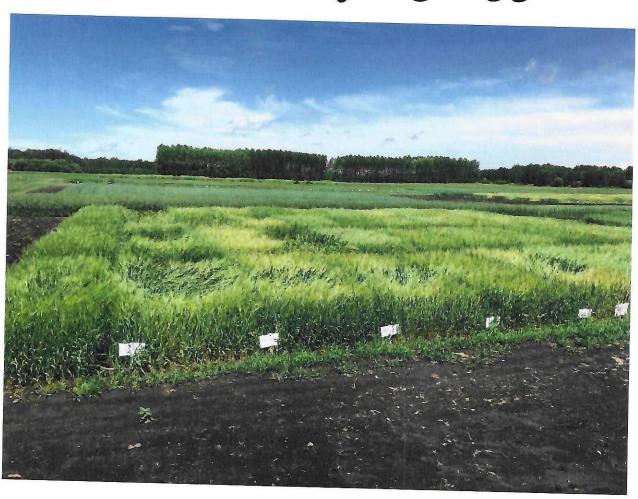
Ontario Crops Research Centre – Emo 2020

By: Kim Jo Bliss



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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;

KimJo

| Cron Heat I | Inita | | | | | | | | |
|--|--|---|--|--|---|--|--|----------------|------------|
| Crop Heat I | 100,000,000 | | | | | | | | |
| | May | June | July | August | September | October | TOTAL | Beginning Date | Ending Dat |
| 2000 | | 466 | 693 | 658 | 188 | 0 | 2357 | Apr-27 | 15-Sep-c |
| 2003 | 30000 | 577 | 681 | 656 | 195 | 0 | 2475 | Apr-28 | 14-Sep-c |
| 2002 | | 503 | 706 | 638 | 289 | 0 | 2177 | Мау-30 | 15-Sep-0 |
| 2003 | - 33 | 588 | 687 | 747 | 301 | О | 2622 | May-o9 | 15-Sep-c |
| 2002 | | 437 | 671 | 530 | 312 | 0 | 1950 | Jun-o3 | 15-Sep-0 |
| 2005 | | 655 | 763 | 649 | 505 | 0 | 2815 | May-og | 15-Sep-c |
| 2006 | | 606 | 780 | 686 | 163 | 0 | 2643 | Apr-16 | 8-Sep-o |
| 2007 | | 658 | 717 | 656 | 185 | 0 | 2680 | Apr-22 | 11-Sep-0 |
| 2008 | 183 | 541 | 683 | 700 | 186 | 0 | 2293 | May-o1 | 12-Sep-c |
| 2009 | 205 | 514 | 587 | 619 | 322 | 0 | 2247 | May-o1 | 15-Sep-0 |
| 2010 | 368 | 550 | 738 | 720 | 161 | 0 | 2537 | May-o1 | |
| 2011 | 307 | 536 | 747 | 665 | 238 | 0 | 2493 | 20 20 | 15-Sep-1 |
| 2012 | 348 | 598 | 766 | 636 | 231 | 0 | | May-o1 | 14-Sep-1 |
| 2013 | | 566 | 701 | 643 | 282 | 0 | 2579 | May-o1 | 14-Sep-1 |
| 2014 | | 594 | 447 | 635 | 161 | 0 | 2299 | May-o1 | 16-Sep-1 |
| 2015 | 41 | 544 | 734 | 613 | 281 | 0 | 1950 | May-o1 | 13-Sep-1 |
| 2016 | 376 | 577 | 729 | 708 | | | 2213 | May-o1 | 15-Sep-1 |
| 2017 | 249 | 576 | 685 | 612 | 277 260 | 0 | 2667 | May-o1 | 15-Sep-1 |
| 2018 | 438 | 623 | | 671 | 11,110,100,00 | 0 | 2382 | May-o1 | 15-Sep-1 |
| 2019 | 195 | 546 | 745 | | 298 | 0 | 2775 | May-01 | 15-Sep-1 |
| 2020 | 321 | 627 | 739 | 738 | 191 | 0 | 2409 | May-01 | 14-Sep-1 |
| | J | 02/ | 757 | 703 | 171 | 0 | 2578 | May-01 | 15-Sep-2 |
| VG | | | | | | | | | |
| e stop coll | ectina CHU' | s whenever | we reach | -2 For Son | tember 15 - w | الماء الماء | 2428 | | |
| ainfall | May | Loren | | | | | | | |
| 2000 | | June | July | August | | 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 | | |
| | 63 | 301.5 | 97 | 99 | 42 | 16.6 | 619.1 | | |
| 2003 | 32.5 185.7 | 133.5 | 83 | 57.5 | 7222 | | | | |
| 2004 | | | | | | 25.6 | 391.1 | | |
| 2005 | | 52.9 | 114.1 | 83.7 | 138.5 | 25.6 112.1 | 391.1 687.0 | | |
| 2005 | 127.6 | 224.5 | 98 | 83.7 107.3 | | | | | |
| 2006 | 127.6 79.6 | 224.5 40 | 98 <i>5</i> 7.3 | 83.7 107.3 37.6 | 138.5 67 35.4 | 112.1 | 687.0 | | |
| 2006 2007 | 127.6 79.6 113.5 | 224.5 40 170.4 | 98 57·3 72 | 83.7 107.3 37.6 27.25 | 138.5 67 | 112.1 77.2 | 687.0 701.6 | | |
| 2006 2007 2008 | 127.6 79.6 113.5 84.5 | 224.5 40 170.4 129.5 | 98 57·3 72 104 | 83.7 107.3 37.6 27.25 53 | 138.5 67 35.4 76.5 | 112.1 77.2 26.8 | 687.0 701.6 276.7 | | |
| 2006 2007 2008 2009 | 127.6 79.6 113.5 84.5 53.5 | 224.5 40 170.4 129.5 52.5 | 98 57·3 72 104 76.5 | 83.7 107.3 37.6 27.25 53 105.5 | 138.5 67 35.4 76.5 | 112.1 77.2 26.8 116 | 687.0 701.6 276.7 575.7 | | |
| 2006 2007 2008 2009 2010 | 127.6 79.6 113.5 84.5 53.5 117.2 | 224.5 40 170.4 129.5 52.5 | 98 57·3 72 104 76.5 | 83.7 107.3 37.6 27.25 53 | 138.5 67 35.4 76.5 113 48 171 | 112.1 77.2 26.8 116 112.5 | 687.0 701.6 276.7 575.7 596.5 | | |
| 2006 2007 2008 2009 2010 2011 | 127.6 79.6 113.5 84.5 53.5 117.2 | 224.5 40 170.4 129.5 52.5 133.7 | 98 57·3 72 104 76.5 | 83.7 107.3 37.6 27.25 53 105.5 105.5 | 138.5 67 35.4 76.5 113 48 | 112.1 77.2 26.8 116 112.5 61.7 | 687.0 701.6 276.7 575.7 596.5 397.7 | | |
| 2006 2007 2008 2009 2010 2011 2012 | 127.6 79.6 113.5 84.5 53.5 117.2 34 | 224.5 40 170.4 129.5 52.5 133.7 110 78 | 98 57·3 72 104 76.5 | 83.7 107.3 37.6 27.25 53 105.5 | 138.5 67 35.4 76.5 113 48 171 | 112.1 77.2 26.8 116 112.5 61.7 38 | 687.0 701.6 276.7 575.7 596.5 397.7 717.4 | | |
| 2006 2007 2008 2009 2010 2011 2012 2013 | 127.6 79.6 113.5 84.5 53.5 117.2 34 34 | 224.5 40 170.4 129.5 52.5 133.7 | 98 57·3 72 104 76.5 152 41.5 | 83.7 107.3 37.6 27.25 53 105.5 105.5 | 138.5 67 35.4 76.5 113 48 171 63.9 | 112.1 77.2 26.8 116 112.5 61.7 38 27.3 | 687.0 701.6 276.7 575.7 596.5 397.7 717.4 307.7 328.7 | | |
| 2006 2007 2008 2009 2010 2011 2012 2013 2014 | 127.6 79.6 113.5 84.5 53.5 117.2 34 34 93 | 224.5 40 170.4 129.5 52.5 133.7 110 78 71.5 | 98 57·3 72 104 76·5 152 41·5 | 83.7 107.3 37.6 27.25 53 105.5 105.5 31 | 138.5 67 35.4 76.5 113 48 171 63.9 | 112.1 77.2 26.8 116 112.5 61.7 38 27.3 84.2 | 687.0 701.6 276.7 575.7 596.5 397.7 717.4 307.7 328.7 533.8 | | |
| 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 | 127.6 79.6 113.5 84.5 53.5 117.2 34 34 93 97.4 151.5 | 224.5 40 170.4 129.5 52.5 133.7 110 78 71.5 335 122.1 | 98 57·3 72 104 76·5 152 41·5 77·5 | 83.7 107.3 37.6 27.25 53 105.5 105.5 31 36 | 138.5 67 35.4 76.5 113 48 171 63.9 19 | 112.1 77.2 26.8 116 112.5 61.7 38 27.3 84.2 26.3 53 | 687.0 701.6 276.7 575.7 596.5 397.7 717.4 307.7 328.7 533.8 735.4 | | |
| 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 | 127.6 79.6 113.5 84.5 53.5 117.2 34 34 93 97.4 151.5 54.6 | 224.5 40 170.4 129.5 52.5 133.7 110 78 71.5 | 98 57·3 72 104 76·5 152 41·5 77·5 149 | 83.7 107.3 37.6 27.25 53 105.5 105.5 31 36 122 | 138.5 67 35.4 76.5 113 48 171 63.9 19 72 | 112.1 77.2 26.8 116 112.5 61.7 38 27.3 84.2 26.3 53 56.4 | 687.0 701.6 276.7 575.7 596.5 397.7 717.4 307.7 328.7 533.8 735.4 690.0 | | |
| 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 | 127.6 79.6 113.5 84.5 53.5 117.2 34 34 93 97.4 151.5 | 224.5 40 170.4 129.5 52.5 133.7 110 78 71.5 335 122.1 | 98 57·3 72 104 76·5 152 41·5 77·5 149 97 211 | 83.7 107.3 37.6 27.25 53 105.5 105.5 31 36 122 39 | 138.5 67 35.4 76.5 113 48 171 63.9 19 72 114 | 112.1 77.2 26.8 116 112.5 61.7 38 27.3 84.2 26.3 53 56.4 34.9 | 687.0 701.6 276.7 575.7 596.5 397.7 717.4 307.7 328.7 533.8 735.4 690.0 532.5 | | |
| 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 | 127.6 79.6 113.5 84.5 53.5 117.2 34 34 93 97.4 151.5 54.6 32.6 74.5 | 224.5 40 170.4 129.5 52.5 133.7 110 78 71.5 335 122.1 158.5 129.1 | 98 57·3 72 104 76.5 152 41.5 77·5 149 97 211 68 52.5 78 | 83.7 107.3 37.6 27.25 53 105.5 105.5 31 36 122 39 59 | 138.5 67 35.4 76.5 113 48 171 63.9 19 72 114 90 | 112.1 77.2 26.8 116 112.5 61.7 38 27.3 84.2 26.3 53 56.4 34.9 48.7 | 687.0 701.6 276.7 575.7 596.5 397.7 717.4 307.7 328.7 533.8 735.4 690.0 532.5 495.0 | | |
| 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 | 127.6 79.6 113.5 84.5 53.5 117.2 34 34 93 97.4 151.5 54.6 32.6 | 224.5 40 170.4 129.5 52.5 133.7 110 78 71.5 335 122.1 158.5 129.1 | 98 57·3 72 104 76.5 152 41.5 77·5 149 97 211 68 52·5 | 83.7 107.3 37.6 27.25 53 105.5 105.5 31 36 122 39 59 94.5 106.05 | 138.5 67 35.4 76.5 113 48 171 63.9 19 72 114 90 122 126 116 | 112.1 77.2 26.8 116 112.5 61.7 38 27.3 84.2 26.3 53 56.4 34.9 48.7 86.8 | 687.0 701.6 276.7 575.7 596.5 397.7 717.4 307.7 328.7 533.8 735.4 690.0 532.5 495.0 551.3 | | |
| 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 | 127.6 79.6 113.5 84.5 53.5 117.2 34 34 93 97.4 151.5 54.6 32.6 74.5 | 224.5 40 170.4 129.5 52.5 133.7 110 78 71.5 335 122.1 158.5 129.1 | 98 57·3 72 104 76.5 152 41.5 77·5 149 97 211 68 52.5 78 | 83.7 107.3 37.6 27.25 53 105.5 105.5 31 36 122 39 59 94.5 106.05 | 138.5 67 35.4 76.5 113 48 171 63.9 19 72 114 90 122 126 116 | 112.1 77.2 26.8 116 112.5 61.7 38 27.3 84.2 26.3 53 56.4 34.9 48.7 86.8 138.0 | 687.0 701.6 276.7 575.7 596.5 397.7 717.4 307.7 328.7 533.8 735.4 690.0 532.5 495.0 551.3 792.0 | | |
| 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 | 127.6 79.6 113.5 84.5 53.5 117.2 34 34 93 97.4 151.5 54.6 32.6 74.5 83 40.5 | 224.5 40 170.4 129.5 52.5 133.7 110 78 71.5 335 122.1 158.5 129.1 102 68 112.5 | 98 57·3 72 104 76·5 152 41·5 77·5 149 97 211 68 52·5 78 162·5 118 | 83.7 107.3 37.6 27.25 53 105.5 105.5 31 36 122 39 59 94.5 106.05 94 136 | 138.5 67 35.4 76.5 113 48 171 63.9 19 72 114 90 122 126 116 | 112.1 77.2 26.8 116 112.5 61.7 38 27.3 84.2 26.3 53 56.4 34.9 48.7 86.8 | 687.0 701.6 276.7 575.7 596.5 397.7 717.4 307.7 328.7 533.8 735.4 690.0 532.5 495.0 551.3 | | |
| 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 | 127.6 79.6 113.5 84.5 53.5 117.2 34 34 93 97.4 151.5 54.6 32.6 74.5 83 40.5 | 224.5 40 170.4 129.5 52.5 133.7 110 78 71.5 335 122.1 158.5 129.1 102 68 112.5 | 98 57·3 72 104 76·5 152 41·5 77·5 149 97 211 68 52·5 78 162·5 118 | 83.7 107.3 37.6 27.25 53 105.5 105.5 31 36 122 39 59 94.5 106.05 94 136 | 138.5 67 35.4 76.5 113 48 171 63.9 19 72 114 90 122 126 116 | 112.1 77.2 26.8 116 112.5 61.7 38 27.3 84.2 26.3 53 56.4 34.9 48.7 86.8 138.0 | 687.0 701.6 276.7 575.7 596.5 397.7 717.4 307.7 328.7 533.8 735.4 690.0 532.5 495.0 551.3 792.0 | | |
| 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 | 127.6 79.6 113.5 84.5 53.5 117.2 34 34 93 97.4 151.5 54.6 32.6 74.5 83 | 224.5 40 170.4 129.5 52.5 133.7 110 78 71.5 335 122.1 158.5 129.1 102 68 112.5 | 98 57·3 72 104 76·5 152 41·5 77·5 149 97 211 68 52·5 78 162·5 118 | 83.7 107.3 37.6 27.25 53 105.5 105.5 31 36 122 39 59 94.5 106.05 94 136 | 138.5 67 35.4 76.5 113 48 171 63.9 19 72 114 90 122 126 116 | 112.1 77.2 26.8 116 112.5 61.7 38 27.3 84.2 26.3 53 56.4 34.9 48.7 86.8 138.0 | 687.0 701.6 276.7 575.7 596.5 397.7 717.4 307.7 328.7 533.8 735.4 690.0 532.5 495.0 551.3 792.0 | | |

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

| | 16 | 15 | 14 | 13 | 12 | 1 | 10 | 9 | 0 | 7 | 6 | 5 | 4 | ω | 2 | _ | | Entry |
|-------------------------------|--------------|----------------|-------------|------------------|------------|-----------------|------------------|------------|------------|------------|--------------|--------------|-------------|--------|--------|--------|------------|--------------------|
| 0-> | 5031 MAJOR | 5088 / | 5037 Fuzion | 5065 / | 5098 Agora | 5042 / | 5099 / | 5096 Minot | 5094 Maida | 5080 Dagon | 5097 | 5095 | 5041 Wilkin | 5081 | 5030 | 5066 | | Code |
| Average LSD (0.05) C.V. | MAJOR | 5088 AAC Synox | Fuzion | 5065 AAC Brandon | Agora | 5042 AAC Scotia | 5099 AAC Harlaka | Minot | Maida | Dagon | 5097 CFB1911 | 5095 CFB1708 | Wilkin | Raven | Furano | Easton | , | Variety |
| 4278.9 0.000 8.2% | 4706.8 | 3572.5 | 4591.0 | 3609.8 | 4178.5 | 4847.3 | 3465.1 | 4501.2 | 4427.6 | 5210.3 | 3632.9 | 3963.2 | 3907.9 | 4851.0 | 4863.2 | 4134.7 | kg/ha | Grain |
| 4645.5 0.799 29.1% | 3844.5 | 4912.5 | 3844.5 | 3844.5 | 4912.5 | 4698.9 | 4058.1 | 4912.5 | 4058.1 | 5553.2 | 4912.5 | 5126 0 | 6621.1 | 4698.9 | 3844.5 | 4485.3 | kg/ha | Straw |
| 33.0 | 35.1 | 30.2 | 35.7 | 31.4 | 34.1 | 36.9 | 32.8 | 38.2 | 31.2 | 29.5 | 30.7 | 29.9 | 31.2 | 35.9 | 35.0 | 30.9 | weight (g) | 1000 Seed Test Wt. |
| 73.1 | 74.5 | 74.8 | 72.5 | 72.8 | 73.7 | 70.9 | 73.7 | 71.3 | 72.1 | 73.3 | 75.3 | 71.8 | 70.7 | 74.0 | 75.2 | 72.5 | kg/hl | Test Wt. |
| 0.5 | 0 | 4 | 1 | 0 | _ | 1 | 1 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | (0-9) | Lodging |
| 93 | 103.0 | 88.5 | 105.5 | 79.5 | 95.0 | 102.0 | 90.5 | 97.8 | 97.8 | 86.8 | 95.5 | 87.0 | 83.8 | 92.3 | 99.5 | 79.5 | (cm) | Height |
| 59 | 62 | 58 | 59 | 55 | 56 | 62 | 58 | 58 | 62 | 62 | 55 | 62 | 58 | 58 | 62 | 62 | Head | Days to |
| 97 | 98 | 97 | 98 | 98 | 98 | 98 | 97 | 98 | 97 | 98 | 98 | 96 | 98 | 97 | 98 | 98 | Mature | Days to |
| 1 | 110 | 83 | 107 | 84 | 98 | 113 | 81 | 105 | 103 | 122 | 85 | 93 | 91 | 113 | 114 | 97 | Grain | Index |
| | 83 | 106 | 83 | 83 | 106 | 101 | 87 | 106 | 87 | 120 | 106 | 110 | 143 | 101 | 83 | 97 | Straw | ex |
| | 109 | 85 | 107 | 86 | 98 | 112 | 83 | 105 | 103 | 120 | 86 | 93 | 92 | 112 | 112 | 97 | Grain | Harv A |
| | 97 | 101 | 97 | 97 | 101 | 100 | 97 | 101 | 97 | 104 | 101 | 102 | 108 | 100 | 97 | 99 | Straw | Harv Adjusted |
| 53 | 57 | 43 | 57 | 45 | 51 | 62 | 42 | 57 | 55 | 64 | 43 | 50 | 50 | 59 | 58 | 51 | bu/acre | Yield |

548.0684 350.0162 Grain 0.90 754.1307 1350.4414 Straw

SD I

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

| | | œ | , | 10 | D | (J) | 4 | _ | ω | 1 | s | , 1 | | Entry | i |
|-------------------------------|--------|----------|---------------|---------------|--------------|-------------|--------|--------|------------|-------------|---------|-----------|------------|---------------|-----------|
| 0 = > | | 8 | 7 | c | | C) | 1 | _ | ω | N | | _, | | Code | , |
| Average LSD (0.05) C.V. | Cici | Red Star | AAC Wheatland | AND SIAI BUCK | AND Starbunk | AAC Brandon | raiala | Donato | AAC Warman | AAC LISUALE | ^ ^ C H | AAC Alida | | Variety | |
| 3724.2 0.0099 18.7% | 70.210 | 13100 | 3785.2 | 3630.4 | 0000 | 3290 1 | 3924.3 | 0.0.0 | 32756 | 4860.1 | 1 | 2716 1 | kg/ha | Ciall | Grain |
| 4500.9 0.1836 22.5% | 4213.0 | 40400 | 5323 7 | 4672.6 | 10.0.0 | 4008 A | 4596.0 | 0000.0 | 3888 3 | 5476.9 | 0000 | 3830 O | kg/ha | MPIIO | Otroni |
| 27.4 | 0.67 | 2000 | 0.80 | 27.3 | 20.0 | 36.3 | 26.8 | 20.0 | 26.3 | 31.2 | 24.0 | 340 | weight (g) | paac oou | 1000 0-11 |
| 72.1 | 77.3 | 1.0.0 | 73 0 | 72.8 | 0.27 | 707 | 73.0 | 71.8 | 74.0 | 73.1 | 08.0 | 200 | kg/hl | lest Wt. | |
| 0.2 | C | | 0 | 0 | | | _ | c | , | 0 | c | | (0-9) | Lodging | • |
| 88 | 88.5 | 0.20 | 000 | 81.3 | /9.3 | 00.0 | 0.96 | 94.3 | | 91.8 | 86.3 | | (cm) | Height | |
| 54 | 54 | 24 | 7 | 54 | 54 | | ZV. | 54 | 1 4 | 7.7 | 54 | | Head | Days to | |
| 98 | 98.0 | 98.0 | 200 | 98.0 | 98.0 | 00.0 | 0 00 | 98.0 | 90.0 | 0 80 | 98.0 | | Mature | Days to | |
| | 116 | 102 | | 07 | 88 | CO | 106 | 88 | 100 | 130 | 73 | 2 | Grain | Ind | |
| | 94 | 118 | 101 | 104 | 89 | 701 | 100 | 86 | 771 | 200 | 85 | CHOW | Strow | ndex | |
| | 111 | 101 | 90 | 00 | 92 | 104 | | 91 | 727 | 100 | 80 | Giaii | Crain | Harv A | |
| | 98 | 107 | | 404 | 96 | 101 | | 20 | 108 | 000 | 95 | MPIIC | Strong | Harv Adineted | |
| 46 | 54 | 47 | 45 | 1 | 41 | 48 | 1 | 41 | 60 | C | ν N | bu/acre | - 1010 | Viold | |

| 635.4259 | 664.8546 | SD |
|-----------|----------|----|
| 1012.2519 | 696.0558 | 35 |

Emo Agricultural Research Station Oat Performance Trial - 2020 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: Buctril M @ 1.0 l/ha

| | 1 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 2 | 3 7 | 3 : | 1 | 10 | 9 | œ | 7 | 0. | 0 | 4 1 | | 0 1 | S. | _ | Entry |
|-------------------------------|----------|----------|---------|-------------|---------------|-----------------|----------|---------------|----------|-------------|----------------|--------|---------|-----------|------------|--------------|--------|--------|---------|--------|--------|--------|--------|------------|---------------|
| | _ | | 3038 | 3089 | 3083 | 3088 | 3087 | 3079 | 3087 | -1 | | 2070 | | 3057 | 3078 | 3058 | 3051 | 3061 | 3084 | 30/5 | 30/4 | 2002 | 2065 | 3059 | Code |
| Average LSD (0.05) C.V. | vicality | Vitality | Hidalaa | PGR-N13-090 | 3083 ORe3542M | 3088 OA1594-1 | OA1584-3 | 3079 OA1568-6 | OA1444-4 | AAC NICOIAS | 30/6 AAC CIYGE | | Orford | CDC Orrin | CDC Arborg | AAC Richmond | Nice | Kara | CFA1708 | _ | | CTALTO | | AAC Oaklin | Variety |
| 5125.3 0.000 10.4% | 4/23./ | 4707.7 | 41077 | 55356 | 4618 9 | 5694.8 | 6622.3 | 5751.7 | 3955.3 | 5298.8 | 5653.6 | 5040.1 | 5040.4 | 4890 3 | 4795.9 | 5444.6 | 5718.8 | 4758.3 | 5434.7 | 4541.4 | 4625.0 | 5154.4 | 0100.0 | 5185 O | Grain |
| 6061.8 0.000 16.7% | 2083.3 | 4000.0 | | 71167 | 5404 4 | 5671.9 | 6742.1 | 6581.6 | 9150.0 | 5939.5 | 8026.3 | /43/./ | 1.0.0.1 | 56184 | 5243.9 | 6902.6 | 6153.5 | 4601.8 | 5779.0 | 5886.0 | 4280.7 | 4441.2 | 0001.0 | Ky/Ha | Straw |
| 33.4 | 34.8 | 33.5 | 20.4 | 3 7 7 | 33.7 | 310 | 30.9 | 33.0 | 34.1 | 30.4 | 33.0 | 32.4 | 04.0 | 2/ 2 | 32.5 | 32.3 | 37.4 | 35.1 | 32.5 | 35.2 | 33.2 | 32.4 | 34. | weight (g) | 1000 Seed |
| 45.7 | 46.3 | 46.6 | 44.4 | 1.5 | 45.0 | 43.6 | 46.2 | 45.9 | 45.8 | 43.9 | 49.6 | 46.2 | 40.7 | 16.7 | 45.8 | 46.2 | 45.6 | 45.2 | 45.3 | 46.2 | 46.2 | 42.7 | 45.5 | Kg/n | - |
| 1.5 | 4 | <u> </u> | c | - | 7 V | S (| 0 | | 0 | 2 | 2 | 0 | _ | 1 0 | S | 2 | 2 | _ | 2 | _ | ω | 2 | N | (0-9) | Lodging |
| 95 | 95.5 | 86.3 | 8.601 | 04.5 | 04.0 | 07.0 | 87.3 | 87.3 | 95.0 | 95.8 | 103.5 | 99.8 | 99.8 | 8 6 | 25.50 | 106.5 | 104.5 | 87.0 | 98.5 | 91.0 | 88.8 | 87.3 | 100.0 | (cm) | Height |
| 61 | 58 | 62 | 62 | 58 | 5 02 | 200 | 63 | રું ! | 62 | 62 | 65 | 62 | 62 | 8 6 | S | રુ | 62 | 58 | 62 | 56 | 62 | 58 | 62 | Head | Days to |
| 96 | 95 | 97 | 95 | 96 | 3 93 | 2 2 | 98 | 95 | 95 | 97 | 95 | 96 | 95 | 90 | 0, 5 | 97 | 99 | 95. | 95 | 95 | 97 | 95 | 95 | Mature | Days to |
| | 92 | 82 | 108 | 90 | | 221 | 100 | 113 | 77 | 103 | 110 | 98 | 95 | 94 | 2 5 | 108 | 13 | 23 | 106 | 89 | 90 | 101 | 101 | Grain | Index |
| | 84 | 77 | 117 | 89 | 94 | 2 = | 111 | 100 | 151 | 98 | 132 | 123 | 93 | /8 | 1 1 | 1 2 1 | 103 | 76 | 95 | 97 | 71 | 73 | 109 | Straw | ex |
| | 94 | 85 | 107 | 92 | 109 | 124 | 2 - | 110 | 84 | 103 | 108 | 99 | 96 | 95 | 200 | 105 | 100 | 2 5 | 105 | 2 1 | ક | 100 | 101 | Grain | Harv A |
| | 87 | 81 | 114 | 91 | 95 | 901 | 107 | 707 | 200 | 98 | 127 | 119 | 94 | 89 | 217 | 3 - | 101 | 8 8 | 98 | 80 | 78 | 78 | 107 | Straw | Harv Adjusted |
| 101 | 92 | 81 | 112 | 92 | 117 | 129 | 113 | 10 | 700 | 100 | 103 | 98 | 94 | 94 | 901 | 100 | 3 8 | 2 6 | 100 | 800 | 9 3 | 109 | 103 | bu/ac | Yield |

H SD SE

0.81

0.83

614.5055 1236.1756

532.5177 Grain

1013.5313 Straw

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

| | | [- | 4 | c | ٥ | N | <u> </u> | ۷ | | mnt) | |
|-------------------------------|-----|---------|---------|-------------|----------|----------|-----------|------------|------------|-----------|-------|
| | | 4 | 4 | u |) | N | - | _ | - | / Code | |
| Average LSD (0.05) C.V. | | COCONYC | CDC Sky | AAC Douglas | | ORe3542M | ORe354 IM | OD-OF LAND | | Variety | |
| 5067.7 0.1001 16.4% | | 2882.1 | E005 1 | 4385.8 | | 4726 R | 5162.9 | Ngilia | ka/ha | Giain | Outin |
| 6412.3 0.7424 25.9% | | 8.71.90 | 200 | 5628.3 | 00,0.0 | 6673 6 | 6834.4 | Ng/IId | 1 m | Melic | 2 |
| 26.1 | | 28.0 | Poli | 25.2 | 20.0 | 386 | 24.6 | weight (g) | mainhs (n) | TUUU Seed | 0000 |
| 42.1 | | 42.5 | | 40 1 | 7.74 | 300 | 43.5 | Kg/ni | 1-11-11 | lest Wt. | 1 |
| 4.9 | | 4.5 | | 70 | 2.5 | ים פ | 5.8 | (e-n) | | Lodaina | |
| 83 | | 86 | c | 38 | α_ | 2 1 | 83 | (cm) | | Height | |
| 57 | | 57 | 00 | 22 | 5/ | | 57 | Head | 00000 | Davs to | |
| 101 | 3 | 101 | 2 | 101 | 101 | | 101 | Mature | 00000 | Dave to | |
| | | 418 | 8/ | 21 | 93 | 100 | 103 | Grain | HIGEN | 20 | |
| | 102 | 100 | 88 | 3 | 204 | 107 | 107 | Straw | CA | OV | |
| | 112 | 2 2 2 | 91 | 000 | 200 | 2 | 404 | Grain | naiv A | L | |
| | 98 | 00 | 117 | 4 | No No | 97 | Cida | Straw | Adjusted | line Land | |
| 108 | 121 | 2 | 98 | - | 101 | 701 | 20,000 | hil/scro | Yield | Vi-1- | |

| -1.37 | 0.64 | Τ |
|-----------|----------|----|
| 538.8733 | 695.3053 | SD |
| 1660.7847 | 829.5765 | SE |
| Straw | Grain | |

| Τ | SD | SE | |
|-------|----------|-----------|-------|
| 0.64 | 695.3053 | 829.5765 | Grain |
| -1.37 | 538.8733 | 1660.7847 | Straw |

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
Fuungicide: Trivapro A .4 l/ha
Trivapro B .2 l/ha

| | | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 1 | 10 | 9 | 8 | 7 | 6 | 51 | 4 | ω | N | , _ | | Entry |
|-------------------------------|--------|---------|---|------------|------------|------------|------------|------------|--------|-------------------|-----------|----------|----------|--------------|-------------|--------|----------|-------------|-----------------|---------|--------|---------|-------------|-------------|----------------|--------------|-------------------|--|
| 0 - > | | | _ | 1108 C | 1151 C | 1149 8 | 1148 8 | 1150 8 | 1125 E | 1118 / | 1080 F | 1126 | | | 1113 | | | | 1153 | 1059 | 1130 | 1147 | 1141 | 1129 | | | | Code |
| Average LSD (0.05) C.V. | | OCEANIK | Harmony | Chambly | OS14-10.29 | SC18-042RB | SC18-032RB | SC18-022RB | Baden | 1118 AAC Montrose | HY 621-6R | DS8126RB | DS5692RB | 009 Bornholm | AAC Purpose | Rafale | Champion | AAC Synergy | 153 AAC Connect | Amberly | Orzo | CF01707 | CFO1505 | AAC Goldman | AAC Bloomfield | AAC Vitality | | Variety |
| 4860.1 0.000 9.7% | 0.0.0 | 4615.0 | 4203.9 | 4968 2 | 5078 9 | 6102.5 | 5937.4 | 5471.0 | 5095.7 | 4479.3 | 4663.4 | 5061.7 | 4310.5 | 4345.1 | 4564.2 | 4634.9 | 4668.5 | 4607.8 | 4430.1 | 4397.9 | 4104.8 | 5433.2 | 5230.3 | 4696.0 | 4851.5 | 5550.9 | kg/ha | Grain |
| 5188.9 0.000 14.8% | 1070.0 | 1373 0 | 6145.6 | 7308 3 | 6145.6 | 4263 2 | 4373 9 | 4263.2 | 3654.1 | 5038.3 | 4484.6 | 4097.1 | 3654.1 | 3931.0 | 5481.2 | 4650.7 | 4761.4 | 4650.7 | 4041.7 | 6367.0 | 6256.3 | 6201.0 | 6976.1 | 4872.2 | 6311.7 | 7419.0 | kg/ha | Straw |
| 42.0 | 40.0 | 40.0 | 38.5 | 40 1 | 410 | 453 | 44.7 | 46.2 | 36.5 | 40.4 | 40.4 | 41.5 | 44.2 | 42.6 | 49.6 | 38.0 | 41.7 | 39.3 | 38.9 | 40.9 | 48.7 | 42.1 | 42.2 | 40.9 | 40.7 | 42.4 | weight (g) | 1000 Seed |
| 56.1 | 00.0 | 1000 | 7. J. | ע לי די | 7 00.0 | 75 C | 58.5 | 55.0 | 57.2 | 53.6 | 56.0 | 56.1 | 58.5 | 62.2 | 55.3 | 57.0 | 58.9 | 54.8 | 53.0 | 55.2 | 59.2 | 56.0 | 55.9 | 53.1 | 55.2 | 54.5 | kg/hl | Test Wt. |
| 0.2 | c | 0 0 | 0 0 | | | 0 | 0 | 0 | 5 - | اد | 0 | 0 | _ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | (0-9) | Lodging |
| 74 | λ | 100 | 07 | 70 | 777 | 5 8 | 65 | 3 8 | 85 | 83 | 79 | 71 | 67 | 67 | 8 | 78 | 71 | 75 | 64 | 81 | 74 | 84 | <u>ه</u> کې | 70 | 82 | 82 | (cm) | Height |
| 58 | 58 | 58 | 58 | 5 8 | 500 | 3 0 | 200 | 500 | 500 | 500 | J C | 78 0 | 56 | 56 | 58 | 58 | 55 8 | 25 0 | 7 8 C | 3 8 | 75 0 | 20 | S | 60 | 56 | 58 | Head | Days to |
| 98 | 98 | 99 | 96 | 000 | 99 | 99 | 99 | 89 | 3 4 | 07 | 90 | 8 8 | 100 | 101 | 98 | 00 00 | 20 8 | 08 | 90 | 90 | 000 | 100 | 100 | 000 | 98 | 99 | Mature | Days to |
| | 95 | 86 | 102 | 105 | 126 | 122 | 113 | 201 | 427 | 88 | 204 | 200 | 80 8 | 80 4 | 0 5 | 05 | 8 8 | 2 4 | 2 8 | 400 | 2 - 12 | 100 | 100 | 07 | 100 | 114 | | Index |
| | 84 | 118 | 141 | 118 | 82 | 84 | 82 | 6 | 16/ | 80 | 8 29 | 200 | 70 | 76 | 106 | 26 | 3 8 | 3 à | 70 | 22 | 22.0 | 104 | 4 2 | 2 2 | 3 5 | 143 | Straw | ΑX |
| | 96 | 89 | 102 | 104 | 120 | 118 | 110 | 104 | 94 | 9/ | 103 | 2 | 92 | 3 8 | 90 | 8 9 | 96 | 93 | 92 | 88 | 801 | 106 | 187 | 200 | 100 | 444 | Grain | Hany A |
| | 86 | 116 | 136 | 116 | 84 | 86 | 84 | 74 | 97 | 88 | 81 | 14 | 7.0 | 705 | 9 | 93 | 91 | 080 | 120 | 118 | 117 | 131 | 95 | 61.1 | 130 | Oridw | Strong duoited | Hary Adjusted |
| 78 | 74 | 69 | 81 | 85 | 97 | 91 | 89 | 80 | 75 | 75 | 81 | 66 | 53 | 74 | | 71 | 76 | 75 | 72 | 62 | 87 | 84 | 80 | 6/9 | 76 | pulac | Liciu | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |

| Ξ | SD | SE | |
|------|-----------|----------|-------|
| 0.80 | 526.4677 | 469.9720 | Grain |
| 0.89 | 1165.6977 | 765.3580 | Straw |

Emo Agricultural Research Station MBBT20 Manitoba Barley Trial - 2020

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

| | | c | n | 4 | | C. | , | _ | ٥ | _ | | • | FILT | 1 |
|-------|--------|----------------|----------|--------|--------|--------------|--------|-------------|--------|------------|------------|---------------|--------------|-------|
| | | 5 AB Advantage | | 4 Lowe | | 3 CDC Fraser | | CUC Churchi | 0 | 1 CDC Bow | | | Code Variety | |
| | | 4646 7 | 1700.0 | 4499 n | TEO!.! | 4267 7 | 01 | 5271 0 | .0.0.0 | 4548 0 | 18/10 | ka/ha | Cidil | O Sis |
| | 00,0,0 | 53796 | 0.404.0 | 37640 | 0311.0 | 20116 | 4/01./ | 77077 | 1001.1 | 43517 | מווער | レルト | Olida | 04-0 |
| | 70.1 | + | | 27.2 | 02.0 | 3 | 0.00 | 360 | 2.10 | 27 2 | Meight (8) | moint (n) | Toob Seed | 10000 |
| | 4.00 | + | | 1 43 | 2.70 | 200 | 20.4 | E0 4 | 0.40 | 643 | Kg/n | | lest Wt. | |
| | c | 4 0 79.3 | | , | _ | , | | | c | | (O-9) | | Lodaina | |
| | 19.3 | | | !!! | ο. | | 0.9.0 | 000 | 2 | 100 | (cm) | | Height | |
| | 55 | 1 | <u>ი</u> | | 57 | | 57 | | 5/ | | Head | 10000 | Davs to | |
| | 97 | | 98 | - | 97 | 000 | 2 | | 98 | o interior | Mature | 00000 | Dave to | |
| | 100 | | 97 | 10 | 3 | - | 2 | 00 | 98 | Cigil | Grain | Vanili | - | |
| | 121 | + | | 00 | 00 | 100 | 200 | 00 | 80 | OHOW | Strow | CX | OV | |
| | 100 | 100 | | CA | 200 | ROI | 100 | 00 | 00 | Cialli | Oroin | narv Adjusted | LI ^ | |
| 7.77 | 109 | 10 | 04 | S | 2 | 103 | 100 | 22 | 00 | Ollaw | 24 | djusted | | |
| 10779 | 71 | | 7,4 | 3 | 1 | α4 | 0 | ò | 75 | bu/acre | | Yield | | |

Average LSD (0.05) C.V.

4646.7 0.0669 9.5%

4439.9 0.2041 22.9%

36.4

55.3

0.1

72

57

97

| Ξ | SD | SE | |
|------|----------|-----------|-------|
| 0.66 | 376.1637 | 440.5036 | Grain |
| 0.41 | 661.2950 | 1017.6240 | Straw |

Malting 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 .4I/ha Trivapro B .2 I/ha

| Entry | Code | Variety | Grain | Straw | 1000 Seed | Test Wt. | Lodging | Height | Days to | Days to | lno | dex | | Harv Adjusted |
|-------|------|----------------|--------|--------|------------|----------|---------|--------|---------|---------|------|-------|---------|---------------|
| | _ | | kg/ha | kg/ha | weight (g) | kg/hl | (0-9) | (cm) | Head | Mature | | Grain | 12,20 | Straw G |
| _ | _ | Bentley | 6143.2 | 5499.0 | 43.6 | 56.4 | 1.8 | 71.0 | 54 | 89 | - 13 | 106 | - | 99 |
| 2 | 2 | AAC Synergy | 6912.2 | 5343.3 | 43.4 | 56.4 | 2.3 | 71.3 | 51 | 91 | - 1 | 120 | | 96 3 |
| ယ | ယ | Newdale | 5982.3 | 6173.4 | 43.7 | 56.2 | 08 | 720 | 54 | 93 | | 103 | | 111 |
| 4 | 4 | CDC Bow | 6160.8 | 5187.7 | 38.5 | 56.0 | 3.5 | 75.5 | 52 | 9 6 | | 107 | - | - |
| 5 | 5 | CDC Kindersley | 5041.7 | 5395.2 | 40.4 | 56.9 | 2.0 | 75.3 | 53 | 91 | 4 | 87 | + | 97 |
| ဝ | 6 | CDC Fraser | 5142.7 | 6121.5 | 43.0 | 58.0 | 0.3 | 80.5 | 83 | 3 | - | 89 | + | 110 |
| 7 | 7 | Lowe | 5886 1 | 5706 F | 37.8 | 7.A.S | 2 7 | 70 0 | 7 (| 2 6 | 1 | 300 | | 2 2 |
| | - | LOWE | 0000. | 0,00.0 | 37.0 | 24.2 | 3.5 | /8.0 | 54 | 97 | | 102 | 102 102 | |
| α | α | CDC Copeland | 5920.9 | 5239.6 | 39.1 | 55.1 | 4.8 | 74.3 | 58 | 91 | | 102 | 102 94 | 102 94 102 |
| 9 | 9 | AAC Conect | 6014.2 | 5758.4 | 40.6 | 55.4 | 2.3 | 76.5 | 54 | 91 | | 104 | | 103 |
| 10 | 10 | OAC 21 | 4636.7 | 5343.3 | 34.7 | 1 7 1 | 7 0 | 220 | 50 | 2 | | 80 | | 96 |

Average LSD (0.05) C.V.

5784.1 0.000 9.4%

5576.8 0.5951 13.9%

40.5

55.9

2.9

76

55

91

| -0.21 | 0.83 | I |
|----------|----------|----|
| 352.0604 | 661.9710 | SD |
| 772.9437 | 540.8113 | SE |
| Straw | Grain | |

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 treatmetns
Herbicide: Buctril M @ 1. 0 l/ha

| Triva | Fungicide: Triva | |
|--------------------|-------------------|------------|
| Trivapro B .2 I/ha | Trivapro A .4I/ha | @ : o ! ia |
| | | |

| | | 4 | 13 | ī | 3 | 7 | 10 | ď | 0 | <u></u> | | 1 (| ກ | ග | 4 | | JJ. | 2 | - | | Entry Code |
|-------------------------------|-------------------|------------------------|----------------------|-----------------------|-------------|------------|-----------|-----------|-----------|----------|-----------------------|-----------------------|--------------------|----------------------|-----------|-----------|----------|----------|---------|---------------|--------------------|
| Average LSD (0.05) C.V. | | 78.75N, 26.25ESN & 12S | 52.5N, 17.5ESN & 12S | 20.25N, 8.75ESN & 12S | 20074 0 120 | 105N & 129 | 70N & 12S | 35N & 12S | 35N 9 400 | 0N & 12S | /8./5N, 26.25ESN & 0S | OZ.OIN, IT.OLOIN OLOO | 52 5N 17 5ECN 9 00 | 26.25N, 8.75ESN & 0S | 105N & 0S | / UN Q UO | 30 8 NUZ | 35N & 0S | ON, OS | | Code Variety |
| 3401.9 0.000 12.8% | 1100 | 4478 5 | 3933.9 | 3268.6 | 4109.2 | 44000 | 4394.1 | 3447.2 | 1.202.1 | 4 000 4 | 3571.2 | 3499.8 | 3 6 6 6 | 3138 3 | 3745.5 | 3/36.1 | 00.1.0 | 3670 g | 1289.1 | kg/ha | Grain |
| 5401.1 0.000 22.8% | 7 000.0 | 7908 3 | 6090.9 | 4961.1 | 52/5.5 | 2071 | 6041.8 | 4469.9 | 3389.3 | | 6876.8 | 5206.7 | 000 | 3831 4 | 7318.9 | 6631.2 | 10.0 | 15101 | 3094.6 | kg/ha | Straw |
| 34.8 | Q 1 ./ | 34.7 | 36.0 | 36.9 | 38.7 | 1 | 413 | 35.2 | 20.5 | 200 | 37 1 | 39.4 | 00.7 | 30.7 | 30.8 | 38.4 | 00.1 | 20.4 | 22 G | weight (g) | 1000 Seed Test Wt. |
| 56.4 | 00.4 | 00.1 | 57.4 | 55.7 | 57.9 | 07.0 | 570 | 55.2 | 50.3 | | 57 0 | 57.4 | 00.0 | 500 | 59.2 | 57.3 | 2.10 | 60. | 50 1 | kg/hl | Test Wt. |
| 0 | c | | D | 0 | _ | c | | 0 | 0 | c | 0 | 0 | c | 0 | 0 | 0 | C | | 5 | (0-9) | Lodging |
| 73 | 73.0 | 70.0 | 75.0 | 73.8 | 73.5 | 12.8 | 100 | 71.8 | 70.5 | 08.0 | 800 | 76.8 | 01.0 | 21.0 | 78 5 | 0.92 | /8.0 | 100.0 | 85.0 | (cm) | Height |
| 63 | 62 | 202 | 3 8 | S | 62 | 62 | 8 8 | 25 | 65 | 20 | 3 1 | හි | 62 | 202 | 2 6 | 83 | 65 | 9 | חות | Head | Days to |
| 96 | 96 | 96 | 8 8 | 06 | 97 | 96 | 90 | 000 | 96 | 98 | 3 8 | 202 | 96 | 90 | 3 5 | 07 | 96 | g | 0.000 | Mature | Davs to |
| | 132 | 116 | 90 | | 123 | 129 | 2 | 2 2 | 38 | 40F | 200 | 103 | 92 | ī | 5 | 110 | 108 | 38 | (101) | Grain | Ind |
| | 146 | 113 | 76 | 3 8 | 80 | 112 | ō3 | 3 8 | 23 | 127 | 90 | 90 | 71 | 136 | 621 | 200 | 84 | 57 | CLIGAN | Strow | ndex |
| | 130 | 115 | 96 | 25 | 101 | 128 | 101 | 1 | 41 | 105 | 100 | 200 | 93 | 110 | 801 | 100 | 108 | 41 | Gialli | Crois | Hany A |
| 8. | 138 | 111 | 93 | 30 | 000 | 110 | 86 | 80 | 60 | 123 | 16 | 0 0 | 76 | 129 | 119 | 0. | 87 | 65 | Ollaw | rain Adjusted | directord |
| 54 | 67 | 62 | 53 | o | G G | 88 | 56 | 23 | 3 6 | 56 | ეე | | ٦ آ آ | 57 | 59 | C | מא | 23 | bu/acre |) ieic | Viola Viola |

| SD 976.6742 1474. | SE 434.4261 1231.4528 | Grain Straw |
|-------------------|-----------------------|-------------|
| 1474.5314 | .4528 | WE. |

Range 1 Summit Oats - 2020 Emo Agricultural Research Station

R1F020

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

Average LSD (0.05) C.V.

3052.5

2470.5

32.6

G

75

58

95

| | | 70 | S | | <u></u> | | | | Code | CLL | |
|------|----------|-----------------------|----------------|------------------|-------------|-----------|----------|-----------|-----------|------------------|--|
| | | NON LITTLE MILLING IN | mmit with No N | WILLIAM SHILLIAM | SIBBIT WITH | | | our orly | Varioty | | |
| | | 1903.0 | 10000 | 4202.0 | 2000 | | KQ/Da | A SOUTH | (1911) | CICALD CICALD | |
| | | 13490 | | 0.7800 | 30000 | 1,97110 | X2/22 | | CCCAN | Straw | |
| | 00 | 20 | | 33.4 | 000 | 16 11 (A) | Work (a) | | וכסס טממט | 1000 0002 | |
| | 71.7 | 41 4 | | 40 / | I | 11/20 | レベル | н | ומטן עעו. | | |
| | c | ת | C | ת | | (0-8) | 3 | | Logging | | |
| | 80 | 60 | 90 | 90 | , , | (cm) | , , , | | IDION | | |
| | Ö | כור | CO | סת | | Head | | Day's Co | מל מעפר |) | |
| | 85 | 0 | S | OF. | 101010 | Mature | | Daysto | Days + | | |
| 2000 | 62 | | -Ca | 100 | (2 2 2 | Grain | | - Index | - 5 | | |
| | S) | | 145 | ì | CLICAN | Strow | 11. | ex | | | |
| 10 | ny Ny | .00 | 222 | | Giall | Oroin | | L V N N I | | | |
| 00 | תת | 110 | 145 | | Wello | 2 | injusted | Admicted | | | |
| | | | | | | | 400 | | | | |

| 1.00 | 1.00 | Η |
|-----------|-----------|----|
| 1586.0405 | 1625.6385 | SD |
| 0.0000 | 0.0000 | SE |
| Straw | Grain | |

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

Average LSD (0.05) C.V.

4871.0

4908.0

35.0

45.7

5

100

58

95

| | | _ | | 4 | | 11111 | Entry C |
|------|----------|--------|--|--------|------------|----------------|--------------|
| | z summit |) | Immus | 2 | | variety | Code Variety |
| | 4818.0 | | 4924 0 | | KQ/na | | Grain |
| | 6136.0 | 0000.0 | 36800 | | KQ/na | | Straw |
| 0 | 34 9 | 00. | 27.1 | (8) | weight (g) | - | 1000 Seec |
| 10.0 | 45.8 | 10.0 | תת | 139 | ka/h | | I Test Wt |
| C | ת | U | 'n | (0-0) | (0-9) | 10000119 | Lodging |
| - 00 | 300 | 99 | 3 | (011) | (cm) | 1 1019111 | Height |
| 00 | 70 | 5 | 7 | חבמט | | Days | Dave to |
| 95 | 2 | 95 | 2 | Mature | | Days | J 2005 to |
| 99 | 3 | 201 | The state of the s | GIAI | 1 | | |
| 125 | | 75 | | Straw | | ndex | |
| 99 | - | 101 | (ign) | Grain | | Harv | |
| 125 | | 75 | CHOVY | Straw | , idaocod | Adilisted | |
| 95 | 3/ | 707 | טטימט | b/20 | - 70 | Yiold Yiold | |

| 74.9533 17 | 유 | Grain | Straw |
|------------|-----|---------|----------|
| 74.9533 | JE. | 0.000 | 0.0000 |
| | SD | 74.9533 | 1736.654 |

| I | SD | SE | |
|------|-----------|--------|-------|
| 1.00 | 74.9533 | 0.0000 | Grain |
| 1.00 | 1736.6543 | 0.0000 | Straw |

Range 3 Ceral 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

| | | N | | _ | , | | _ | - | | The second second | | Entry | |
|-----|-----------------|----------------|-------------------|---------------|--------|-------------------|----------|---|----------------|-------------------|----------------|-----------|-----------|
| | | v | 1 | , | | _ | . | | _ | | - Constitution | Code |) |
| | סטוסמו ושואנעוס | Cereal Mixture | סייסמי ואוואנמו כ | COTOU MIXTURE | | Cereal Wixture | | CCICAL MINIMIA | Carpal Mixtura | | | Variety | |
| | 1100.0 | 22880 | 10 H.O | 0 7770 | 1000.0 | |) | 2000 | 2220 | Nerica | ka/ha | Cigii | O Sin |
| | 4500.0 | 10630 | 4001.0 | 7227 | 0.00.0 | 54880 | 1 | 4230.0 | 2000 | 79/ Id | レベルン | CHAM | Otto |
| | 0.87 | 000 | 20.1 | 7 | 10. | 7 70 | | N1.0 | 270 | weight (g) | moint (n) | noo seed | 4000 0001 |
| | 00.7 | 10.1 | 0.70 | 0 0 | 40.0 | 200 | : | 4/.0 | 110 | Kg/nl | | lest vvt. | |
| | C | , | C |) | C | > | (| 0 | | (O-9) | 60 | Lodging | |
| | 90 | | 84 | 0 | 0/ | 20 | 10 | 200 | 1 7 | (CM) | | Height | |
| | 59 92 59 92 | | 59 | | 90 | 0 | 00 | 70 | | Head | | Days to | |
| | | | 3 | | 92 | 0 | 20 | S | 2.0.0 | Vat Iro | | Davs to | |
| 3 | 20 | 000 | 96 | | 112 | | 9/ | 07 | Cigni | C I I I | | 7 | |
| 101 | 104 | - | 2 | | ת | Section Section 2 | o | 000 | CHON | Otrow | .07. | ndex | |
| 30 | 20 | 30 | 20 | 111 | 113 | | 9 | 01 | Giall | Ornin | I IQI V | | |
| 104 | 101 | ď | 2 | | 117 | 00 | 200 | 200 | Ollaw | 04 | Unaten | Adi istad | |
| 4 | 44 | 38 | 3 | 0 1 | 20 | 777 | 44 | 000000000000000000000000000000000000000 | Du/ac | | 1 10 10 | V. 2.7 | |

Average LSD (0.05) C.V.

2404.8

4753.0

27.0

50.3

0

86

59

92

| 工 | SD | SE | |
|------|----------|--------|-------|
| 1.00 | 190.2233 | 0.0000 | Grain |
| 1.00 | 587.6331 | 0.0000 | Straw |

Emo Agricultural Research Station Range 5 No Till Oats - 2020 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 No Till Summit Variety 2575.4 2669.0 Grain kg/ha 4008.0 Straw kg/ha 349.0 weight (g) 29.5 29.8 1000 Seed Test Wt. kg/hl 41.5 42.7 Lodging (0-9)0 0 Height 84 82 Days to Head 59 59 Mature 95 95 Days to Grain 98 102 Index Straw 184 Grain 102 Harv Adjusted Straw 184 16 Yield bu/ac 56

2622.2 2178.5 29.7 42.1 0 83 59 95

Average LSD (0.05)

C.<

SD SE I 0.0000 66.1852 1.00 Grain 2587.3037 0.0000 Straw 1.00

56

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

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

| | | | _ | - | _ | The state of the s | Entry | 1 |
|-------------------------------|-----|---------|----------|---------|--------|--|----------------|-------|
| | | ı | v | - | _ | | Code |) |
| Average LSD (0.05) C.V. | | Carrie | Simmit | Carrier | Summit | , | Variety | |
| 3541.1 | | 0.404.8 | 2/2/0 | 2.1700 | 2027 | kg/ha | 0 2 | O Gin |
| 4504.5 | | 4090.0 | 10000 | 4 19.0 | 1400 | kg/ha | Otion | C+ |
| 26.0 | | 2α.Ο | 000 | 24.0 | 0 (0) | weight (a) | naac oool | 10000 |
| 38.7 | | C. | | 39.0 | | ka/h | lest vvt. | 1 |
| 0 | - | 0 | | 0 | (00) | (0-9) | Loaging | |
| 90 | 00 | 28 | | 100 | (0111) | (cm) | Height | |
| 59 | 000 | AQ | 0 | 70 | - Icau | Ε, | Days to | |
| 95 | 00 | 07 | 90 | 20 | Marne | Mati | Days to | |
| | 90 | 00 | 701 | 200 | Grain | | lnd | |
| | 201 | 200 | <u>«</u> | 2 | orraw | | ndex | |
| | 98 | 3 | 201 | 100 | Grain | Ę | Harv L | |
| | 109 | | 91 | | Straw | / wjusicu | direted | |
| 82 | 00 | | 84 | 2,20 | bu/ac | 1 1010 | Viola Viola | |

| 1111 | | | |
|------|----------|--------|-------|
| エ | SD | SE | |
| 1.00 | 121.8345 | 0.0000 | Grain |
| 1.00 | 545.1793 | 0.0000 | Straw |

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

| | | [| 4 | c | N | N | , | _ | | Entry |
|-------------------------------|---------|--------------------------------|-------------------------------|--------------------------------------|-------|-------------------------------------|----------|----------|------------|--------------------|
| | | - | 4 | ٥ | s | N | | _ | | Entry Code |
| Average LSD (0.05) C.V. | | Lional abblied b 70-30 % DIOON | Enliar applied B 20 50% Bloom | Foliar applied B at bolting .4 bs/ac | | Soil applied at planting 1 lbs B/ac | | No Boron | * | e Variety |
| 1863.9 0.1789 12.3% | | 1/52.4 | 7200 | 1836.0 | | 1764.0 | V100.0 | 2103 3 | kg/ha | Giaili |
| | | | | | | | | | Ka/ha | Straw |
| 3.7 | | 3.7 | 0.0 | 3 6 | c. / | 4.0 | ٥./ | (8)6.0 | Weight (g) | 1000 Seed Test Wt. |
| 65.7 | | 660 | 00.0 | 0 20 | 04.7 | 647 | 0.0 | 18.11 | Ka/h | lest Wt. |
| 3.0 | 0.0 | 20 | 0.0 | 3 | ٥.0 | 0 0 | ند ص | (0-0) | (0_0) | Lodging |
| 115 | 10.0 | 128.0 | - i . o | | 8.801 | | 1143 | (1117) | (cm) | Height |
| 56 | ć | 22 | 56 | 3 | 56 | 2 | ZZ ZZ | riowei | | Days to |
| 110 | 10.0 | 1100 | 110.0 | | 110.0 | 10.0 | 1100 | wature | | Days to |
| | 94 | | 99 | 30 | 25 | 113 | 240 | Grain | | Inc |
| | | | | | | | | Straw | | ndex |
| | 9/ | | 99 | 3/ | 07 | 707 | 101 | Grain | I wini | Hany A |
| | #DIV/0! | | #DIV/01 | #0///0: | #フミン | #UIV/0! | | Straw | nanca | Hany Adiristed |
| 26 | 24 | 10 | 27 | 02/ | 200 | 28 | | bu/acre | - 1012 | Viola Viola |

*Unable to take straw yields.

0.1789 12.3%

| #DIV/0 | 0.51 | I |
|--------|----------|----|
| #DIV/0 | 163.8136 | SD |
| 0.0000 | 229.6377 | SE |
| Straw | Grain | |

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

| | | ഗ | 1 | _ | ယ | 1 | s | _ | | Entry |
|-------------------------------|---------|-------------|-------------|----------|-------------|------------|---------|-----------|------------|----------------|
| 0 = > | | (J) | 4 | | ω | _ | 3 | _ | | Code |
| Average LSD (0.05) C.V. | | 40 lbs of S | ZU IDS OT S | 30 II 50 | 10 lbs of S | O IDS OF S | E 150 | Olbs of S | | Variety |
| 968.5 0.1478 15.9% | , 00.0 | 796.6 | 935.8 | 000. | 7 300 | 1023.0 | 1000.0 | 1000 F | kg/ha | Grain |
| | | | | | | | | | kg/ha | Straw |
| 8 | 0. | 27 | 3.7 | 0.0 | သ စ | ယ ထ | 0.0 | 3 | weight (g) | 1000 Seed |
| 63.8 | 02.1 | 2 | 65.4 | 04.4 | CAA | 64.3 | 6.70 | 30 | kg/hl | Test Wt. |
| 3.0 | 3.0 | 3 6 | 3.0 | 3.0 | 0 0 | 3.0 | 3.0 | | (0-9) | Lodging |
| 1111 | 107.3 | 100.0 | 108.8 | 124.8 | | 110.5 | 105.3 | () | (cm) | Height |
| 56 | 56 | 3 6 | 56 | 56 | 50 | 97 | 56 | | Flower | Days to |
| 110 | 110 | | 110 | 110 | - | 110 | 110 | I SICILLI | Mature | Days to |
| | 82 | 3/ | 07 | 103 | 100 | 106 | 113 | Cigil | Grain | 5 |
| | | | | | | | | Olida | Ctrown | ndex |
| | 91 | 98 | 201 | 102 | 201 | 100 | 107 | Gidili | | Harv I |
| | #DIV/0! | #DIV/0! | | #DIV/01 | #UIV/0! | | #DIV/01 | Straw | Tagara a | Hary Adjusted |
| 14 | 12 | 3 | 1 | 14 | 14 | | 18 | bu/acre | 1 | Viola Viola |

*Unable to take straw yields.

| #DIV/01 | 10000 | 1 |
|---------|----------|----|
| #DIV/0 | 110 9923 | S |
| 0.0000 | 154.0911 | SE |
| Straw | Grain | |

| | Grain | Straw |
|----|----------|--------|
| SE | 154.0911 | 0.0000 |
| SD | 110.9923 | #DIV/0 |
| I | 0.52 | #DIV/0 |

Phosphorus Placement of Canola Trial - 2020 Emo Agricultural Research Station PPCT20

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

| | | | - | | _ | _ | - | _ | 7 | _ | - | Г | - | _ | - | | | |
|------------|---|--|------|---------------------------------------|--|---|---------|---|---------------|--|--|---------------------------------------|--------|----------|------------|-------------------|-----------|-----------|
| | | 1 | 7 | o | 0 | ပ | 1 | 1 | _ | c | N | 7 | s | _ | 4 | | EIILIY | 7-1- |
| | | 1 | 7 | o | 1 | o | , | 4 | | o | ٥ | 7 | s | _ | | | Code |) |
| | 000000000000000000000000000000000000000 | U IDS Of T with seed & 40 lbs of P Broadcast | | 40 lbs of P with seed & 0 P Broadcast | יייייייייייייייייייייייייייייייייייייי | 30 lbs of P with seed & 10 lbs of P Broadcast | | 20 lbs of P with seed & 20 lbs of P Broadcast | 50 F - 50 ::: | I U IDS OF P WITH Seed & 30 Ibs of P Broadcast | DE-150 | U F WITH SEED & 40 IDS OF F Broadcast | | T | | | Variety | |
| | 1.1.10 | 821 7 | | 617 R | 040.7 | 828 7 | 0.0.0 | 6133 | | 771 9 | 000. | 839 | 7.00.7 | 738 4 | NG/110 | (a/b) | Cigii | D Sin |
| | | | | | | | | | | | | | | | Nyma | La/ha | Olida | 2 |
| | 0.7 | 7 | 0.0 | S Fi | 0.7 | 2 7 | 0.0 | S S | 0.0 | 20 | | 27 | 0.7 | 2 7 | weight (g) | moint (n) | paac ooo | r 0 000 F |
| | 2.00 | 20.0 | 0.00 | E 0 D | 0.80 | 200 | 20.4 | 50.4 | 00.7 | 7 02 | 00.4 | 707 | 7.80 | E0 7 | Kg/II | | lest vvt. | 7 |
| | ن | , | C | 3 | c | 0 | u | 3 | ٥ | s | ٥ | s | د | , | (e-0) | 5 | Loaging | |
| | 10.0 | 1 | 10.0 | 000 | 714.5 | | 120.0 | 2000 | -4-0 | 444 | 123.0 | 000 | 172.0 | 1 | (CM) | | Height | |
| | 36. O | | 56.U | | 56.0 | | 56.0 | 200 | 00.0 | 200 | 00.0 | 200 | 56.0 | | Head | | Davs to | 000 |
| | 110 | | 110 | | 110 | | 110 | | 1 | | 7 | | 110 | | Vature | 1 | Davs to | |
| | 110 | 00 | 33 | 1 | | 1 | 200 | | 103 | | 2 | | 99 | (. wii. | Grain | | <u> </u> | |
| | | | | | | | | | | | | | | CHUN | Straw | 5 | Yepr | |
| | 104 | 00 | ရှ | 100 | 105 | 00 | 03 | - | 101 | .00 | 105 | .00 | 100 | 0.00 | Grain | Ligit A Uninstein | Hon A | |
| 37 D. V/O: | #コミニ | #DI V/O: | #720 | #DIVIO: | #77.55 | #DI V/U! | #DEX.50 | HOIVIO: | #コくの | #U.V.O. | #DI </td <td># D. V/O:</td> <td>#J </td> <td>CHAW</td> <td>Ofron</td> <td>noich</td> <td>dinetod</td> <td></td> | # D. V/O: | #J | CHAW | Ofron | noich | dinetod | |
| ā | 18 | 2 | 3 | ō | 20 | 0 | 40 | ō | 16 | 77 | 22 | ō | 16 | DEI IIIZ | 30. 30 | Counts | Counts | |
| 71 | 40 | ď | 0 | ī | 2 | œ | , | 71 | 3 | 5 | 2 | | 4 | DU/ACIE | h | neid. | V: - I | |

*Unable to take straw yields.

Average LSD (0.05) C.V.

747.2 0.1741 19.7%

3.6

59.2

ယ

118

56

110

17

=

| SD 96.6573 # | SE 147.5036 | Grain |
|----------------|-------------|-------|
| #DIV/0 | 0.0000 | Straw |

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 |
|-------|------|--------------------|-----------|------------|-----------|------------|-------|--------|
| | | - 7 | kg/ha | cm | kg/ha | cm | Yield | t/acre |
| _ | _ | Tre Tim MF RCG KBG | 3694 | 67 | 2395 | 43 | 6080 | |
| ၁ | s | TIN TO MO CON | | | 0000 | Ç | 0000 | |
| ^ | N | I re I F MB OG KBG | 3088 | <u>ග</u> | 2375 | 47 | 5463 | |
| ယ | ω | Tre Tim MF KBG | 3597 | 85 | 22/2 | 3 | 0.00 | |
| _ | 7 | TEN TE ME DOO KE | | 00 | 010 | 71 | 7460 | |
| 1 | 4 | LIGHT MID KCG KB | 3402 | 63 | 2371 | 49 | 5773 | 26 |
| S | ഗ | Alf Tim MF RCG KRG | 2822 | 70 | 1610 | À | 1 | |
| n | 0 | ALC TO CO CO CO | 1707 | è | 1040 | C4 | 4465 | N. C |
| | c | All IT MB OG KBG | 2389 | 62 | 1665 | 51 | 4054 | |
| _ | 1 | Alf Tim MF KBG | 2769 | 69 | 1528 | 20 | 4208 | |
| 00 | α | ALE TE MB BCC KBC | | | 010 | 2 | 17.00 | |
| c | c | All IT MB KCG KBG | 2603 | 67 | 1878 | 50 | 4481 | |

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

Tre = Trefoil

Tim = Timothy

RCG = Reed Canary Grass

KBG = Kentucy Bluegrass

TF = Tall Fescue

MB = Meadow Bromegrass

OG = Orchard Grass

ALF = AlfalfaMF = Meadow Fescue

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

| | | တ | 5 | 4 | ω | 2 | _ | | Entry |
|--------------------|---------|------------|-----------------|---------|---------------------|--------------------|--------|------------|------------|
| | | 6 | 5 | 4 | ယ | 2 | _ | | Code |
| LSD (0.05) C.V. | Average | Red Clover | Cicer Milkvetch | Sanfoin | Response WT Alfalfa | Birds Foot Trefoil | Galega | a an local | Variety |
| 567 38.8% | 971 | 711 | 1026 | 700 | 1273 | 1536 | 582 | kg/ha | Yield (1) |
| 12 21.0% | 38 | 35 | 33 | 63 | 48 | 36 | 16 | cm | Height (1) |
| 404 43.6% | 615 | 455 | 740 | 180 | 1041 | 1080 | 191 | kg/ha | Yield (2) |
| 9 19.9% | 30 | 35 | 28 | 28 | 44 | 33 | 14 | cm | Height (2) |
| 915 38.3% | 1589 | 1166 | 1767 | 898 | 2314 | 2616 | 773 | Yield | Total |
| | 0.7 | 0.5 | 0.8 | 0.4 | 1.0 | 1.2 | 0.3 | t/acre | Total |

^{*}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
Havrvest: 1st cut - June 24, 2020
2nd cut - August 4, 2020

| | c | η 4 | > c | N N | ა _ | ۷ | Entry |
|-------------------------------|-----------|------------|-----------------|---------------|---------|--------|------------|
| | O | | ٠, | S N | s _ | _ | Code |
| Average LSD (0.05) C.V. | see below | ** carroin | Cicel WilkVetch | Cios Millanda | Alialia | 6 | Variety |
| 855 504.2 38.3% | 452 | 6/1 | 1085 | 941 | 1128 | kg/ha | Yield (1) |
| 40 15.6 19.8% | 0 | 67 | 34 | 44 | 53 | cm | Height (1) |
| 749 556.8 48.3% | 336 | 474 | 895 | 1023 | 1016 | kg/ha | Yield (2) |
| 32 7.7 15.8% | 27 | 26 | 27 | 37 | 42 | cm | Height (2) |
| 1604 982.8 39.8% | 788 | 1144 | 1981 | 1964 | 2144 | Yield | Total |
| 0.7 | 0.3 | 0.5 | 0.9 | 0.9 | 0.9 | t/acre | Total |

^{*}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 |
| 1 |
| Ā |
| gus |
| 4 |
| 2 |
| 220 |
| _ |

| | C | η 1 | > C | N | <u>ی</u> ا | _x | ntry |
|-------------------------------|----------|--------------|------------|------------|------------|--------|------------|
| | O | 4 π | ٠ ر | | ა _ | ۵ | Code |
| Average LSD (0.05) C.V. | Response | IU-5 Alfalfa | Terrection | Dorfootion | LODUST | | Variety |
| 1250 330 17.1% | 1216 | 1313 | 1224 | 1303 | 1192 | kg/ha | Yield (1) |
| 50 7 9.0% | 47 | 52 | 50 | 49 | 54 | cm | Height (1) |
| 919 271 19.1% | 843 | 845 | 1008 | 1001 | 900 | kg/ha | Yield (2) |
| 40 8 12.5% | 42 | 40 | 38 | 41 | 40 | cm | Height (2) |
| 2169 530 15.9% | 2059 | 2158 | 2232 | 2304 | 2092 | Yield | Total |
| 1.0 | 0.9 | 1.0 | 1.0 | 1.0 | 0.9 | t/acre | Total |

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

| | α | , | 10 | D (| ת | 4 | u |) N | ٥ - | ١ | , | Entry |
|-------------------------------|------------|---------------|--------|-------------|------------|----------------|-----------|-----------|------------|------------|-------|------------|
| 20-01 (Sp. 1987) | α | | 10 | 0 | ת | 4 | c | N | 3 - | _ | - | Code |
| Average LSD (0.05) C.V. | Sidewinder | Revolution MD | Robust | response vv | Dospos W/T | AAC Meadowview | Rugged ST | Haygrazer | Fellection | Doutootion | | Varioty |
| 1310 353 18.3% | 1579 | 1052 | 1224 | 1449 | 110 | 1220 | 1306 | 1399 | 1254 | 18/10 | ka/ha | Yield (1) |
| 37 8 15.0% | 34 | 34 | 37 | 39 | 3 | 3/ | 41 | 39 | 39 | CI | 200 | Height (1) |
| 1383 366 17.9% | 1610 | 1377 | 1425 | 1247 | 1071 | 1061 | 1207 | 1416 | 1519 | Nyllid | Vm/ha | Yield (2) |
| 36 7 12.8% | 35 | 32 | 37 | 37 | ပ္ပ | 36 | 36 | 38 | 35 | CIII | | Height (2) |
| 2693 617 15.5% | 3189 | 2429 | 2649 | 2696 | 2481 | 2 1 | 2513 | 2814 | 2773 | Yield | V: | Total |
| 1.2 | 1.4 | <u>.</u> | 1.2 | 1.2 | | | حـ | 1.2 | 1.2 | Vacre | | Total |

LOCATION: PLANTING:

FERTILIZER:

Emo 25-May-17 11-52-0 @ 30 kg/ha 46-0-0 @ 70 kg/ha (Trefoil was less than 50%) 1st cut - June 23, 2020

HARVEST:

2nd cut - August 4, 2020

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

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

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

SPRING TRITICALE

LOCATION:
PLANTING:
FERTILIZER: Emo

2-Jun-20 11-52-0 @ 30 kg/ha 46-0-0 @ 70 kg/ha 20-0-0-24 @ 10 kg/ha

1st cut - August 11, 2020

HARVEST:

YIELD # 1 (kg/ha) HEIGHT # 1 (cm) YIELD (t/acre)

2.2 2.6

108 112

2.4

110

5427

MEAN C.V.

Triticale Triticale

4930 5924

VARIETY

LSD (0.05)

ALFALFA

| HARVEST: | FERTILIZER: | PLANTING: | LOCATION: |
|------------------|----------------|-----------|-----------|
| 1st cut - June 2 | 11-52-0 @ 30 k | 26-May-17 | Emo |

11-52-0 @ 30 kg/ha 1st cut - June 24, 2020

2nd cut - August 11, 2020

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

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

RED CLOVER

LOCATION:
PLANTING:
FERTILIZER:
HARVEST:

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

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

RED CLOVER

Emo

LOCATION:
PLANTING:
FERTILIZER:
HARVEST:

5-Jul-19 11-52-0 @ 30 kg/ha 1st cut - June 25, 2020 2nd cut - August 11, 2020

VARIETY

YIELD # 1 (kg/ha) 2934 3178 2689 YIELD # 2 (kg/ha) 2518 2410 2626 HEIGHT # 1 (cm) 55 54 HEIGHT # 2 (cm) 54 64

TOTAL YIELD

YIELD (t/acre)

MEAN C.V.

55

59

5452

5099 5804

2.3 2.6

Red Clover Red Clover

LSD (0.05)

ALFALFA

LOCATION:
PLANTING:
FERTILIZER:
HARVEST:

Emo 26-May-17 11-52-0 @ 30 kg/ha 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 Alfalfa B | 1658 1912 | 1580 1375 | 87 62 | 47 48 | 3238 3287 | 1.4 | |
| MEAN C.V. LSD (0.05) | 1785 | 1477 | 75 | 48 | 3262 | 1.4 | |
| | | | | | | | |

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

SUMMIT OATS

| O ANTINO: | OCATION: |
|-----------|----------|
| 2 | Emo |

PLANTING: FERTILIZER:

22-May-20 11-52-0 @ 30 kg/ha 46-0-0 @ 70 kg/ha 20-0-0-24 @ 10 kg/ha

HARVEST:

| 1s | |
|--------|---|
| t cu | |
| t-/ | |
| August | |
| 11, | (|
| 2020 | |

VARIETY

YIELD #1

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

PERFORMER ALFALFA

Emo

YIELD # 2 (kg/ha)

HEIGHT #1 (cm)

HEIGHT#2 (cm)

40

TOTAL

YIELD (t/acre)

3358 3892 1.5 1.7

3625

40

52

2333

1292

1283 1302

52 52

MEAN C.V. LSD (0.05)

Performer A Performer B VARIETY YIELD #1 (kg/ha) 2591 2075

LOCATION:
PLANTING:
FERTILIZER:
HARVEST:

6-Jun-17 11-52-0 @ 30 kg/ha 1st cut - June 25, 2020 2nd cut - August 11, 2020

S W

ALFALFA (North of our Hop Yard)

| EERTH IZED. | PLANTING: | LOCATION: |
|-------------|-----------|-----------|
| נו נו | 26-May- | Emo |

HARVEST:

26-May-17 11-52-0 @ 30 kg/ha 1st cut - June 25, 2020

| pu |
|------|
| cut |
| - Au |
| gust |
| 11, |
| 2020 |

STRIP OF ALFALFA (West side of Station)

Emo 26-May-17 11-52-0 @ 30 kg/ha 1st cut - June 25, 2020

2nd cut - August 11, 2020

YIELD # 2 (kg/ha)

HEIGHT # 1 (cm)

HEIGHT #2 (cm)

YIELD (t/acre)

TOTAL YIELD

5837 4557

2.6 2.0

5197

2.3

LSD (0.05)

MEAN C.V.

3198

1999

69

65

2912 3484

2353 1645

70 68

68 62

55Q27 A 55Q27 B

VARIETY YIELD # 1 (kg/ha)

HARVEST:

LOCATION:
PLANTING:
FERTILIZER:

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. The 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 though 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.