

***Ontario Crops Research
Centre – Emo***

2020

By: Kim Jo Bliss



Table on Contents

EARS 2020

Page #

1	Table of Contents
2	Kim Jo's 2020 Comments
3	Weather Summary
4	Spring Wheat Performance Trial
5	Manitoba Wheat Trial
6	Oat Performance Trial
7	Manitoba Oat Trial
8	Barley Performance Trial
9	Manitoba Barley Trial
10	Malting Barley Varieties Trial
11	Nitrogen & Sulfur on Malting Barley
12	Range 1 - Summit Oats
13	Range 2 - Summit Oats
14	Range 3 - Cereal Mixture
15	Range 5 - No-Till Oats
16	Range 7 - Summit Oats
17	Boron Application & Timing on Canola
18	Sulfur Rate on Canola
19	Phosphorus Placement of Canola Trial
20	Forage Seed Mixtures
21	Forage Comparison Trial
22	Legume Comparison Trial
23	Larry's Alfalfa Varieties
24	Alfalfa Varieties
25	Cross Seeding Trial - Trefoil & Tall Fescue
26	Spring Triticale
27	Forage Blocks
28	Alfalfa
29	Red Clover
30	Red Clover
31	Alfalfa
32	Summit Oats
33	Peformer Alfalfa
34	Alfalfa (North of the Hops yard)
35	Alfalfa
36	Other Information

I think we can all agree that 2020 was quite a year! When Covid started to shut things down in March we were left wondering if we would even operate this year. March is our start up time, and we were encouraged to work at home as much as we possibly could. We quickly found out we did fall into the Essential Category. Working at home was fine when it was just planning and computer work but once the seed started to flow in, it was necessary to return to the Station. We were not allowed to have the public visit and we were to keep the doors locked. How strange? The next challenge was students. How do we physically distance? How do we safely share space? We have a single cab truck and it isn't possible to stay 6 feet apart. Turns out we were reduced to one student and less trials. Looking back now, it was a good thing for several reasons, not just the current pandemic challenges. I would be hiring a new student in 2020 and it is challenging to learn the research ways and it takes a little longer. As well, like you have heard so many times before we are still struggling with tile issues. Little did I know that 2020 would be a tough one for me personally and I am thankful that we had less workload to deal with. We hired Katie Hay as our Summer Student and she was excellent. Katie is a very good worker and caught on quickly. Katie went out of her way to keep the station flowing after my dad passed away and her dedication wasn't unnoticed. She worked along at 2nd cut and doing it with 2 people is tough and she managed to get a lot done. Katie is attending school in the U.S., so this meant she couldn't return this fall and was scheduled for on-line learning. She ended up staying on through the fall working part-time.

If you drove past you would have noticed our barley planted near the highway. This was our malting barley trials we were working on with NOFIA. One of them; the Nitrogen and Sulfur on Barley really showed up well as the plots with 0 Nitrogen looked rough. It was a good demonstration to see the effects of fertility. We had many inquires about poor forages this year. We were in the exact same boat as everyone else. I really believe much of this was caused by the poor weather we experienced last fall. I think any fertility that had been built had leached out and we all know that alfalfa doesn't like wet feet. Our plots looked rough and I even wondered if it was worth it too harvest. It is very frustrating when feed is short, and we really can't help one another when we are all experiencing the same issue. Another problem last fall created was the fact that our deer friends were able to harvest all our soybeans last fall and they were ready right from the beginning of the season do that again. We tried to keep them out of our plots right from planting on and we had little luck. This is the first year in many years I have no soybean data. We are going to have to figure out something for next year. Jesse (Tait) was in and repaired a few more tile areas. Our issue is the fact that the old tile that was installed runs a bit randomly as you get in the North plots here at the Station. Jesse continues to hook up areas and we may need to struggle this for awhile yet before we start to see good results. It really limits where I can plant, and it isn't ideal for rotations, but we are doing the best we can. We did some fertility work with canola this year, but I was disappointed with our yield results. It could be that the little finch birds are doing more damage than I realize; especially in small plots or perhaps it is our combine that has very little settings. Either way, we will continue this work next year.

For the first time in my career here at the Research Station we were not able to host an Open House. Thankfully NOFIA again stepped to the plate and helped us with a Virtual Tour. If you haven't had time to check it out, I encourage you to do so.

We do not know what next year will bring, but I hope we all stay safe and we can get together again next year!

Thank you to everyone that continues to support us in one way, shape or form. It is appreciated and does not go unnoticed.

We also have a name change; Ontario Crops Research Centre – Emo! That will be hard for some (me included). I still have people who call it "Crop Check North" which was the name in 1985 when it all began.

Take care;

Kim Jo

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	8-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
2012	348	598	766	636	231	0	2579	May-01	14-Sep-12
2013	107	566	701	643	282	0	2299	May-01	16-Sep-13
2014	113	594	447	635	161	0	1950	May-01	13-Sep-14
2015	41	544	734	613	281	0	2213	May-01	15-Sep-15
2016	376	577	729	708	277	0	2667	May-01	15-Sep-16
2017	249	576	685	612	260	0	2382	May-01	15-Sep-17
2018	438	623	745	671	298	0	2775	May-01	15-Sep-18
2019	195	546	739	738	191	0	2409	May-01	14-Sep-19
2020	321	627	757	703	171	0	2578	May-01	15-Sep-20
AVG							2428		
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		
2012	34	78	77.5	36	19	84.2	328.7		
2013	93	71.5	149	122	72	26.3	533.8		
2014	97.4	335	97	39	114	53	735.4		
2015	151.5	122.1	211	59	90	56.4	690.0		
2016	54.6	158.5	68	94.5	122	34.9	532.5		
2017	32.6	129.1	52.5	106.05	126	48.7	495.0		
2018	74.5	102	78	94	116	86.8	551.3		
2019	83	68	162.5	136	204.5	138.0	792.0		
2020	40.5	112.5	118	133.2	39	63.5	506.7		
Normal's from Environment Canada - (rainfall amounts)									
	67.3	113.8	99	84	79.4	50.4	493.9		

Spring Wheat Performance Trial - 2020
Emo Agricultural Research Station
SWPT20

Seeded: 4-May-20
Fertilization: 11-52-0 @ 30 kg/ha
46-0-0 @ 70 kg/ha
20-0-0-24 @ 10 kg/ha
Herbicide: Buctril M @ 1.0 l/ha

Entry	Code	Variety	Grain		1000 Seed weight (g)	Test Wt. (kg/hl)	Lodging (0-9)	Height (cm)	Days to Head	Days to Mature	Index		Harv Adjusted		Yield bu/acre
			kg/ha	kg/ha							Grain	Straw	Grain	Straw	
1	5066	Easton	4134.7	4485.3	30.9	72.5	0	79.5	62	98	97	97	99	51	
2	5030	Furano	4863.2	3844.5	35.0	75.2	0	99.5	62	98	114	83	112	97	58
3	5081	Raven	4851.0	4698.9	35.9	74.0	0	92.3	58	97	113	101	112	100	59
4	5041	Wilkin	3907.9	6621.1	31.2	70.7	0	83.8	58	98	91	143	92	108	50
5	5095	CFB1708	3963.2	5126.0	29.9	71.8	1	87.0	62	96	93	110	93	102	50
6	5097	CFB1911	3632.9	4912.5	30.7	75.3	0	95.5	55	98	85	106	86	101	43
7	5080	Dagon	5210.3	5553.2	29.5	73.3	0	86.8	62	98	122	120	120	104	64
8	5094	Maida	4427.6	4058.1	31.2	72.1	0	97.8	62	97	103	87	103	97	55
9	5096	Minot	4501.2	4912.5	38.2	71.3	0	97.8	58	98	105	106	105	101	57
10	5099	AAc Harlaka	3465.1	4058.1	32.8	73.7	1	90.5	58	97	81	87	83	97	42
11	5042	AAc Scotia	4847.3	4698.9	36.9	70.9	1	102.0	62	98	113	101	112	100	62
12	5098	Agora	4178.5	4912.5	34.1	73.7	1	95.0	56	98	98	106	98	101	51
13	5065	AAc Brandon	3609.8	3844.5	31.4	72.8	0	79.5	55	98	84	83	86	97	45
14	5037	Fuzion	4591.0	3844.5	35.7	72.5	1	105.5	59	98	107	83	107	97	57
15	5088	AAc Synox	3572.5	4912.5	30.2	74.8	4	88.5	58	97	83	106	85	101	43
16	5031	MAJOR	4706.8	3844.5	35.1	74.5	0	103.0	62	98	110	83	109	97	57

Average 4278.9 4645.5 33.0 73.1 0.5 93 59 97
LSD (0.05) 0.000 0.799
C.V. 8.2% 29.1%

	Grain	Straw
SE	350.0162	1350.4414
SD	548.0684	754.1307
H	0.90	0.20

Manitoba Wheat Trial - 2020
 Emo Agricultural Research Station
MBWT20

Seeded: 5-May-20
 Fertilization: 11-52-0 @ 30 kg/ha
 46-0-0 @ 70 kg/ha
 20-0-0-24 @ 10 kg/ha
 Herbicide: Buctril M @ 1.0 l/ha

Entry	Code	Variety	Grain	Straw	1000 Seed	Test Wt.	Lodging	Height	Days to	Days to	Index		Yield		
			kg/ha	kg/ha	weight (g)	kg/l	(0-9)	(cm)	Head	Mature	Grain	Straw		Harv Adjusted	Straw
1	1	AAC Aida	2716.1	3830.0	24.0	69.5	0	86.3	54	98.0	73	85	80	95	35
2	2	AAC Tisdale	4860.1	5476.9	31.2	73.1	0	91.8	54	98.0	130	122	122	108	60
3	3	AAC Warman	3275.6	3868.3	26.3	71.9	0	94.3	54	98.0	88	86	91	95	41
4	4	Parata	3924.3	4596.0	26.8	73.0	1	96.0	54	98.0	105	102	104	101	48
5	5	AAC Brandon	3290.1	4026.5	26.3	72.5	1	79.3	54	98.0	88	89	92	96	41
6	6	AAC Starbuck	3630.4	4672.6	27.3	72.8	0	81.3	54	98.0	97	104	98	101	45
7	7	AAC Wheatland	3785.2	5323.7	28.0	73.0	0	82.8	54	98.0	102	118	101	107	47
8	8	Red Star	4312.0	4213.0	29.0	71.3	0	88.5	54	98.0	116	94	111	98	54

Average 3724.2 4500.9 27.4 72.1 0.2 88 54 98
 LSD (0.05) 0.0099 0.1836
 C.V. 18.7% 22.5%

46

	Grain	Straw
SE	696.0558	1012.2519
SD	664.8546	635.4259
H	0.73	0.37

Oat Performance Trial - 2020
Emo Agricultural Research Station
OPT20

Seeded: 4-May-20
Fertilization: 11-52-0 @ 30 kg/ha
46-0-0 @ 70 kg/ha
20-0-0-24 @ 10 kg/ha
Herbicide: Bucril M @ 1.0 l/ha

Entry	Code	Variety	Grain		Straw		1000 Seed weight (g)	Test Wt. kg/l	Lodging (0-9)	Height (cm)	Days to Head	Days to Mature	Index		Harv Adjusted		Yield bu/ac
			kg/ha	kg/ha	kg/ha	kg/ha							Grain	Straw	Grain	Straw	
1	3059	AAC Oaklin	5185.0	6581.6	34.1	45.5	2	100.0	62	95	101	109	101	107	103		
2	3062	Akina	5154.4	4441.2	32.4	42.7	2	87.3	58	95	101	73	100	78	109		
3	3074	CFA1502	4625.0	4280.7	33.2	46.2	3	88.8	62	97	90	71	92	76	90		
4	3075	CFA1506	4541.4	5886.0	35.2	46.2	1	91.0	56	95	89	97	91	98	89		
5	3084	CFA1708	5434.7	5779.0	32.5	45.3	2	98.5	62	95	106	95	105	96	108		
6	3061	Kara	4758.3	4601.8	35.1	45.2	1	87.0	58	95	93	76	94	80	95		
7	3051	Nice	5718.8	6153.5	37.4	45.6	2	104.5	62	95	112	102	109	101	113		
8	3058	AAC Richmond	5444.6	6902.6	32.3	46.2	2	106.5	62	97	106	114	105	112	106		
9	3078	CDC Arborg	4795.9	5243.9	32.5	45.8	2	96.5	62	95	94	87	95	89	94		
10	3057	CDC Orrin	4890.3	5618.4	34.3	46.7	2	99.8	62	95	95	93	96	94	94		
11	3090	Orford	5040.1	7437.7	32.4	46.2	0	99.8	62	96	98	123	99	119	98		
12	3076	AAC Clyde	5653.6	8026.3	33.0	49.6	2	103.5	65	95	110	132	108	127	103		
13	3063	AAC Nicolas	5298.8	5939.5	30.4	43.9	2	95.8	62	97	103	98	103	98	109		
14	3081	OAI444-4	3955.3	9150.0	34.1	45.8	0	95.0	62	95	77	151	81	142	78		
15	3079	OAI568-6	5751.7	6581.6	33.0	45.9	1	87.3	62	95	112	109	110	107	113		
16	3087	OAI584-3	6622.3	6742.1	30.9	46.2	0	87.3	62	96	129	111	124	109	129		
17	3088	OAI594-1	5694.8	5671.9	31.2	43.6	2	97.8	62	95	111	94	109	95	117		
18	3083	ORe3542M	4618.9	5404.4	33.7	45.4	1	84.5	58	96	90	89	92	91	92		
19	3089	PGR-N13-090	5535.6	7116.7	35.4	44.4	0	109.8	62	95	108	117	107	114	112		
20	3038	Hidalgo	4187.7	4655.3	33.5	46.6	1	86.3	62	97	82	77	85	81	81		
21	3039	Vitality	4723.7	5083.3	34.8	46.3	4	95.5	58	95	92	84	94	87	92		

Average 5125.3 6061.8 33.4 45.7 1.5 95 61 96
LSD (0.05) 0.000 0.000
C.V. 10.4% 16.7%

101

	Grain	Straw
SE	532.5177	1013.5313
SD	614.5055	1236.1756
H	0.81	0.83

Manitoba Oat Trial - 2020
 Emo Agricultural Research Station
MBOT20

Seeded: 5-May-20
 Fertilization: 11-52-0 @ 30 kg/ha
 46-0-0 @ 70 kg/ha
 20-0-0-24 @ 10 kg/ha
 Herbicide: Buctril M @ 1.0 l/ha

Entry	Code	Variety	Grain		Straw		1000 Seed weight (g)	Test Wt. (kg/l)	Lodging (0-9)	Height (cm)	Days to Head	Days to Mature	Index		Harv Adjusted		Yield bu/acre
			kg/ha	kg/ha	kg/ha	kg/ha							Grain	Straw	Grain	Straw	
1	1	ORe3541M	5162.9	6834.4	24.6	43.5	5.8	82	57	101	102	107	101	91	107		
2	2	ORe3542M	4726.8	6673.6	26.6	42.2	2.5	81	57	101	93	104	96	94	101		
3	3	AAC Douglas	4385.8	5628.3	25.2	40.1	7.0	86	55	101	87	88	91	117	98		
4	4	CDC Skye	5995.1	6512.8	28.0	42.5	4.5	86	57	101	118	102	112	98	127		

Average 5067.7 6412.3 26.1 42.1 4.9 83 57 101
 LSD (0.05) 0.1001 0.7424
 C.V. 16.4% 25.9%

108

	Grain	Straw
SE	829.5765	1660.7847
SD	695.3053	538.8733
H	0.64	-1.37

Barley Performance Trial - 2020
Emo Agricultural Research Station
BPT20

Seeded: 4-May-20
Fertilization: 11-52-0 @ 30 kg/ha
46-0-0 @ 70 kg/ha
20-0-0-24 @ 10 kg/ha
Herbicide: Buctril M @ 1.0 l/ha
Fungicide: Trivapro A 4 l/ha
Trivapro B 2 l/ha

Entry	Code	Variety	Grain	Straw	1000 Seed weight (g)	Test Wt. kg/hl	Lodging (0-9)	Height (cm)	Days to Head	Days to Mature	Index		Harv Adjusted		Yield bu/ac
			kg/ha	kg/ha							Grain	Straw	Grain	Straw	
1	1111	AAC Vitality	5550.9	7419.0	42.4	54.5	0	82	58	99	114	143	111	138	92
2	1131	AAC Bloomfield	4851.5	6311.7	40.7	55.2	0	82	56	98	100	122	100	119	79
3	1129	AAC Goldman	4696.0	4872.2	40.9	53.1	0	70	62	99	97	94	97	95	80
4	1141	CFO1505	5230.3	6976.1	42.2	55.9	0	83	62	100	108	134	106	131	84
5	1147	CFO1707	5433.2	6201.0	42.1	56.0	0	84	58	100	112	120	109	117	87
6	1130	Orzo	4104.8	6256.3	48.7	59.2	0	74	58	96	84	121	88	118	62
7	1059	Amberly	4397.9	6367.0	40.9	55.2	0	81	62	97	90	123	92	120	72
8	1153	AAC Connect	4430.1	4041.7	38.9	53.0	0	64	58	99	91	78	93	80	75
9	1138	AAC Synergy	4607.8	4650.7	39.3	54.8	0	75	58	96	95	90	96	91	76
10	1128	Champion	4668.5	4761.4	41.7	58.9	0	71	56	98	96	92	97	93	71
11	1146	Rafale	4634.9	4850.7	38.0	57.0	0	78	58	99	95	90	96	91	73
12	1113	AAC Purpose	4564.2	5481.2	49.6	55.3	0	81	58	98	94	106	95	105	74
13	1009	Bornholm	4345.1	3931.0	42.6	62.2	0	67	56	101	89	76	92	78	63
14	1127	DS5692RB	4310.5	3654.1	44.2	58.5	1	67	56	100	89	70	91	74	66
15	1126	DS8126RB	5061.7	4097.1	41.5	56.1	0	71	58	98	104	79	103	81	81
16	1080	HY 621-6R	4663.4	4484.6	40.4	56.0	2	79	55	98	96	86	97	88	75
17	1118	AAC Montrose	4479.3	5038.3	40.4	53.6	1	83	56	97	92	97	94	97	75
18	1125	Baden	5095.7	3654.1	36.5	57.2	0	65	58	99	105	70	104	74	80
19	1150	SC18-022RB	5471.0	4263.2	46.2	55.0	0	62	58	99	113	82	110	84	89
20	1148	SC18-032RB	5937.4	4373.9	44.7	58.5	0	65	61	99	122	84	118	86	91
21	1149	SC18-042RB	6102.5	4263.2	45.3	56.8	0	59	58	99	126	82	120	84	97
22	1151	OS14-10,29	5078.9	6145.6	41.2	54.1	0	77	58	100	105	118	104	116	85
23	1108	Chambly	4968.2	7308.3	42.1	55.5	0	78	58	96	102	141	102	136	81
24	1056	Harmony	4203.9	6145.6	38.5	54.5	0	87	58	99	86	118	89	116	69
25	1049	OCEANIK	4615.0	4373.9	40.3	56.0	0	78	58	98	95	84	96	86	74

Average 4860.1 5188.9 42.0 56.1 0.2 74 58 98
LSD (0.05) 0.000 0.000
C.V. 9.7% 14.8%

	Grain	Straw
SE	469.9720	765.3580
SD	526.4677	1165.6977
H	0.80	0.89

Manitoba Barley Trial - 2020
Emo Agricultural Research Station
MBBT20

Seeded: 5-May-20
Fertilization: 11-52-0 @ 30 kg/ha
46-0-0 @ 70 kg/ha
21-0-0-024 @ 10 kg/ha
Herbicide: Buctril M @ 1.0 l/ha
Fungicide: Trivapro A.4 l/ha
Trivapro B.2 l/ha

Entry	Code	Variety	Grain	Straw	1000 Seed weight (g)	Test Wt. (kg/hl)	Lodging (0-9)	Height (cm)	Days to Head	Days to Mature	Index		Harv Adjusted	Yield bu/acre	
			kg/ha	kg/ha							Grain	Straw			
1	1	CDC Bow	4548.0	4351.7	37.2	54.3	0	73.3	57	98	98	98	99	99	75
2	2	CDC Churchill	5271.9	4791.7	36.8	56.4	1	69.0	57	95	113	108	109	103	84
3	3	CDC Fraser	4267.7	3911.6	32.3	52.3	0	67.3	57	97	92	88	95	95	73
4	4	Lowe	4499.0	3764.9	37.3	57.4	0	71.5	61	98	97	85	98	94	71
5	5	AB Advantage	4646.7	5379.6	38.4	56.4	0	79.3	55	97	100	121	100	109	74
Average			4646.7	4439.9	36.4	55.3	0.1	72	57	97					76
LSD (0.05)			0.0669	0.2041											
C.V.			9.5%	22.9%											

	Grain	Straw
SE	440.5036	1017.6240
SD	376.1637	661.2950
H	0.66	0.41

Mating Barley Variety Trial - 2020
Emo Agricultural Research Station
MBVT20

Seeded: 8-May-20
Fertilization: 11-52-0 @ 30 kg/ha
46-0-0 @ 70 kg/ha
20-0-0-24 @ 10 kg/ha
Herbicide: Buctril M @ 1/0 l/ha
Fungicide: Trivapro A .4l/ha
Trivapro B .2 l/ha

Entry	Code	Variety	Grain		1000 Seed weight (g)	Test Wt. (kg/hl)	Lodging (0-9)	Height (cm)	Days to Head	Days to Mature	Index		Harv Adjusted Grain	Harv Adjusted Straw	Yield bu/acre
			kg/ha	kg/ha							Grain	Straw			
1	1	Bentley	6143.2	5499.0	43.6	56.4	1.8	71.0	54	89	106	99	105	100	98
2	2	AAC Synergy	6912.2	5343.3	43.4	56.4	2.3	71.3	51	91	120	96	116	101	110
3	3	Newdale	5982.3	6173.4	43.7	56.2	0.8	72.0	54	92	103	111	103	98	96
4	4	CDC Bow	6160.8	5187.7	38.5	56.0	3.5	75.5	54	91	107	93	105	101	99
5	5	CDC Kindersley	5041.7	5395.2	40.4	56.9	2.0	75.3	53	91	87	97	89	101	80
6	6	CDC Fraser	5142.7	6121.5	43.0	58.0	0.3	80.5	62	92	89	110	91	98	80
7	7	Lowe	5886.1	5706.5	37.8	54.2	3.5	78.0	54	91	102	102	101	100	98
8	8	CDC Copeland	5920.9	5239.6	39.1	55.1	4.8	74.3	58	91	102	94	102	101	97
9	9	AAC Conect	6014.2	5758.4	40.6	55.4	2.3	76.5	54	91	104	103	103	99	98
10	10	OAC 21	4636.7	5343.3	34.7	54.7	7.8	83.0	58	91	80	96	83	101	76

Average 5784.1 5576.8 40.5 55.9 2.9 76 55 91 93
LSD (0.05) 0.000 0.5951
C.V. 9.4% 13.9%

	Grain	Straw
SE	540.8113	772.9437
SD	661.9710	352.0604
H	0.83	-0.21

Nitrogen & Sulfur on Malting Barley
Emo Agricultural Research Station
NSMB20

Seeded: 8-May-20
Fertilization: 11-52-0 @ 30 kg/ha
Nitrogen - as per individual treatments
Sulfur - as per individual treatments
Herbicide: Buctril M @ 1.0 l/ha
Fungicide: Trivapro A 4l/ha
Trivapro B 2 l/ha

Entry	Code	Variety	Grain	Straw	1000 Seed	Test Wt.	Lodging	Height	Days to	Days to	Index		Harv Adjusted		Yield
			kg/ha	kg/ha	weight (g)	kg/hl	(0-9)	(cm)	Head	Mature	Grain	Straw	Grain	Straw	
1		ON, OS	1289.1	3094.6	22.6	50.1	0	65.0	65	95	38	57	41	65	23
2		35N & OS	3672.8	4519.1	36.1	57.2	0	78.0	65	96	108	84	108	87	58
3		70N & OS	3736.1	6631.2	38.4	57.3	0	76.0	62	97	110	123	109	119	59
4		105N & OS	3745.5	7318.9	30.8	59.2	0	78.5	62	96	110	136	110	129	57
5		26.25N, 8.75ESN & OS	3138.3	3831.4	39.7	56.0	0	67.8	62	96	92	71	93	76	50
6		52.5N, 17.5ESN & OS	3499.8	5206.7	39.4	57.4	0	76.8	62	95	103	96	103	97	55
7		78.75N, 26.25ESN & OS	3571.2	6876.8	37.1	57.0	0	69.0	62	98	105	127	105	123	56
8		ON & 12S	1282.7	3389.3	20.5	50.3	0	70.5	65	96	38	63	41	69	23
9		35N & 12S	3447.2	4469.9	35.2	55.2	0	71.8	65	96	101	83	101	86	56
10		70N & 12S	4394.1	6041.8	41.3	57.9	0	72.8	62	96	129	112	128	110	68
11		105N & 12S	4169.2	5275.5	38.7	57.9	1	73.5	62	97	123	98	121	98	65
12		26.25N, 8.75ESN & 12S	3268.6	4961.1	36.9	55.7	0	73.8	62	96	96	92	96	93	53
13		52.5N, 17.5ESN & 12S	3933.9	6090.9	36.0	57.4	0	75.5	62	96	116	113	115	111	62
14		78.75N, 26.25ESN & 12S	4478.5	7908.3	34.7	60.4	0	73.0	62	96	132	146	130	138	67

Average 3401.9 5401.1 34.8 56.4 0 73 63 96
LSD (0.05) 0.000 0.000
C.V. 12.8% 22.8%

	Grain	Straw
SE	434.4261	1231.4528
SD	976.6742	1474.5314
H	0.95	0.83

Range 1 Summit Oats - 2020
 Emo Agricultural Research Station
 R1FO20

Seeded: 12-May-20
 Fertilization: 11-52-0 @ 20 kg/ha
 46-0-0 @ 70 kg/ha
 21-0-0-24 @ 10 kg/ha
 Herbicide: Buctril M @ 1.0 l/ha

Entry	Code	Variety	Grain	Straw	1000 Seed	Test Wt.	Lodging	Height	Days to	Days to	Index		Harv Adjusted	Yield	
			kg/ha	kg/ha	weight (g)	kg/hl	(0-9)	(cm)	Head	Mature	Grain	Straw	Grain		Straw
1	1	Summit with N	4202.0	3592.0	33.4	40.7	5	90	58	95	138	145	138	145	93
1	2	Summit with No N	1903.0	1349.0	31.8	41.4	5	59	58	95	62	55	62	55	41
Average			3052.5	2470.5	32.6	41.1	5	75	58	95					67
LSD (0.05)															
C.V.															

	Grain	Straw
SE	0.0000	0.0000
SD	1625.6385	1586.0405
H	1.00	1.00

Range 2 Summit Oats - 2020
 Emo Agricultural Research Station
 R2FO20

Seeded: 12-May-20
 Fertilization: 11-52-0 @ 20 kg/ha
 46-0-0 @ 70 kg/ha
 21-0-0-24 @ 10 kg/ha
 Herbicide: Buctril M @ 1.0 l/ha

Entry	Code	Variety	Grain	Straw	1000 Seed weight (g)	Test Wt. (kg/hl)	Lodging (0-9)	Height (cm)	Days to Head	Days to Mature	Index		Yield bu/ha		
			kg/ha	kg/ha							Grain	Straw			
1	1	Summit	4924.0	3680.0	35.1	45.5	5	99	58	95	101	75	101	75	97
1	2	Summit	4818.0	6136.0	34.9	45.8	5	100	58	95	99	125	99	125	95
Average			4871.0	4908.0	35.0	45.7	5	100	58	95					96
LSD (0.05)															
C.V.															

	Grain	Straw
SE	0.0000	0.0000
SD	74.9533	1736.6543
H	1.00	1.00

Range 3 Cereal Blocks - 2020
 Emo Agricultural Research Station
R3CB20

Seeded: 2-Jun-20
 Fertilization: 11-52-0 @ 20 kg/ha
 46-0-0 @ 70 kg/ha
 21-0-0-24 @ 10 kg/ha
 Herbicide: Buctril M @ 1.0 l/ha

Entry	Code	Variety	Grain	Straw	1000 Seed weight (g)	Test Wt. (kg/hl)	Lodging (0-9)	Height (cm)	Days to Head	Days to Mature	Index		Harv Adjusted		Yield bu/ac
			kg/ha	kg/ha							Grain	Straw	Grain	Straw	
1	1	Cereal Mixture	2328.0	4230.0	27.6	47.8	0	82	59	92	97	89	97	89	44
1	2	Cereal Mixture	2689.0	5488.0	25.1	49.9	0	87	59	92	112	115	112	115	48
2	1	Cereal Mixture	2314.0	4331.0	26.1	52.8	0	84	59	92	96	91	96	91	39
2	2	Cereal Mixture	2288.0	4963.0	29.0	50.7	0	90	59	92	95	104	95	104	41
Average			2404.8	4753.0	27.0	50.3	0	86	59	92					43
LSD (0.05)															
C.V.															

	Grain	Straw
SE	0.0000	0.0000
SD	190.2233	587.6331
H	1.00	1.00

Range 5 No Till Oats - 2020
 Emo Agricultural Research Station
R5NTO20

Seeded: 22-May-20
 Fertilization: 11-52-0 @ 20 kg/ha
 46-0-0 @ 70 kg/ha
 21-0-0-24 @ 10 kg/ha
 Herbicide: Buctril M @ 1.0 l/ha

Entry	Code	Variety	Grain		Straw		1000 Seed weight (g)	Test Wt. (kg/hl)	Lodging (0-9)	Height (cm)	Days to Head	Days to Mature	Index		Harv Adjusted	Yield bu/ac
			kg/ha	kg/ha	kg/ha	kg/ha							Grain	Straw		
1	1	No Till Summit	2575.4	349.0	29.5	41.5	0	84	59	95	98	16	98	16	56	
1	2	No Till Summit	2669.0	4008.0	29.8	42.7	0	82	59	95	102	184	102	184	56	
Average			2622.2	2178.5	29.7	42.1	0	83	59	95					56	
LSD (0.05)																
C.V.																

*We just tried to No-Till some Oats into last years stubble. It worked decent!

	Grain	Straw
SE	0.0000	0.0000
SD	66.1852	2587.3037
H	1.00	1.00

Range 7 Summit Oats - 2020
 Emo Agricultural Research Station
R7SO20

Seeded: 22-May-20
 Fertilization: 11-52-0 @ 20 kg/ha
 46-0-0 @ 70 kg/ha
 21-0-0-24 @ 10 kg/ha
 Herbicide: Buctril M @ 1.0 l/ha

Entry	Code	Variety	Grain	Straw	1000 Seed	Test Wt.	Lodging	Height	Days to	Days to	Index		Harv Adjusted	Yield	
			kg/ha	kg/ha	weight (g)	kg/hi	(0-9)	(cm)	Head	Mature	Grain	Straw			Grain
1	1	Summit	3627.2	4119.0	24.0	39.0	0	100	59	95	102	91	102	91	84
1	2	Summit	3454.9	4890.0	28.0	38.3	0	80	59	95	98	109	98	109	81
Average			3541.1	4504.5	26.0	38.7	0	90	59	95					82
LSD (0.05)															
C.V.															

	Grain	Straw
SE	0.0000	0.0000
SD	121.8345	545.1793
H	1.00	1.00

Boron Application & Timing on Canola - 2020
 Emo Agricultural Research Station
BATC20

Seeded: 11-May-20
 Fertilization: 11-52-0 @ 30 kg/ha
 46-0-0 @ 70 kg/ha
 20-0-0-24 @ 10kg/ha
 Boron - Bolting July 5, 2020
 Boron - Bloom July 7, 2020
 Herbicide: Round-Up @ 1.25 l/ha

Entry	Code	Variety	Grain	Straw	1000 Seed	Test Wt.	Lodging	Height	Days to	Days to	Index		Harv Adjusted	Yield
			kg/ha	kg/ha	weight (g)	kg/hl	(0-9)	(cm)	Flower	Mature	Grain	Straw		
1	1	No Boron	2103.3		3.7	66.5	3.0	114.3	56	110.0	113		107	28
2	2	Soil applied at planting 1 lbs B/ac	1764.0		3.7	64.7	3.0	109.8	56	110.0	95		97	25
3	3	Foliar applied B at bolting .4lbs/ac	1836.0		3.6	65.6	3.0	111.8	56	110.0	99		99	25
4	4	Foliar applied B 20-50% Bloom	1752.4		3.7	66.0	3.0	126.0	56	110.0	94		97	24
Average			1863.9		3.7	65.7	3.0	115	56	110				26
LSD (0.05)			0.1789											
C.V.			12.3%											

*Unable to take straw yields.

	Grain	Straw
SE	229.6377	0.0000
SD	163.8136	#DIV/0!
H	0.51	#DIV/0!

Sulfur Rate on Canola - 2020
 Emo Agricultural Research Station
SRC20

Seeded: 11-May-20
 Fertilization: 11-52-0 @ 30 kg/ha
 46-0-0 @ 70 kg/ha
 Herbicide: Round-Up @ 1.25 l/ha

Entry	Code	Variety	Grain		1000 Seed weight (g)	Test Wt. (g)	Lodging (0-9)	Height (cm)	Days to Flower	Days to Mature	Index		Yield bu/acre
			kg/ha	kg/ha							Grain	Straw	
1	1	O lbs of S	1090.5		3.9	62.9	3.0	105.3	56	110	113	107	16
2	2	5 lbs of S	1023.0		3.8	64.3	3.0	110.5	56	110	106	103	14
3	3	10 lbs of S	996.7		3.8	64.4	3.0	124.8	56	110	103	102	14
4	4	20 lbs of S	935.8		3.7	65.4	3.0	108.8	56	110	97	98	13
5	5	40 lbs of S	796.6		3.7	62.1	3.0	107.3	56	110	82	91	12

Average 968.5
 LSD (0.05) 0.1478
 C.V. 15.9%

3.8 63.8 3.0 111 56 110 14

*Unable to take straw yields.

	Grain	Straw
SE	154.0911	0.0000
SD	110.9923	#DIV/0!
H	0.52	#DIV/0!

Phosphorus Placement of Canola Trial - 2020
 Emo Agricultural Research Station
 PCT20

Seeded: 11-May-20
 Fertilization: 11-52-0 @ 30 kg/ha
 20-0-0-24 @ 10 kg/ha
 Herbicide: Round-Up @ 1.25 l/ha

Entry	Code	Variety	Grain	Straw	1000 Seed weight (g)	Test Wt.	Lodging (0-9)	Height	Days to Head	Days to Mature	Index		Counts per m ²	Yield bu/acre
			kg/ha	kg/ha		kg/l		(cm)			Grain	Straw		
1	1	0 P	738.4		3.7	59.7	3	112.0	56.0	110	99		16	11
2	2	0 P with seed & 40 lbs of P Broadcast	839.1		3.7	58.4	3	123.8	56.0	110	112	100	16	11
3	3	10 lbs of P with seed & 30 lbs of P Broadcast	771.9		3.6	56.7	3	114.5	56.0	110	103	105	22	13
4	4	20 lbs of P with seed & 20 lbs of P Broadcast	613.3		3.6	56.4	3	126.0	56.0	110	82	101	16	12
5	5	30 lbs of P with seed & 10 lbs of P Broadcast	828.7		3.7	59.5	3	114.5	56.0	110	111	93	18	9
6	6	40 lbs of P with seed & 0 P Broadcast	617.6		3.5	58.6	3	116.0	56.0	110	83	105	16	13
7	7	0 lbs of P with seed & 40 lbs of P Broadcast	821.7		3.7	60.2	3	116.5	56.0	110	110	104	13	9
Average			747.2		3.6	59.2	3	118	56	110			17	11
LSD (0.05)			0.1741											
C.V.			19.7%											

*Unable to take straw yields.

	Grain	Straw
SE	147.5036	0.0000
SD	96.6573	#DIV/0!
H	0.42	#DIV/0!

Forage Seed Mixtures - 2018 2020
 Emo Agricultural Research Station
FSM1820

Seeded: 8-Jun-18
 Fertilization: 11-52-0 @ 30 kg/ha
 Harvest: 1st Cut - June 23, 2020
 2nd Cut - August 7, 2020

Entry	Code	Variety	Yield (1)	Height (1)	Yield (2)	Height (2)	Total	Total
			kg/ha	cm	kg/ha	cm	Yield	t/acre
1	1	Tre Tim MF RCG KBG	3694	67	2395	43	6089	2.7
2	2	Tre TF MB OG KBG	3088	61	2375	47	5463	2.4
3	3	Tre Tim MF KBG	3597	65	2345	42	5942	2.6
4	4	Tre TF MB RCG KB	3402	63	2371	49	5773	2.6
5	5	Alf Tim MF RCG KBG	2822	70	1643	45	4465	2.0
6	6	Alf TF MB OG KBG	2389	62	1665	51	4054	1.8
7	7	Alf Tim MF KBG	2769	69	1528	50	4296	1.9
8	8	Alf TF MB RCG KBG	2603	67	1878	50	4481	2.0

Average 3045 66 2025 47 5070 2.2
 LSD (0.05) 375.7 7.2 406.4 5.1 712.6
 C.V. 8.4% 7.5% 13.7% 7.3% 9.6%

- Tre = Trefoil
- Tim = Timothy
- RCG = Reed Canary Grass
- KBG = Kentucky Bluegrass
- TF = Tall Fescue
- MB = Meadow Bromegrass
- OG = Orchard Grass
- MF = Meadow Fescue
- ALF = Alfalfa

I replicated this trial from the Beef Research Council. We continually have questions asked about mixtures.

Forage Comparison Trial 2017 2020
 Emo Agricultural Research Station
FCT1720

Seeded: 25-May-17
 Fertilization: 11-52-0 @ 30 kg/ha
 Harvest: 1st cut - June 24, 2020
 2nd cut - August 5, 2020

Entry	Code	Variety	Yield (1)	Height (1)	Yield (2)	Height (2)	Total	Total
			kg/ha	cm	kg/ha	cm	Yield	t/acre
1	1	Galega	582	16	191	14	773	0.3
2	2	Birds Foot Trefoil	1536	36	1080	33	2616	1.2
3	3	Response WT Alfalfa	1273	48	1041	44	2314	1.0
4	4	Sanfoin	700	63	180	28	898	0.4
5	5	Cicer Milkvetch	1026	33	740	28	1767	0.8
6	6	Red Clover	711	35	455	35	1166	0.5

Average 971 38 615 30 1589 0.7
 LSD (0.05) 567 12 404 9 915
 C.V. 38.8% 21.0% 43.6% 19.9% 38.3%

*We really don't have a good stand of Galega.
 *Sanfoin & Cicer Milkvetch improve with time.

Legume Comparison Trial 2017/2018/2020

Emo Agricultural Research Station

LCT1720

Seeded: 25-May-17

Fertilization: 11-52-0 @ 30 kg/ha

Harvest: 1st cut - June 24, 2020

2nd cut - August 4, 2020

Entry	Code	Variety	Yield (1)	Height (1)	Yield (2)	Height (2)	Total	Total
			kg/ha	cm	kg/ha	cm	Yield	t/acre
1	1	Alfalfa	1128	53	1016	42	2144	0.9
2	2	Birds Foot Trefoil	941	44	1023	37	1964	0.9
3	3	Cicer Milkvetch	1085	34	895	27	1981	0.9
4	4	Sanfoin	671	67	474	26	1144	0.5
5	5	**see below	452	0	336	27	788	0.3

Average	855	40	749	32	1604	0.7
LSD (0.05)	504.2	15.6	556.8	7.7	982.8	
C.V.	38.3%	19.8%	48.3%	15.8%	39.8%	

*Cicer Milkvetch and Sanfoin improve with time.

**First year this was Crimson Clover, now it is just natural species.

Larry's Alfalfa Varieties 2017 2020
 Emo Agricultural Research Station

LAV1720

Seeded: 26-May-17
 Fertilization: 11-52-0 @ 30 kg/ha
 Harvest: 1st cut - June 25, 2020
 2nd cut - August 4, 2020

Entry	Code	Variety	Yield (1)	Height (1)	Yield (2)	Height (2)	Total	Total
			kg/ha	cm	kg/ha	cm	Yield	t/acre
1	1	Robust	1192	54	900	40	2092	0.9
2	2	THZ	1303	49	1001	41	2304	1.0
3	3	Perfection	1224	50	1008	38	2232	1.0
4	4	10-5 Alfalfa	1313	52	845	40	2158	1.0
5	5	Response	1216	47	843	42	2059	0.9

Average	1250	50	919	40	2169	1.0
LSD (0.05)	330	7	271	8	530	
C.V.	17.1%	9.0%	19.1%	12.5%	15.9%	

Alfalfa Varieties - 2019 - 2020
 Emo Agricultural Research Station
AV1920

Seeded: 24-Jun-19
 Fertilization: 11-52-0 @ 30 kg/ha
 Harvest: 1st cut - June 25, 2020
 2nd cut - August 11, 2020

Entry	Code	Variety	Yield (1)	Height (1)	Yield (2)	Height (2)	Total	Total
			kg/ha	cm	kg/ha	cm	Yield	t/acre
1	1	Perfection	1254	39	1519	35	2773	1.2
2	2	Haygrazer	1399	39	1416	38	2814	1.2
3	3	Rugged ST	1306	41	1207	36	2513	1.1
4	4	AAC Meadowview	1220	34	1261	36	2481	1.1
5	5	Response WT	1449	39	1247	37	2696	1.2
6	6	Robust	1224	37	1425	37	2649	1.2
7	7	Revolution MD	1052	34	1377	32	2429	1.1
8	8	Sidewinder	1579	34	1610	35	3189	1.4

Average 1310 37 1383 36 2693 1.2
 LSD (0.05) 353 8 366 7 617
 C.V. 18.3% 15.0% 17.9% 12.8% 15.5%

CROSS SEEDING TRIAL - TREFOIL / TALL FESCUE

LOCATION: Emo
 PLANTING: 25-May-17
 FERTILIZER: 11-52-0 @ 30 kg/ha
 46-0-0 @ 70 kg/ha (Trefoil was less than 50%)
 HARVEST: 1st cut - June 23, 2020
 2nd cut - August 4, 2020

VARIETY	YIELD # 1 (kg/ha)	YIELD # 2 (kg/ha)	HEIGHT # 1 (cm)	HEIGHT # 2 (cm)	TOTAL YIELD	YIELD (t/acre)
Sample A	4743	1036	95	42	5779	2.6
Sample B	4686	1153	103	36	5838	2.6
MEAN	4715	1094	99	39	5809	2.6
C.V.						
LSD (0.05)						

*This project was coordinated with RAIN. Trefoil was planted North/South and the Tall Fescue was planted on the 2nd pass East/West.

*This is planted at the South - East corner of the station - it endures all flooding.

SPRING TRITICALE

LOCATION: Emo
 PLANTING: 2-Jun-20
 FERTILIZER: 11-52-0 @ 30 kg/ha
 46-0-0 @ 70 kg/ha
 20-0-0-24 @ 10 kg/ha
 HARVEST: 1st cut - August 11, 2020

VARIETY	YIELD # 1 (kg/ha)	HEIGHT # 1 (cm)	YIELD (t/acre)
Triticale	4930	108	2.2
Triticale	5924	112	2.6
MEAN	5427	110	2.4
C.V.			
LSD (0.05)			

FORAGE BLOCKS - RANGE # 4							
LOCATION:	Emo						
PLANTING:	7-Jun-18						
FERTILIZER:	11-52-0 @ 30 kg/ha						
HARVEST:	1st Cut - June 23, 2020						
	2nd Cut - August 7, 2020						
TREATMENT	1st CUT YIELD (kg/ha)	HEIGHT (cm)	2nd CUT YIELD (kg/ha)	HEIGHT (cm)	TOTAL YIELD	TOTAL YIELD (t/acre)	
Galega	1613	30	1546	27	3159	1.4	
	1926	27	1328	28	3254	1.4	
55Q27 Alfalfa	2727	62	2107	43	4834	2.1	
	2353	63	2173	44	4527	2.0	
55Q27 Alfalfa	2165	71	1708	52	3873	1.7	
	2164	62	1847	52	4010	1.8	

*There is very little Galega - there is many other species in this block.

ALFALFA

LOCATION: Emo
 PLANTING: 26-May-17
 FERTILIZER: 11-52-0 @ 30 kg/ha
 HARVEST: 1st cut - June 24, 2020
 2nd cut - August 11, 2020

VARIETY	YIELD # 1 (kg/ha)	YIELD # 2 (kg/ha)	HEIGHT # 1 (cm)	HEIGHT # 2 (cm)	TOTAL YIELD (kg/ha)	YIELD (t/acre)
Performer A	2249	1202	51	46	3451	1.5
Performer B	1676	1372	53	42	3048	1.3
Performer C	1909	1042	5	41	2951	1.3
Performer D	1964	1209	56	40	3174	1.4
MEAN	1950	1206	41	42	3156	1.4
C.V.						
LSD (0.05)						

*A & B West end of the forage area and C & D are East end.

RED CLOVER

LOCATION: Emo
 PLANTING: 5-Jul-19
 FERTILIZER: 11-52-0 @ 30 kg/ha
 HARVEST: 1st cut - June 25, 2020
 2nd cut - August 11, 2020

VARIETY	YIELD # 1 (kg/ha)	YIELD # 2 (kg/ha)	HEIGHT # 1 (cm)	HEIGHT # 2 (cm)	TOTAL YIELD	YIELD (t/acre)
Red Clover	2918	2395	48	59	5314	2.4
Red Clover	2904	2298	49	65	5202	2.3
Red Clover	2875	3526	51	67	6401	2.8
Red Clover	2360	4173	52	71	6534	2.9
MEAN	2911	2347	49	62	5258	2.3
C.V.						
LSD (0.05)						

RED CLOVER

LOCATION: Emo
 PLANTING: 5-Jul-19
 FERTILIZER: 11-52-0 @ 30 kg/ha
 HARVEST: 1st cut - June 25, 2020
 2nd cut - August 11, 2020

VARIETY	YIELD # 1 (kg/ha)	YIELD # 2 (kg/ha)	HEIGHT # 1 (cm)	HEIGHT # 2 (cm)	TOTAL YIELD	YIELD (t/acre)
Red Clover	2689	2410	55	54	5099	2.3
Red Clover	3178	2626	54	64	5804	2.6
MEAN	2934	2518	55	59	5452	2.4
C.V.						
LSD (0.05)						

ALFALFA

LOCATION: Emo
 PLANTING: 26-May-17
 FERTILIZER: 11-52-0 @ 30 kg/ha
 HARVEST: 1st cut - June 25, 2020
 2nd cut - August 11, 2020

VARIETY	YIELD # 1 (kg/ha)	YIELD # 2 (kg/ha)	HEIGHT # 1 (cm)	HEIGHT # 2 (cm)	TOTAL YIELD	YIELD (t/acre)
Alfalfa A	1658	1580	87	47	3238	1.4
Alfalfa B	1912	1375	62	48	3287	1.5
MEAN	1785	1477	75	48	3262	1.4
C.V.						
LSD (0.05)						

*This was a side by side comparison with Galega but there was no Galega.

SUMMIT OATS

LOCATION: Emo
PLANTING: 22-May-20
FERTILIZER: 11-52-0 @ 30 kg/ha
46-0-0 @ 70 kg/ha
20-0-0-24 @ 10 kg/ha
HARVEST: 1st cut - August 11, 2020

VARIETY	YIELD # 1 (kg/ha)	HEIGHT # 1 (cm)	YIELD (t/acre)
Summit	2585	80	1.1
Summit	2873	70	1.3
MEAN	2729	75	1.2
C.V.			
LSD (0.05)			

PERFORMER ALFALFA

LOCATION: Emo
 PLANTING: 6-Jun-17
 FERTILIZER: 11-52-0 @ 30 kg/ha
 HARVEST: 1st cut - June 25, 2020
 2nd cut - August 11, 2020

VARIETY	YIELD # 1 (kg/ha)	YIELD # 2 (kg/ha)	HEIGHT # 1 (cm)	HEIGHT # 2 (cm)	TOTAL YIELD	YIELD (t/acre)
Performer A	2075	1283	52	40	3358	1.5
Performer B	2591	1302	52	40	3892	1.7
MEAN	2333	1292	52	40	3625	1.6
C.V.						
LSD (0.05)						

ALFALFA (North of our Hop Yard)

LOCATION: Emo
 PLANTING: 26-May-17
 FERTILIZER: 11-52-0 @ 30 kg/ha
 HARVEST: 1st cut - June 25, 2020
 2nd cut - August 11, 2020

VARIETY	YIELD # 1 (kg/ha)	YIELD # 2 (kg/ha)	HEIGHT # 1 (cm)	HEIGHT # 2 (cm)	TOTAL YIELD	YIELD (t/acre)
55Q27 A	3508	2264	70	78	5772	2.6
55Q27 B	4052	2716	72	71	6769	3.0
MEAN	3780	2490	71	75	6270	2.8
C.V.						
LSD (0.05)						

STRIP OF ALFALFA (West side of Station)

LOCATION: Emo
 PLANTING: 26-May-17
 FERTILIZER: 11-52-0 @ 30 kg/ha
 HARVEST: 1st cut - June 25, 2020
 2nd cut - August 11, 2020

VARIETY	YIELD # 1 (kg/ha)	YIELD # 2 (kg/ha)	HEIGHT # 1 (cm)	HEIGHT # 2 (cm)	TOTAL YIELD	YIELD (t/acre)
55Q27 A	3484	2353	70	68	5837	2.6
55Q27 B	2912	1645	68	62	4557	2.0
MEAN	3198	1999	69	65	5197	2.3
C.V.						
LSD (0.05)						

2020 Other Information for EARS~

- *We left most of Range 1 (area near the highway) open to allow for Winter Wheat planting. On September 10th, 2020 we planted 2 Winter Wheat Trials; one has 20 Varieties and the other 19. They did well through the fall so we hope they have a good winter and spring.
- *The far East End of Range 2 was our sunflower block. Our many reasons for planting are to hopefully attract the birds to this area and keep them out of the other plots. There is talk of doing some further sunflower work with NOFIA.
- *Along with the Manitoba Cereal Trials came a Manitoba Pea Trial. Unfortunately, they were harvested by our Deer Friends. The trial looked good prior to that. It was a trial of 3 varieties; CDC Canary, CDC Lewochko & CDC Spectrum.
- *We also had the deer harvest our Soybean Variety Trial. They were in our plots right from emergence. We fenced it off and it worked for a short period of time, but they quickly learned to jump in. There was nothing let off them. The Varieties included; SC20-2400 R2X, ND12-6120GT, P006T46R, S003-ZXS, Barker R2X, W5, S007-A2XS, Akaras, ND17009GT, Merritt R2X & P03A26X.
- *We established various Red Clover blocks that will be incorporated into our plots. The Red Clover did very well.
- *We planted a new Alfalfa Trial. There had been a request to look at a new variety of Alfalfa; AAC Trueman that had been read about in the Cattlemen's Magazine. It was difficult to get seed mainly due to Covid and many Ag Canada employees were not allowed into their offices. We seeded Revolution MD, Elite, AAC Trueman, Response WT & Perfection. These are some of the top alfalfa varieties currently.
- *We still have the Perennial Bio- Mass Trial though we are not taking data from it. It is a great source of the popular biomass species.
- *Rick & Linda Neilson donated Pumpkin and Squash seed early in the spring of 2020. They thought it would be a nice gesture to grow and donate to people around our community as things were really in a turmoil with the pandemic. They did well and many people enjoyed both.
- *Hops! They did not have a great year in 2020 but we still had many cones. Various people were able to harvest some from our yard and we are continuing to source markets.
- *Hybrid Poplar trees – still growing near the back of the station and likely the root of much of our tile issues. They are supposed to be going soon.
- *Black Spruce Clonal Orchard – behind the Poplar. These belong to Resolute.