	Test Wt.	Lodging	Height	Days to Head	Days to Mature	Straw Yield	Grain Index	Straw Index
			kg/ha	weight (g)	kg/hl	(0-9)	(cm)					
1		Sable - 0				0	53.3	61	102	523		102
2		Sable - 2.4 t/ha				0	58.0	61	102	653		127
3		Sable - 4.7 t/ha				0	54.0	61	102	504		98
4		Sable - 7.1 t/ha				0	53.3	61	102	448		87
X		Guard				0	51.8	61	102	398		77
Y		Guard				0	48.0	61	102	554		108

Average #DIV/0! #DIV/0! #DIV/0! 0.0 53 61 102 513  
 LSD (0.05) 114  
 C.V. 13.40%

Birds destroyed this before we harvested.



Emo - Bio-Char on Barley - 2011  
 Emo Agricultural Research Station  
 Emo BCB11

Seeded: 10-May-11  
 Fertilization: 46-0-0 @ 70 kg/ha  
 11-52-0 @ 20 kg/ha  
 Herbicide: Mextrol 1.4 l/ha

Entry	Code	Variety	Yield	1000 Seed	Test Wt.	Lodging	Height	Days to Head	Days to Mature	Straw Yield	Grain Index	Straw Index
			kg/ha	weight (g)	kg/hl	(0-9)	(cm)					
1		AC Alma - 0	3772.0	39.4	58.3	0	80	48	82	3240.6	104	108
2		AC Alma - 2.4 t/ha	4152.0	38.2	57.7	0	82	48	82	2957.5	114	99
3		AC Alma - 4.7 t/ha	4162.8	39.3	59.6	0	85	48	82	3122.5	114	104
4		AC Alma - 7.1 t/ha	2856.8	38.7	57.7	0	82	48	82	3026.8	79	101
X		Guard	2836.5	38.8	55.8	0	82	48	82	2614.6	78	87
Y		Guard	4048.0	41.1	56.8	0	84	48	82	3021.2	111	101
Average			3638.0	39.2	57.6	0	82	48	82	2997.2		
LSD (0.05)			656.839	2.016	3.353					704.345		
C.V.			10.99%	3.24%	3.59%					14.26%		

Emo - Bio-Char on Barley WET- 2011  
 Emo Agricultural Research Station  
 Emo BCBWET11

Seeded: 10-May-11  
 Fertilization: 46-0-0 @ 70 kg/ha  
 11-52-0 @ 20 kg/ha  
 Herbicide: Mextrol @ 1.4 l/ha

Entry	Code	Variety	Yield kg/ha	1000 Seed weight (g)	Test Wt. kg/hl	Lodging (0-9)	Height (cm)	Days to Head	Days to Mature	Index
1		AC Alma - 0				0		55		#DIV/0!
2		AC Alma - 2.4 t/ha				0		55		#DIV/0!
3		AC Alma - 4.7 t/ha				0		55		#DIV/0!
4		AC Alma - 7.1 t/ha				0		55		#DIV/0!
X		Guard				0		55		#DIV/0!
Y		Guard				0		55		#DIV/0!

Average #DIV/0! #DIV/0! #DIV/0! 0.0 #DIV/0! 55 #DIV/0!  
 LSD (0.05)  
 C.V.

Birds destroyed these plots before harvest.



Emo - Bio-Char on Canola - 2011  
 Emo Agricultural Research Station  
 Emo BCC11

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Seeded: 16-May-11  
 Fertilization: 46-0-0 @ 70 kg/ha  
 11-52-0 @ 20 kg/ha  
 Herbicide: Round-Up @ 1.25 l/ha

Entry	Code	Variety	Yield	1000 Seed	Test Wt.	Lodging	Height	Straw	Days to	Days to	Grain	Straw
			kg/ha	weight (g)	kg/hl	(0-9)	(cm)	Yield	Flower	Harvest	Index	Index
1		Canola	1661.7	3.0	63.6	2.8	80.5	1708.4	48	100	105	96
2		Canola - 2.4 t/ha	1566.5	3.2	64.2	2.3	83.3	1746.3	48	100	99	98
3		Canola - 4.7 t/ha	1467.9	3.1	64.4	2.3	77.5	1900.3	48	100	93	107
4		Canola - 7.1 t/ha	1716.8	3.1	64.2	2.5	80.3	1597.6	48	100	109	90
X		Guard	1707.0	3.2	64.2	2.3	86	2464.5	48	100	108	139
Y		Guard	1335.5	3.1	64.2	2.5	86	1254.4	48	100	85	71
Average			1575.9	3.1	64.1	2.4	82	1778.6	48	100		
LSD (0.05)			259.871	0.205	1.369			662.224				
C.V.			10.13%	4.11%	1.31%			23.82%				

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Emo - Bio-Char on Canola WET- 2011  
Emo Agricultural Research Station  
Emo BCCWET11

Seeded: 16-May-11  
Fertilization: 46-0-0 @ 70 kg/ha  
11-52-0 @20 kg/ha  
Herbicide: Round-Up @ 1.25l/ha

Entry	Code	Variety	Yield	1000 Seed	Test Wt.	Lodging	Height	Straw	Days to	Days to	Grain	Straw
			kg/ha	weight (g)	kg/hl	(0-9)	(cm)	Yield	Flower	Harvest	Index	Index
1		Canola	124.0	5.9		1.8	55.3	224.4	49	100	103	33
2		Canola - 2.4 t/ha	103.7	5.8		2.3	52.8	304.6	49	100	86	45
3		Canola - 4.7 t/ha	84.9	5.5		2.3	53.5	331.7	49	100	70	49
4		Canola - 7.1 t/ha	137.9	5.9		2.0	56.8	407.3	49	100	114	60
X		Guard	207.8	5.7		3.8	57.0	2253.9	49	100	172	330
Y		Guard	65.0	6.0		1.7	42.8	570.0	49	100	54	84

Average	120.5	5.8	#DIV/0!	2.3	53	682	49	100
LSD (0.05)	69.842	0.444				332.039		
C.V.	38.75%	4.81%				65.48%		

Birds destroyed these plots before harvest.



CEREAL MIX

LOCATION: Emo  
 PLANTING: 20-May-11  
 FERTILIZER: 11-52-0 @ 20 kg/ha  
 46-0-0 @ 70 kg/ha  
 HERBICIDE: Mexrol 1.4 l/ha  
 HARVEST: 25-Aug-11

VARIETY	YIELD (kg/ha)	1000 KW (g)	TEST WT. (kg/hl)	STRAW YIELD (kg/ha)	HEIGHT (cm)	LODGING (0-9)	DAYS TO HEAD	DAYS TO MATURE	DISEASE (0-9)
Cereal Mix	1704.9	35.3	66.1	1725.6	112	0	52	97	2
Cereal Mix	2297.5	36.3	66.1	2264.3	112	0	52	97	2
MEAN	2001.2	35.8	66.1	1995.0	112	0	52	97	2

GREEN MANURE TRIAL

LOCATION: Emo  
 PLANTING: 20-May-11  
 FERTILIZER: 11-52-0 @ 20 kg/ha  
 46-0-0 @ 70 kg/ha  
 HERBICIDE: Mexrol 1.4 l/ha  
 HARVEST: 25-Aug-11

VARIETY	YIELD (kg/ha)	1000 KW (g)	TEST WT. (kg/hl)	STRAW YIELD (kg/ha)	HEIGHT (cm)	LODGING (0-9)	DAYS TO HEAD	DAYS TO MATURE	DAYS TO DISEASE (0-9)	GRAIN INDEX	STRAW INDEX
(Buckwheat)	1506.5	29.7	75.1	1719.0	79	0	52	97	3	97	83
(Sweet Clover)	1646.1	30.2	73.0	2116.9	79	0	52	97	3	106	102
(Sweet + Red Clover)	1670.3	29.9	73.6	2022.7	79	0	52	97	3	108	98
(Red Clover - single)	1798.7	30.4	74.2	2325.1	79	0	52	97	3	116	112
(Red Clover - double)	1437.8	29.8	74.5	2168.1	79	0	52	97	3	93	105
(Oil Seed Radish)	1678.2	30.8	73.6	2354.1	79	0	52	97	3	109	114
(Common Vetch)	1403.1	29.5	74.5	2049.0	79	0	52	97	3	91	99
(Hairy Vetch)	1745.6	31.0	74.8	2380.0	79	0	52	97	3	113	115
(Braco Mustard)	1586.0	29.9	73.3	2422.9	79	0	52	97	3	103	117
MEAN	1546.2	29.8	74.2	2070.9	79.0	0	52	97	3		
LSD (0.05)	438.384	1.436	2.156	1082.9							
C.V.	11.82%	2.07%	1.26%	21.61%							

This was planted to Superb Wheat but the above is the crop that we ploughed down in 2008

## JORDAN OATS

LOCATION: Emo  
 PLANTING: 10-May-11  
 FERTILIZER: 11-52-0 @ 20 kg/ha  
               46-0-0 @ 70 kg/ha  
 HERBICIDE: Mexrol 1.4 l/ha  
 HARVEST: 24-Aug-11

VARIETY	YIELD (kg/ha)	1000 KW (g)	TEST WT. (kg/hl)	STRAW YIELD (kg/ha)	HEIGHT (cm)	LODGING (0-9)	DAYS TO HEAD	DAYS TO MATURE	DISEASE (0-9)
Jordan	3348.6	39.5	42.4	2930.2	108	0	62	106	2
Jordan	3208.6	41.0	42.4	2786.8	110	0	62	106	2
MEAN	3278.6	40.3	42.4	2858.5	109	0	62	106	2



BRUCEFIELD BARLEY

LOCATION: Emo  
PLANTING: 26-May-11  
FERTILIZER: 11-52-0 @ 20 kg/ha  
46-0-0 @ 70 kg/ha  
HERBICIDE: Mexrol 1.4 l/ha  
HARVEST: 24-Aug-11

VARIETY	YIELD (kg/ha)	1000 KW (g)	TEST WT. (kg/hl)	STRAW YIELD (kg/ha)	HEIGHT (cm)	LODGING (0-9)	DAYS TO HEAD	DAYS TO MATURE	DISEASE (0-9)
Brucefield	3239.7	37.9	59.9	2136.2	78	0	46	91	3
Brucefield	2374.1	38.5	58.6	1379.5	78	0	46	91	3
MEAN	2806.9	38.2	59.25	1757.85	78	0	46	91	3

BRUCEFIELD BARLEY

LOCATION: Emo

PLANTING: 10-May-11

FERTILIZER 11-52-0 @ 20 kg/ha  
46-0-0 @ 70 kg/ha

HERBICIDE: Mexrol 1.4 l/ha

HARVEST: 11-Aug-11

VARIETY	YIELD (kg/ha)	1000 KW (g)	TEST WT. (kg/hl)	STRAW YIELD (kg/ha)	HEIGHT (cm)	LODGING (0-9)	DAYS TO HEAD	DAYS TO MATURE	DISEASE (0-9)
Brucefield	3179.1	38.0	57.4	2309.5	101	0	62	93	4
Brucefield	2728.6	37.5	54.9	2124.8	100	0	62	93	4
MEAN	2953.85	37.8	56.15	2217.2	100.5	0	62	93	4

SUPERB WHEAT

LOCATION: Emo  
 PLANTING: 10-May-11  
 FERTILIZER: 11-52-0 @ 20 kg/ha  
 46-0-0 @ 70 kg/ha  
 HERBICIDE: Mexrol 1.4 l/ha  
 HARVEST: 24-Aug-11

VARIETY	YIELD (kg/ha)	1000 KW TEST WT. (g)	TEST WT. (kg/hl)	STRAW YIELD (kg/ha)	HEIGHT (cm)	LODGING (0-9)	DAYS TO HEAD MATURE	DAYS TO MATURE	DISEASE (0-9)
Superb	3061.4	34.8	76.1	4631.4	94	0	51	106	5
Superb	2638.4	31.8	74.8	4030.6	94	0	51	106	5
MEAN	2849.9	33.3	75.45	4331.0	94	0	51	106	5



ANNUAL GRASS CONTROL

LOCATION: Emo  
 PLANTING: Cereals & Soybeans May 25, 2011  
 Alfalfa May 27, 2011  
 FERTILIZER: 11-52-0 @ 20 kg/ha  
 46-0-0 @ 70 kg/ha (Cereals & Soybeans)  
 HERBICIDE: Cereals - Achieve @ 1.35 ml/plot + Mextrol @ 3.38 ml/plot  
 Soybeans - Round Up @ 2.7 ml/plot  
 Alfalfa - Venture @ 2.7 ml/plot  
 Fallow - cultivate 3 times per season

TREATMENT	YIELD (kg/ha)	HEIGHT (cm)	LODGING (0-9)	DAYS TO HEAD /FLOWER	DAYS TO MATURE	STRAW YIELD	OVERALL WEED CONTROL	ANNUAL GRASS CONTROL
ALFALFA							3	1
WHEAT		74.0	0	58	92	5928.6	2	1
SOYBEANS	182.5	37.3	0	58	114	750.8	2	1
BARLEY		58.0	0	58	92	4786.0	2	2
FALLOW							5	2
MEAN	182.5	56.4	0	58	99	3821.8	3	1
LSD (0.05)		9.005				2614.32	0.486	0.595
C.V. %		7.04%				30.18%	9.01%	20.62%

Objective: To develop an effective strategy for the control of Annual Grasses.

Notes:

The birds cleaned off the wheat and barley before we could harvest. The deer cleaned off the soybeans and we salvaged what we could.

Overall Weed Control Rating - 1 = No Weeds, 5 = Weed Infested.

Annual Grass Weed Control Rating = 1 = Excellent Control and 5 = No Control.

Weeds in the plots included:

- Lambs Quarter
- Barn Yard Grass
- Proso Millet
- Ladys Thumb
- Dandelion
- Quack Grass
- Plantain

## LARRY'S OAT STRIPS

LOCATION: Emo  
 PLANTING: 10-Jun-11  
 FERTILIZER: 11-52-0 @ 20 kg/ha  
 46-0-0 @ 70 kg/ha  
 HERBICIDE: Mexrol 1.4 l/ha  
 HARVEST: 22-Aug-11

VARIETY	YIELD (kg/ha)	HEIGHT (cm)	LODGING (0-9)	DAYS TO HEAD	YIELD (t/acre)	YIELD INDEX
CASCADE	16988.3	74.5	0	49	6.9	85
RONALD	16859.4	81.0	0	49	6.8	84
JORDAN	15225.6	93.5	0	61	6.2	76
WALDERN	17953.1	88.5	0	61	7.3	90
SOURIS	23122.7	68.5	0	51	9.3	115
MEAN	20055.5	71.5	0	50	8.1	



Emo Biomass Miscanthus (2010) 2011  
Emo Agricultural Research Station

Seeding Date: 29-Jun-10  
Fertilization: 46-0-0 70 kg/ha per plot protocol  
11-52-0 @ 20 kg/ha (October 4, 2011)  
Herbicide: n/a

Entry	Code	Variety	Yield		1000 Seed weight (g)	Test Wt. kg/hi	Lodging (0-9)	Height (cm)	Days to Flower/Head	Days to Harvest	Disease	Population Count (1)	Population Count (2)	Straw Yield	Index	t/acre
			kg/ha	kg/ha												
1	111	Switchgrass "Sunburst" 0 N Spring Cut					0	100							0	0.000
2	112	Switchgrass "Sunburst" 0N Fall Cut	725.0				0	102							80	0.293
3	121	Switchgrass "Sunburst" 50 N Spring Cut					0	103							0	0.000
4	122	Switchgrass "Sunburst" 50 N Fall Cut	1331.0				0	104							147	0.538
5	211	Switchgrass "Cave-In-Rock" 0 N Spring Cut					0	105							0	0.000
6	212	Switchgrass "Cave-In-Rock" 0 N Fall Cut	643.3				0	95							71	0.260
7	221	Switchgrass "Cave-In-Rock" 50 N Spring Cut					0	100							0	0.000
8	222	Switchgrass "Cave-In-Rock" 50 N Fall Cut	1432.7				0	98							158	0.579
9	311	Miscanthus Pol 0 N Spring Cut					0	72			4	4			0	0.000
10	312	Miscanthus Pol 0 N Fall Cut	250.0				0	75			4	4			28	0.101
11	321	Miscanthus Pol 50 N Spring Cut					0	101			9	6			0	0.000
12	322	Miscanthus Pol 50 N Fall Cut	1033.0				0	95			4	6			114	0.417
13	411	Miscanthus M1 0 N Spring Cut					0	79			6	5			0	0.000
14	412	Miscanthus M1 0 N Fall Cut	561.0				0	63			7	5			0	0.227
15	421	Miscanthus M1 50 N Spring Cut					1	89			9	9			0	0.000
16	422	Miscanthus M1 50 N Fall Cut	791.3				1	88			8	6			87	0.320
17	511	Miscanthus 114 0 N Spring Cut					1	97			10	9			0	0.000
18	512	Miscanthus 114 0 N Fall Cut	499.0				1	99			10	6			55	0.202
19	521	Miscanthus 114 50 N Spring Cut					2	102			12	16			0	0.000
20	522	Miscanthus 114 50 N Fall Cut	1335.7				2	100			7	13			147	0.540
21	611	Miscanthus 116 0 N Spring Cut					1	86			16	14			0	0.000
22	612	Miscanthus 116 0 N Fall Cut	542.7				2	76			17	14			60	0.219
23	621	Miscanthus 116 50 N Spring Cut					0	114			14	18			0	0.000
24	622	Miscanthus 116 50 N Fall Cut	1841.3				1	130			13	17			203	0.744
25	711	Reed Canary Grass (Rival) 0 N Fall Cut	1241.0				0	116							137	0.501
26	721	Reed Canary Grass (Rival) 50 N Fall Cut	2097.7				0	122							232	0.847
27	811	Prairie Cord Grass (Spartina) 0 N Fall Cut	59.3				0	71							7	0.024
28	821	Prairie Cord Grass (Spartina) 50 N Fall Cut	439.0				0	89							48	0.177
29	911	Big Bluestem (Prairie View) 0 N Fall Cut	258.0				0	117							28	0.104
30	921	Big Bluestem (Prairie View) 50 N Fall Cut	737.7				0	125							81	0.298
31		Oat (Prescott)	1226.7		35.7	41.8	0	75	56	88	2				135	0.496
32		Spring Wheat (Norwell)	1075.7		32.4	75.8	0	72	58	102	2				119	0.435
33		Canola (7245-RR)					0	66	55	100					0	0.000
Average			906.1		34.0	58.8	0.3	95	56	97	2	9	10		1552	
LSD (0.05)			681.728		5.358	9.337									577.602	
C.V.			45.52%		4.49%	1.53%									10.59%	

Notes:  
Birds destroyed Canola so there was no yield data.  
Miscanthus 114 variety was flowering on September 12, 2011.  
We harvested the Fall Plots on November 2 & 4, 2011.



SWITCH GRASS TRIAL

LOCATION: Emo  
 PLANTING: 07-Jun-01  
 FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)  
 46-0-0 @ 70 kg/ha  
 HARVEST: Spring Cut - Reps # 1 & # 2 - May 5, 2011  
 Fall Cut - Reps # 3 & # 4 - October 31, 2011

TREATMENT	SPRING CUT (kg/ha)	HEIGHT (cm)	FALL CUT (kg/ha)	HEIGHT (cm)	SPRING CUT (t/acre)	FALL CUT (t/acre)
SUNBURST	2112.5		3533.1	99	0.9	1.4
FORESTBURG	2546.7		3640.1	101	1.0	1.5
DACOTAH	1768.35		3613.6	98	0.7	1.5
VANTAGE (1)	1345.3		3526.6	96	0.5	1.4
CAVE-IN-THE-ROCK	826.0		3363.2	94	0.3	1.4
VANTAGE (2)	916.45		3297.7	91	0.4	1.3
MEAN	1585.9		3495.7	96.3	0.6	1.4
C.V.	47.7%		7.0%	7.5%		
PR>F	n/s		n/s	n/s		
LSD (0.05)	1373.529		444.322	13.2		

Reed Canary Grass is slowly taking over these plots as well.

Again I did not measure spring heights since the plots were flat to the ground and hard to pick up.

REED CANARY GRASS & SWITCH GRASS BLOCKS

LOCATION: Emo

PLANTING: 28-May-08

FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)  
46-0-0 @ 70 kg/ha

HARVEST: 31-Oct-11

TREATMENT	REED CANARY GRASS (kg/ha)	SWITCH GRASS (kg/ha)	REED CANARY GRASS (cm)	SWITCH GRASS (cm)	REED CANARY GRASS (t/acre)	SWITCH GRASS (t/acre)
(A)	3315.1	2442.3	101.0	88	1.3	1.0
(B)	3277.9	1896.0	107.0	79	1.3	0.8
MEAN	3296.5	2169.2	104.0	83.5	1.3	0.9

Reed Canary Grass = Palaton

Switch Grass = Sunburst

Note - These are the same blocks that the producers planted on farm.  
We also feel that our Switch Grass Seed might not have been the best quality.

DEMO GRASS STRIPS

LOCATION: Emo  
 PLANTING: 25-May-00  
 FERTILIZER: 46-0-0 @ 70 kg/ha  
 HARVEST: Spring Cut - Rep's # 1 & # 2 - May 5, 2011  
 Fall Cut - Rep's # 3 & # 4 - October 31, 2011

TREATMENT	SPRING CUT (kg/ha)	HEIGHT (cm)	FALL CUT (kg/ha)	HEIGHT (cm)	SPRING CUT (t/acre)	FALL CUT (t/acre)
REED CANARY GRASS	854.6		3002.9	152	0.3	1.2
REED CANARY GRASS	1373.7		3697.7	155	0.6	1.5
REED CANARY GRASS	549.5		3813.1	170	0.2	1.5
MEAN	925.9		3504.5	159.0	1.9	1.7
C.V.	71.87%		8.40%	6.56%		
PR>F	n/s		n/s	n/s		
LSD (0.05)	2024.521		895.542	31.715		

Originally these plots were Switch Grass, Praire Grass and Reed Canary Grass but now they are all Reed Canary Grass.

Spring Plots are very hard to pick up since they are flat to the ground which is why I didn't measure height.



## KURA CLOVER ESTABLISHMENT TRIAL

LOCATION: Emo  
 PLANTING: 25-May-00  
 FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)  
 HARVEST: 1st Cut - June 9, 2011  
 2nd Cut - July 13, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD (kg/ha)	TOTAL YIELD (t/acre)
<b>FACTOR A</b>						
VENTURE REED CANARY GRASS	3080.4	59	1736.3	48	4816.7	1.9
OKAY ORCHARD GRASS	3148.4	74	1616.4	54	4764.8	1.9
<b>FACTOR B</b>						
ENDURA KURA CLOVER	3216.9	69	1770.8	49	4987.7	2.0
ENDURA + LEO TREFOIL	3309.3	69	1730.1	52	5039.4	2.0
ENDURA + WALTER RED CLOVER	3131.0	66	1743.6	48	4874.5	2.0
ENDURA + LEGEND 2 ALFALFA	2893.4	65	1533.0	55	4425.4	1.8
ENDURA + WILL WHITE CLOVER	3021.6	64	1604.4	50	4625.9	1.9
<b>FACTOR A + FACTOR B</b>						
VENTURE + ENDURA	3134.7	59	1818.4	48	4953.1	2.0
VENTURE + ENDURA + LEO	3257.6	62	1842.1	48	5099.6	2.1
VENTURE + ENDURA + WALTER	3069.7	55	1798.9	42	4868.6	2.0
VENTURE + ENDURA + LEGEND 2	2828.7	67	1567.0	53.25	4395.7	1.8
VENTURE + ENDURA + WILL	3111.5	55	1655.2	49	4766.7	1.9
OKAY + ENDURA	3299.2	79	1723.1	50	5022.3	2.0
OKAY + ENDURA + LEO	3361.0	77	1618.2	57	4979.1	2.0
OKAY + ENDURA + WALTER	3192.2	77	1688.3	54	4880.5	2.0
OKAY + ENDURA + LEGEND 2	2958.0	64	1499.0	56	4457.0	1.8
OKAY + ENDURA + WILL	2931.7	72	1553.5	51	4485.1	1.8
MEAN	3114.4	67	1676.4	51	4790.8	1.9
C.V.	7.1%	15.8%	7.2%	12.1%	6.2%	
PRF - FACTOR A		0.0037	n/s	n/s		
PRF - FACTOR B	0.0092		0.0021	n/s	0.0016	
PRF - FACTOR + FACTOR B		n/s		n/s		
LSD (0.05) - FACTOR A						
LSD (0.05) - FACTOR B	436.6		236.4		582.4	
LSD (0.05) - FACTOR A + FACTOR B						

Kura Clover Establishment Trail  
 Seperation Data - 2011

	Dry Wt. (g)	%		Dry Wt. (g)	%
101 Reed Canary Grass	3	15.2	301 Reed Canary Grass	0	0
Kura Clover	12.8	65.0	Kura Clover	10.2	47.2
Other	3.9	19.8	Alfalfa	8.9	41.2
	19.7		Other	2.5	11.6
				21.6	
102 Reed Canary Grass	4.8	24.9	302 Reed Canary Grass	0.2	1.2
Kura Clover	9.4	48.7	Kura Clover	8.2	49.1
Red Clover	3.8	19.7	White Clover	2.7	16.2
Other	1.3	6.7	Other	5.6	33.5
	19.3			16.7	
103 Orchard Grass	4.6	26.4	303 Reed Canary Grass	0.7	3.5
Kura Clover	7.2	41.4	Kura Clover	16.5	82.5
Trefoil	0	0	Red Clover	1	5.0
Other	5.6	32.2	Other	1.8	9.0
	17.4			20	
104 Orchard Grass	14.3	75.7	304 Orchard Grass	7.5	47.2
Kura Clover	1.6	8.5	Kura Clover	8.4	52.8
Other	3	15.9	Other	0	0.0
	18.9			15.9	
105 Reed Canary Grass	0	0.0	305 Reed Canary Grass	7.8	36.8
Kura Clover	10.2	51.3	Kura Clover	13.4	63.2
Trefoil	0	0	Trefoil	0	0
Other	9.7	48.7	Other	0	0.0
	19.9			21.2	
106 Reed Canary Grass	2.4	18.5	306 Orchard Grass	8.6	75.4
Kura Clover	9.2	70.8	Kura Clover	2.8	24.6
White Clover	0	0.0	Trefoil	0	0.0
Other	1.4	10.8	Other	0	0.0
	13			11.4	
107 Orchard Grass	8.1	55.5	307 Orchard Grass	0	0.0
Kura Clover	3.2	21.9	Kura Clover	13.6	100.0
White Clover	1.6	11.0	Red Clover	0	0.0
Other	1.7	11.6	Other	0	0
	14.6			13.6	
108 Reed Canary Grass	1.1	9.0	308 Orchard Grass	4.9	18.4
Kura Clover	6	49.2	Kura Clover	0	0.0
Alfalfa	4.4	36.1	Alfalfa	21.7	81.6
Other	0.7	5.7	Other	0	0
	12.2			26.6	
109 Orchard Grass	3.7	33.0	309 Orchard Grass	3.7	33.6
Kura Clover	7.5	67.0	Kura Clover	7.3	66.4
Alfalfa	0	0.0	White Clover	0	0.0
Other	0	0.0	Other	0	0.0
	11.2			11	
110 Orchard Grass	0.5	2.6	310 Reed Canary Grass	2.2	20.8
Kura Clover	5.2	27.1	Kura Clover	6.3	59.4
Red Clover	13.5	70.3	Other	2.1	19.8
Other	0	0.0		10.6	
	19.2				

\*Note - after 2nd cut we seperated out Rep # 1 & # 3 - to see what was there for species.



## REED CANARY GRASS FOR HAY / PASTURE SYSTEMS

LOCATION: Emo  
 PLANTING: 19-Jun-00  
 FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)  
 HARVEST: 1st Cut - June 9, 2011  
 2nd Cut - July 13, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD (kg/ha)	TOTAL YIELD (t/acre)
<b>FACTOR A - LEGUME</b>						
LEO TREFOIL	2688.1	59	1716.5	36	4404.5	1.8
WILL WHITE CLOVER	2249.2	58	1571.6	37	3820.8	1.5
ENDURA KURA CLOVER	3299.4	66	1920.9	37	5220.3	2.1
<b>FACTOR B - GRASS</b>						
CLIMAX TIMOTHY	2977.7	60	1689.5	36	4667.1	1.9
BAYLOR SMOOTH BROME GRASS	2719.3	54	1794.7	36	4513.9	1.8
VENTURE REED CANARY GRASS	2805.0	62	1893.3	39	4698.3	1.9
VENTURE + KOKANEE TALL FESCUE	2654.4	64	1770.8	36	4425.2	1.8
VENTURE + FLEET MEADOW BROME GRASS	2815.2	65	1697.1	35	4512.3	1.8
VENTRUE + KOKANEE + FLEET	2502.0	63	1572.5	37	4074.6	1.6
<b>FACTOR A + FACTOR B - LEGUME + GRASS</b>						
LEO + CLIMAX	2842.0	57	1610.3	35	4452.4	1.8
LEO + BAYLOR	2900.3	53	1968.3	35	4868.6	2.0
LEO + VENTURE	2624.2	55	1924.9	38	4549.1	1.8
LEO + VENTURE + KOKANEE	2357.4	61	1611.1	36	3968.5	1.6
LEO + VENTURE + FLEET	2716.0	65	1602.3	34	4318.4	1.7
LEO + VENTURE + KOKANEE + FLEET	2688.5	64	1582.0	37	4270.5	1.7
WILL + CLIMAX	2632.9	59	1622.4	38	4255.3	1.7
WILL + BAYLOR	2031.7	56	1470.5	40	3502.2	1.4
WILL + VENTURE	2269.4	62	1722.7	36	3992.1	1.6
WILL + VENTURE + KOKANEE	2317.2	56	1660.5	36	3977.7	1.6
WILL + VENTURE + FLEET	2373.0	61	1624.8	38	3997.8	1.6
WILL + VENTURE + KOKANEE + FLEET	1871.3	55	1328.7	34	3200.1	1.3
ENDURA + CLIMAX	3458.0	63	1835.7	35	5293.7	2.1
ENDURA + BAYLOR	3225.8	52	1945.3	32	5171.1	2.1
ENDURA + VENTURE	3521.4	68	2032.4	42	5553.8	2.2
ENDURA + VENTURE + KOKANEE	3288.6	75	2040.8	36	5329.4	2.2
ENDURA + VENTURE + FLEET	3356.5	69	1864.2	34	5220.7	2.1
ENDURA + VENTURE + KOKANEE + FLEET	2946.3	70	1807.0	41	4753.3	1.9
MEAN	2745.6	61	1736.3	36	4481.9	1.8
C.V.	12.4%	15.2%	13.6%	13.0%	11.6%	
PRF - FACTOR A	0.0011	0.046	0.0237	n/s	0.0023	
PRF - FACTOR B	0.0321	n/s	0.0401		n/s	
PRF - FACTOR A + FACTOR B	n/s	n/s		n/s	n/s	
LSD (0.05) - FACTOR A	1550	27.5	958.8		2354	
LSD (0.05) - FACTOR B	618.7		430.2			
LSD (0.05) - FACTOR A + FACTOR B						



Reed Canary Grass for Hay / Pasture Systems  
Seperation Data 2011  
(The plots with Trefoil only)

	Weight (g)	%
101 Trefoil	3.6	17.0
Timothy		0.0
Other	17.6	83.0
TOTAL	21.2	
105 Trefoil		0.0
Reed Canary Grass	0.8	2.8
Other	27.6	97.2
TOTAL	28.4	
109 Trefoil	0	0.0
Reed Canary Grass	0	0.0
Tall Fescue	0	0.0
Meadow Brome Grass	0.5	2.9
Other	17	97.1
TOTAL	17.5	
111 Trefoil	0	0.0
Smooth Brome Grass	0	0.0
Other	28.8	100.0
TOTAL	28.8	
112 Trefoil	0	0.0
Reed Canary Grass	0	0.0
Meadow Brome	3.1	11.9
Other	23	88.1
TOTAL	26.1	
115 Trefoil	0	0.0
Reed Canary Grass	0	0.0
Tall Fescue	0	0.0
Other	13	100.0
TOTAL	13	

	Weight (g)	%
201 Trefoil	2	15.6
Reed Canary Grass	0	0.0
Tall Fescue	0	0.0
Meadow Brome Grass	0	84.4
Other	10.8	100.0
TOTAL	12.8	
204 Trefoil	0	0.0
Reed Canary Grass	0	0.0
Meadow Brome Grass	3	14.4
Other	17.9	85.6
TOTAL	20.9	
205 Trefoil	0.3	1.1
Timothy	0	0.0
Other	25.9	98.9
TOTAL	26.2	
206 Trefoil	0	0.0
Smooth Brome Grass	2.2	7.6
Other	26.8	92.4
TOTAL	29	
210 Trefoil	0	0.0
Reed Canary Grass	6.7	25.4
Tall Fescue	0	0.0
Other	19.7	74.6
TOTAL	26.4	
218 Trefoil	1.3	10.7
Reed Canary Grass	1.1	9.0
Other	9.8	80.3
TOTAL	12.2	

Reed Canary Grass for Hay / Pasture Systems  
 Separation Data 2010  
 (The plots with Trefoil only)

	Weight (g)	%
304 Trefoil	4.7	18.8
Reed Canary Grass	0	0.0
Tall Fescue	0	0.0
Other	20.3	81.2
TOTAL	25	

306 Trefoil	0.9	5.6
Reed Canary Grass	1.6	9.9
Other	13.7	84.6
TOTAL	16.2	

308 Trefoil	0	0.0
Reed Canary Grass	1.2	5.9
Tall Fescue	0	0.0
Meadow Brome	1	4.9
Other	18.3	89.3
TOTAL	20.5	

310 Trefoil	7.5	44.6
Timothy	0.9	5.4
Other	8.4	50.0
TOTAL	16.8	

311 Trefoil	0	0.0
Smooth Brome Grass	0.6	2.6
Other	22.7	97.4
TOTAL	23.3	

	Weight (g)	%
402 Trefoil	0	0.0
Reed Canary Grass	0	0.0
Tall Fescue	1	5.6
Meadow Brome	0.6	3.4
Other	16.1	91.0
TOTAL	17.7	

405 Trefoil	0	0.0
Reed Canary Grass	0.2	1.3
Other	15.3	98.7
TOTAL	15.5	

408 Trefoil	0	0.0
Reed Canary Grass	0	0.0
Tall Fescue	0	0.0
Other	17.6	100.0
TOTAL	17.6	

410 Trefoil	0	0.0
Smooth Brome Grass	0.4	2.2
Other	18	97.8
TOTAL	18.4	

412 Trefoil	0	0.0
Timothy	0	0.0
Other	10.3	100.0
TOTAL	10.3	

417 Trefoil	0	0.0
Reed Canary Grass	0	0.0
Meadow Brome Grass	0	0.0
Other	9.2	100.0
TOTAL	9.2	

## TEFF

LOCATION: Emo  
 PLANTING: 17-May-11  
 FERTILIZER: 11-52-0 @ 20 kg/ha  
 46-0-0 @ 70 kg/ha  
 HARVEST: 1st Cut - July 28, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	YIELD (t/acre)
TIFFANY (A)	4319.0	74	1.7
(B)	3823.5	82	1.5
CW0604 (A)	3737.1	72	1.5
(B)	4087.0	77	1.7
MEAN	3991.7	76	1.6

Very neat annual grass!

I should have cut a 2nd Cut but didn't get to it and the frost beat me.



GRASS FILLER BLOCKS

LOCATION: Emo  
 PLANTING: 05-Jun-07  
 FERTILIZER: 11-52-0 @ 50 kg/ha (October 4, 2010)  
 46-0-0 @ 70 kg/ha  
 HARVEST: 1st Cut - June 16, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD (t/acre)
BELLVUE REED CANARY GRASS	2032.2	52	0.8
	2709.0	56	1.1
COURTNEY TALL FESCUE	2412.1	65	1.0
	1750.1	73	0.7
MEAN	2225.9	62	0.9

GRASS LEGUME DEMO'S

Emo  
 24-May-06  
 LOCATION: 11-52-0 @ 20 kg/ha (October 4, 2010)  
 PLANTING:  
 FERTILIZER: 1st Cut - June 13, 2011  
 HARVEST: 2nd Cut - August 3, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD (t/acre)
ALFALFA	3402.5	53	1956.3	55	5358.8
(B)	3254.3	52	2258.1	54	5512.4
ALFALFA + TIMOTHY	4366.2	59	2520.4	54	6886.6
(B)	4415.3	59	2424.4	60	6839.7
ALFALFA + BROMEGRASS	4345.7	64	2607.3	57	6953
(B)	3624.1	64	2587.2	52	6211.3
ALFALFA + ORCHARD GRASS	4363	59	2617.0	61	6980
(B)	3777.4	62	2535.1	47	6312.5
ALFALFA + ORCHARD GRASS + WHITE CLOVER	4031.6	64	2748.6	58	6780.2
(B)	3986.2	63	2392.6	57	6378.8
ALFALFA + TIMOTHY + BROMEGRASS + WHITE	3935.3	58	2335.9	59	6271.2
(B)	3841.1	59	2295.3	57	6136.4
BIRDSFOOT TREFOIL + TIMOTHY	3300.2	58	1136.8	36	4437
(B)	2842.9	55	1274.1	35	4117
BIRDSFOOT TREFOIL + BROMEGRASS	2788.5	33	1036.1	34	3824.6
(B)	2644.5	36	798.4	36	3442.9
BIRDSFOOT TREFOIL + ORCHARD GRASS	3140.3	38	1135.6	37	4275.9
(B)	1804.3	32	1290.0	37	3094.3
BIRDSFOOT TREFOIL + TALL FESCUE	2400.8	36	1676.6	41	4077.4
(B)	1798.6	36	1188.3	34	2986.9
RED CLOVER	1347.7	36	561.3	35	1909
(B)	1081.7	29	131.0	31	1212.7
RED CLOVER + TIMOTHY	1190.2	28	135.6	29	1325.8
(B)	906.6	30	184.4	24	1091
WHITE CLOVER + ORCHARD GRASS	1796.2	40	401.0	37	2197.2
(B)	2391.8	42	460.1	31	2851.9
MEAN	2953.0	48	1564.9	44	4517.9
					1.8

Notes - This trial was planted in our drought year, and the grasses did not establish well at all. I ploughed this trial this fall.

LEO TREFOIL

LOCATION: Emo

PLANTING: 27-May-10

FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)

HARVEST: 1st Cut - June 17, 2011

2nd Cut - August 3, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YEILD (kg/ha)	HEIGHT (cm)	TOTAL YIELD	TOTAL (t/acre)
SAMPLE A	2775.4	56	1186.4	34	3961.8	1.6
SAMPLE B	2767.1	47	1308.3	35	4075.4	1.6
MEAN	2771.3	51.5	1247.4	35	4018.6	



## TALL FESCUE + ALFALFA &amp; TREFOIL

LOCATION: Emo  
 PLANTING: 15-May-03  
 FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)  
 46-0-0 @ 70 kg/ha (on straight Tall Fescue plot only)  
 HARVEST: 1st Cut - June 13, 2011  
 2nd Cut - August 3, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD	TOTAL YIELD (t/acre)
TALL FESCUE	3509.7	40	1420.7	50	4930.4	2.0
(B)	3069.6	39	1109.4	52	4179	1.7
TALL FESCUE +	2091.6	49	1396.7	57	3488.3	1.4
(B)	2004.6	54	1309.1	54	3313.7	1.3
TALL FESCUE +	2073.3	66	1583.4	39	3656.7	1.5
(B)	2372.6	65	1205.0	47	3577.6	1.4
MEAN	2520.2	52	1337.4	50	3857.6	1.6

\*When this was first planted, it was planted with Trefoil. On May 27, 2008 I decided to run our seed drill through the plot adding alfalfa, and trefoil since the original trefoil was non-existent. You could see the plants, it wasn't a heavy stand but we did add some legumes to this stand of tall fescue.

\*It seems the Alfalfa caught a bit better than the Trefoil.

## GRASS DEMO'S (Larry's)

LOCATION: Emo  
 PLANTING: 21-May-09  
 FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)  
 46-0-0 @ 70 kg/ha  
 HARVEST: 1st cut - July 12, 2010

TREATMENT	YIELD (kg/ha)	HEIGHT (cm)	YIELD (t/acre)
Express Timothy	3661.1	78	1.5
Treasure Timothy	3534.7	73	1.4
Courtney Tall Fescue	2543.9	80	1.0
Arctic Orchard Grass	2553.5	89	1.0
MEAN	3073.3	80	1.2
C.V.	6.07%	9.64%	
PR>F	0.0000	n/s	
LSD (0.05)	298.412	12.339	

## GRASS DEMO STRIPS (Larry's)

LOCATION: Emo  
 PLANTING: 21-May-09  
 FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)  
 46-0-0 @ 70 kg/ha  
 HARVEST: 1st cut - July 12, 2010

TREATMENT	YIELD (kg/ha)	HEIGHT (cm)	YIELD (t/acre)
Courtney Tall Fescue	3615.5	74	1.5
(B)	3298.9	82	1.3
Arctic Orchard Grass	3228.0	87	1.3
(B)	3088.3	88	1.2
Express Timothy	3000.0	80	1.2
(B)	3241.1	81	1.3
Treasure Timothy	3259.9	67	1.3
(B)	3641.1	78	1.5
<b>MEAN</b>	<b>3296.6</b>	<b>80</b>	<b>1.3</b>



## Jeff Hyatt RRCA Intern Mixes

LOCATION: Emo

PLANTING: 21-May-09

FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)

HARVEST: 1st cut - June 13, 2011

2nd cut - July 28, 2011

TREATMENT	YIELD (1) (kg/ha)	HEIGHT (cm)	YIELD (2) (kg/ha)	HEIGHT (cm)	TOTAL YIELD	YIELD (t/acre)
Upland	3501.4	90	1631.4	55	5132.8	2.1
(B)	3994.0	101	2184.8	60	6178.8	2.5
General	2994.0	91	1295.9	40	4289.9	1.7
(B)	3426.3	90	1591.1	50	5017.4	2.0
Lowland	2424.1	91	1766.9	46	4191.0	1.7
(B)	2177.4	93	1632.8	43	3810.2	1.5
MEAN	3086.2	93	1683.8	49	4770.0	1.9

Lowland = Double Cut Red Clover, Birds Foot Trefoil, Creeping Red Fescue, Reed Canary Grass, Meadow Foxtail & Tall Fescue.

General = Birds Foot Trefoil, Russian Wildrye, Double Cut Red Clover, Smooth Bromegrass, Reed Canary Grass, Cicer Milkvetch, & Tall Fescue.

Upland = Cicer Milkvetch, Sanfoin, Meadow Bromegrass, Western Wheatgrass, Alfalfa & Orchard Grass.

## LEGUME COMPARISON TRIAL

LOCATION: Emo  
 PLANTING: 23-May-08  
 FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)  
 HARVEST: 1st Cut - June 16, 2011  
 2nd Cut - July 28, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD	TOTAL YIELD (t/acre)
BIRDS FOOT TREFOIL	2820.8	66	2731.1	71	5551.9	2.2
ALFALFA	2198.1	63	1440.4	48	3638.5	1.5
SANFOIN	2140.3	55	1880.4	45	4020.7	1.6
CICER MILKVETCH	2368.4	43	1976.0	47	4344.4	1.8
MEAN	2381.9	57	2007.0	53	4388.9	1.8
C.V.	11.87%	10.11%	13.02%	7.92%	11.71%	
PR>F	0.0298	0.0012	0.0005	0.0000	0.0028	
LSD (0.05)	452.377	9.190	417.950	6.672	822.009	

FORAGE DEMO BLOCKS

LOCATION: Emo  
 PLANTING: 28-May-08  
 FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)  
 46-0-0 @ 70kg/ha on Timothy only  
 HARVEST: 1st Cut - June 16, 2011  
 2nd Cut - Alfalfa, Trefoil - July 28, 2011  
 2nd Cut - Sanfoin, Cicer Milk Vetch - August 3, 2011  
 No 2nd Cut for Timothy

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD	TOTAL YIELD (t/acre)
TIMOTHY	3327.4	74			3327.4	1.3
	2905.0	74			2905.0	1.2
SANFOIN	2278.5	70	602.5	28	2881.0	1.2
	2448.0	67	459.0	33	2907.0	1.2
ALALFA	2910.4	51	2599.7	72	5510.1	2.2
	2621.1	57	2855.9	74	5477.0	2.2
CICER MILKVETCH	1694.8	44	2558.3	42	4253.1	1.7
	1992.2	42	1652.2	43	3644.4	1.5
BIRDS FOOT TREFOIL	2847.4	65	1301.4	35	4148.8	1.7
	2442.3	74	1545.7	28	3988.0	1.6
MEAN	2546.7	62	1696.8	44	3904.2	1.6



Emo - Bio-Char on Alfalfa 2011  
 Emo Agricultural Research Station  
 Emo BC411  
 Seeded: 24 Jun-10  
 Fertilizer: 11-52-0 @ 20 kg/ha (October 4, 2010)

**LEGUME FILLER BLOCKS**

**LOCATION:** Emo  
**PLANTING:** 04-Jun-07  
**FERTILIZER:** 11-52-0 @ 20 kg/ha (October 4, 2010)  
**HARVEST:** 1st Cut - June 16, 2011  
 2nd Cut - Alfalfa, Trefoil - July 28, 2011  
 2nd Cut - Cicer Milk Vetch, Crown Vetch - August 3, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD	TOTAL YIELD (t/acre)
BIRDS FOOT TREFOIL	2194.6	43	1362.5	40	3557.1	1.4
(B)	1839.3	44	1969.2	38	3808.5	1.5
ALFALFA 1	2789.8	71	2571.6	55	5361.4	2.2
(B)	2506.5	70	2825.7	63	5332.2	2.2
CICER MILK VETCH	2741.7	49	1802.8	54	4544.5	1.8
(B)	2516.1	55	1719.9	47	4236	1.7
CROWN VETCH	2606.3	47	1151.5	46	3757.8	1.5
(B)	1927.7	49	2256.7	55	4184.4	1.7
ALFALFA 2	2620.2	74	2703.2	60	5323.4	2.2
(B)	2481.8	74	2901.0	59	5382.8	2.2
<b>MEAN</b>	<b>2422.4</b>	<b>58</b>	<b>2126.4</b>	<b>52</b>	<b>4548.8</b>	<b>1.8</b>

Emo - Bio-Char on Alfalfa- 2011  
 Emo Agricultural Research Station  
 Emo BCA11

Seeded: 24-Jun-10  
 Fertilization: 11-52-0 @ 20 kg/ha (October 4, 2010)

Entry	Code	Variety	Yield (1)	Height (1)	Yield (2)	Height (2)	Total	Total t/acre	Index
			kg/ha	cm	kg/ha	(cm)	Yield		
1		Alfalfa	2141.0	70.3	2205.4	67	4346.4	1.8	103
2		Alfalfa - 2.4 t/ha	2250.6	69.8	2081.1	70	4331.6	1.7	103
3		Alfalfa - 4.7 t/ha	1941.5	62.5	2029.0	69	3970.5	1.6	94
4		Alfalfa - 7.1 t/ha	2042.7	73.3	2179.1	72	4221.8	1.7	100
X		Guard							
Y		Guard							

Average	2093.9	68.9	2123.7	69.3	4217.6
LSD (0.05)	635.552		407.752		718.471
C.V.	18.97%		12.00%		10.65%

Emo - Bio-Char on Alfalfa WET- 2011  
Emo Agricultural Research Station  
Emo BCAWET11

Seeded: 29-Jun-10  
Fertilization: 11-52-0 @ 20kg/ha (October 4, 2010)

Entry	Code	Variety	Yield (1)	Height (1)	Yield (2)	Height (2)	Total	Total t/acre	Index
			kg/ha	cm	kg/ha	cm	Yield		
1		Alfalfa	694.4	44.5	1010.4	53	1704.8	0.7	91
2		Alfalfa - 2.4 t/ha	1198.3	48.8	1081.5	51	2279.7	0.9	122
3		Alfalfa - 4.7 t/ha	933.5	49.8	1032.2	50	1965.7	0.8	105
4		Alfalfa - 7.1 t/ha	635.4	41.3	910.5	55	1545.9	0.6	82
X		Guard							
Y		Guard							

Average	865.4	46.1	1008.7	52.4	1874.0
LSD (0.05)	665.046		212.897		741.346
C.V.	48.04%		13.20%		24.73%

Note:  
This area was suffering from our tile problem - which we think is fixed but difficult to tell with such a dry 2011.



ALFALFA

LOCATION: Emo

PLANTING: 27-May-10

FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)

HARVEST: 1st Cut - June 17, 2011

2nd Cut - July 28, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD	TOTAL (t/acre)
SAMPLE A	3257.7	70	2107	61	5364.7	2.2
SAMPLE B	3053.3	72	1990.9	64	5044.2	2.0
MEAN	3155.5	71.0	2049	63	5204.5	2.1

## ALFALFA VARIETIES (Larry's)

LOCATION: Emo

PLANTING: 21-May-09

FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)

HARVEST: 1st cut - June 17, 2011

2nd cut - July 28, 2011

VARIETY	YIELD # 1 (kg/ha)	HEIGHT # 1 (cm)	YIELD # 2 (kg/ha)	HEIGHT # 2 (cm)	TOTAL YIELD	YIELD (t/acre)
Blend 10-4	2958.8	75	2154.6	73	5113.4	2.1
Ascend	2836.6	71	2143.5	69	4980.1	2.0
Tophand	2998.8	73	2127.5	70	5126.3	2.1
Haygrazer	2804.9	73	2313.4	71	5118.3	2.1
Rhino	3156.5	74.25	2372.4	72	5528.9	2.2
MEAN	2951.1	73	2222.3	71	5173.4	2.1
C.V.	7.46%	7.21%	7.69%	2.62%	6.75%	
PR>F	n/s	n/s	n/s	n/s	n/s	
LSD (0.05)	339.399	8.150	263.252	2.851	538.330	

\*This alfalfa was beautiful and I could have easily taken a 3rd cut.

## ALFALFA VARIETY STRIPS (Larry's)

LOCATION: Emo

PLANTING: 21-May-09

FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)

HARVEST: 1st cut - June 16, 2011

2nd cut - July 28, 2011

VARIETY	YIELD # 1 (kg/ha)	HEIGHT # 1 (cm)	YIELD # 2 (kg/ha)	HEIGHT # 2 (cm)	TOTAL YEILD	YIELD (t/acre)
Blend 10-4	3323.6	74	3323.6	68	6647.2	2.7
(B)	3317.0	71	3317.0	68	6634.0	2.7
Rhino	3499.6	77	3499.6	72	6999.2	2.8
(B)	3063.8	70	3063.8	64	6127.6	2.5
Hay Grazer	3487.2	68	3487.2	74	6974.4	2.8
(B)	2639.1	71	2639.1	68	5278.2	2.1
Ascend	3093.3	74	3093.3	71	6186.6	2.5
(B)	2763.9	70	2763.9	67	5527.8	2.2
Top Hand	3210.3	68	3210.3	67	6420.6	2.6
(B)	2785.3	68	2785.3	67	5570.6	2.3
MEAN	3118.3	71	3118.3	69	6236.6	2.5



## ALFALFA VARIETIES

LOCATION: Emo  
 PLANTING: 14-Jul-05  
 FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)  
 HARVEST: 1st Cut - June 16, 2011  
 2nd Cut - July 28, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD	TOTAL YIELD (t/acre)
8920 MF (A)	3120.0	74	2184.9	61	5304.9	2.1
(B)	3229.1	79.0	2287.5	64	5516.6	2.2
2065 MF (A)	3447.3	72	2543.8	67	5991.1	2.4
(B)	3199.9	68	2222.3	62	5422.2	2.2
ALFAGRAZE (A)	2918.4	63	2022.3	60	4940.7	2.0
(B)	2762.0	61	1833.6	58	4595.6	1.9
MEAN	3112.8	70	2182.4	62	5295.2	2.1

ULTRA ALFALFA

LOCATION: Emo

PLANTING: 22-Jun-01

FERTILIZER: 11-52-0 @ 20 kg/ha (October 4, 2010)

HARVEST: 1st Cut - June 16, 2011

2nd Cut - July 28, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD	TOTAL (t/acre)
SAMPLE A	2824.0	57	1466.7	62	4290.7	1.7
SAMPLE B	2329.5	60	1701.6	54	4031.1	1.6
MEAN	2576.8	59	1584.2	58	4160.9	1.7

This is the block of Alfalfa behind the building.

ULTRA ALFALFA (End of Range # 6, # 7, & # 8.)

LOCATION: Emo  
 PLANTING: 22-Jun-01  
 FERTILIZER: 11-52-0 @ 70 kg/ha (October 4, 2010)  
 HARVEST: 1st Cut - June 16, 2011  
 2nd Cut - July 28, 2011

TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD	TOTAL YIELD (t/acre)
(A)	2467.3	55	1758.7	72	4226.0	1.7
(B)	3317.1	59	1696.9	77	5014.0	2.0
MEAN	2892.2	57	1727.8	75	4620.0	1.9



Other Trial Info.

Round-Up Canola

Planted: May 17, 2011

I planted this canola to control the severe Annual Grass problem we had. By spraying Round Up it cleans up the plot nicely. We chopped this canola right after the Open House in July and ploughed in. It was a beautiful stand of canola.

Red Clover

Planted: May 17, 2011

I planted 2 blocks of Red Clover on the areas that we were unable to touch for a few years because of the tile problems. I ploughed them in this fall.

Sunflowers

Planted: May 19, 2011

I planted 2 blocks of Sunflowers on areas that we were unable to plant a research trial (mainly because of the tile problem). I also hope that this will keep the birds busy out of our other Research Trial. We had a decent stand of sunflowers and we should have taken the time to harvest since the price of bird feed has drastically risen.

Trefoil

Planted: May 18, 2011

Range # 7 (beside Switch Grass Trial)

Alfalfa Trial & Strips

Planted: May 17, 2011

Philip Krahn provided EARS with 4 varieties of Alfalfa: 53Q30 / 15% Timothy, 55V48, 54Q32 and 55V46 / 15% Timothy

We put this into a research block as well we planted strips so you could see them covering a larger area.

Timothy

Planted: May 18, 2011

We planted a strip of Timothy behind our Miscanthus trial so that we were not battling weeds in this area.

Carrot & Lettuce Trial

Planted: May 20, 2011

We planted our veggie trials again this year. This year we had severe deer problems. We managed to salvage some carrots but the deer actually started to pull them out of the ground. Instead of providing them to the food box, we provided a majority of them to Mother Nature.

Failures:

The Miscanthus that we planted in July 2009 did not survive the winter. I found that strange with our incredible snow cover but we found no plants in 2011.

We had a block of trefoil and a block of canola that did not germinate but we are thinking that the chain on the seed drill may have not been on correctly.