



2022

Peace Region
Field Research



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All weather data was pulled from the BC Peace Agri Weather Network, using the closest weather station to the plot



Scan To go to the BC Agri Weather Network



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Presidents Report

It's an incredibly interesting time to be involved in agriculture. From soaring equipment prices, supply chain interruptions, the war in Ukraine (a country that has been called Europe's bread basket), global energy concerns, ambitious federally mandated environmental and emission reduction targets, of course, this is all on top of our local weather. It's a good thing that innovation and adaptation have always been a vital part of agriculture and we know that producers who have proven they can grow grain in this short northern climate are up for the challenge.

The BC Grain Producers staff and board of directors have been hard at work representing grain producers from North East BC at board tables across western Canada. Some of the events attended are; meeting with important government officials, discussing the quality and maintenance of our local roads, grain growers of Canada, CCGA, IAF, BCAC, and we already have had the opportunity to meet our new Agriculture Minister. I myself sit as the chair on Western Grains Research Foundation's Research committee, which is currently Canada's largest farmer funded research funder. We review proposed agricultural research projects from all of the top Canadian universities along with Ag Canada and I would love to be able to tell you that there are some amazing agricultural innovations coming to western Canada but if they are, I think they will be coming from private industry. Agriculture and Agri-Food Canada recently released their 10 year strategic plan. The top 4 key focus areas are; mitigating and adapting to climate change, increasing the resiliency of agro-ecosystems, advancing the circular economy by developing value-added opportunities and accelerating the digital transformation of agriculture and agri-food. As researchers draft new research ideas they will target one of these 4 priority areas in order to have a better chance of receiving funding for the project.

Times are definitely changing and we are going to have to become leaner and meaner when it comes to getting the most out of our resources. The BC Grain producers are partnering with local growers to carry out unbiased research on new products on the market. This is going to give us local results, and multiyear data, while utilizing real-world weather conditions with modern equipment. We encourage producers to get in touch with us if they have any ideas, or concerns, about an ongoing or new project. I would like to hear directly from all of you about what the BCGPA could do for you and your farm, to become more profitable and sustainable.

Malcolm Odermatt

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2022 Rewind

The BC Grain Producers Association (BCGPA) would like to thank the producers who made this year's Peace Region Field Research possible. We would also like to thank Northern Development and the BC Hydro Peace Agriculture Compensation Fund for sponsoring this year's project.

The 2022 season marked the beginning of the Peace Region Field Research Project for the BCGPA. The goal was to have ten trials across the BC Peace Region, and in the Spring of 2022, twelve trials were planned to be seeded. Unfortunately, due to the extremely wet spring, only ten trials made it to harvest. In season we collected data from the ten site locations across the BC Peace Region. Since the research is located on local Peace Region farms, we have been able to create the environment for, mentorship opportunities and knowledge transfer, by conducting field days and tours in the 2023 season. We want to continue to build on this. During the 2022 season, BCGPA monitored the ten sites throughout the year. The sites varied from nutrient, variety, inoculant to herbicide trials. BCGPA monitored all sites for growth and yield variations between the different treatments. Insects and diseases that might be prevalent and plant counts were also collected to obtain additional information, as you will find in this book. With this being the first year, many things were learned, and we hope to build upon the foundation we started this year. Along with our amazing producers, we had help from industry through donations of products such as fertilizer, micronutrients and seed; we hope to continue to build these relationships over the project.

Thank you to our sponsors:

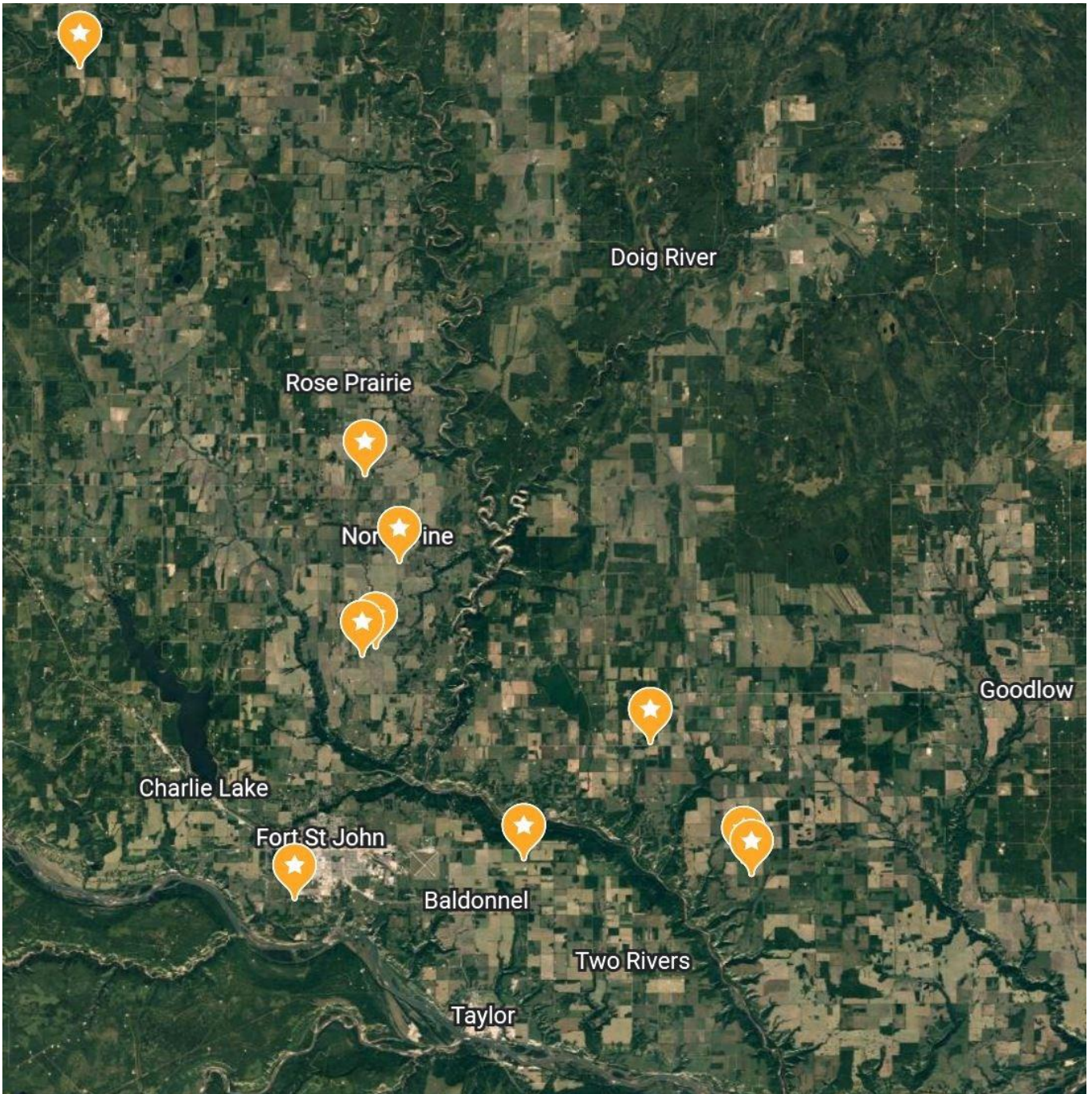
Peace Region Field Research Project



2022 Advocacy, Outreach & Operation Project

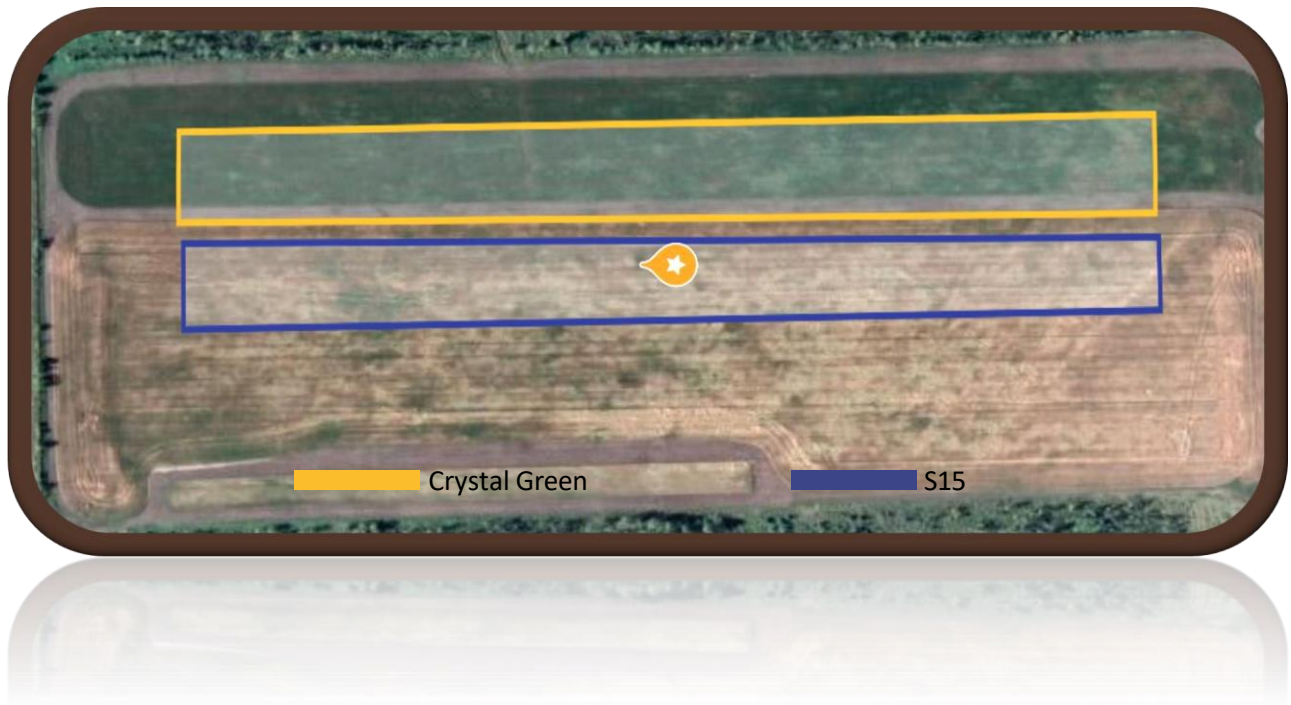


2022 Trial Map



Trial One

PW Farms Crystal Green Synchro Trial



Seeding Date: May 24, 2022

Harvest Date: September 9, 2022

Variety: Camden Oats

Trial Area: Flat Rock, BC

Thank you for your sponsoring this trial:



PW Farms Crystal Green Synchro Trial

| | Emergence Date | Plant Count | Height | Weight (Lbs) | Acres | Bushels per Acre (Before dockage) | Dockage | Bushels per Acre (After dockage) | Moisture | Green | Test Weight |
|------------------------------|----------------|-------------|--------|--------------|-------|-----------------------------------|---------|----------------------------------|----------|-------|-------------|
| Crystal Green Synchro | June 3-5th | 20.2 | 33" | 6236 | 1.5 | 129.92 | .58% | 129.17 | 10.2% | .1% | 49.5 |
| S15 | June 3-5th | 19.8 | 35" | 6006 | 1.5 | 125.13 | .48% | 124.53 | 10.9% | .25% | 48.2 |

Crystal Green Synchro

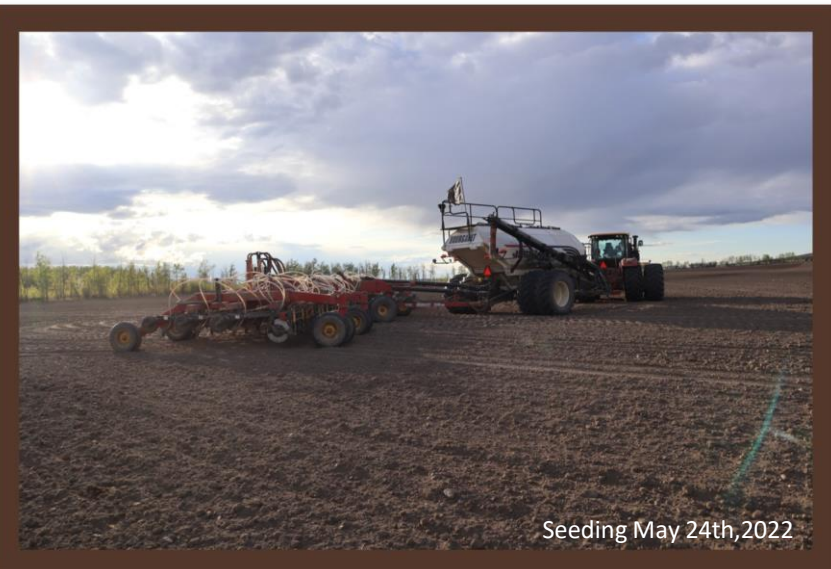
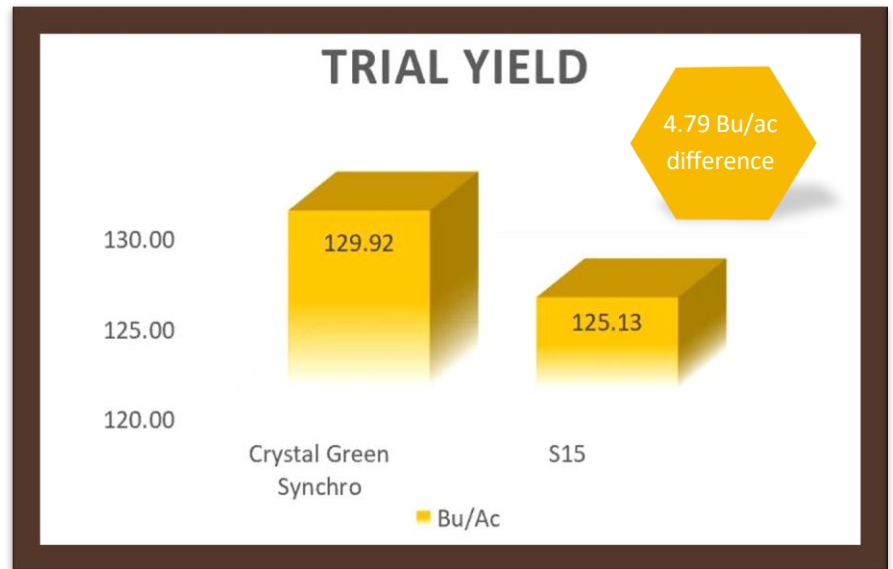
8-40-0 5%Magnesium

S15(check)

13-33-0-15S

Crystal Green synchro is a continuous release granular phosphorus fertilizer

On May 24th, 2022, this trial was seeded. The field was split into two sections; section one was seeded to Camden oats at 3 Bu/ac with 140lbs 46-0-0 and 84/lbs Crystal Green Synchro. The other half was seeded to Camden oats at 3lbs/ac with 140lbs 46-0-0 and 100lbs S15. Germination had begun as of May 31st, with emergence happening between June 5-7th. Throughout the season, there was little visual difference between the Crystal Green synchro side and the S15 side. Through measurements, the S15 side was found to be, on average, 2 inches taller than the Crystal green synchro. Plant counts showed no significant differences. Throughout the

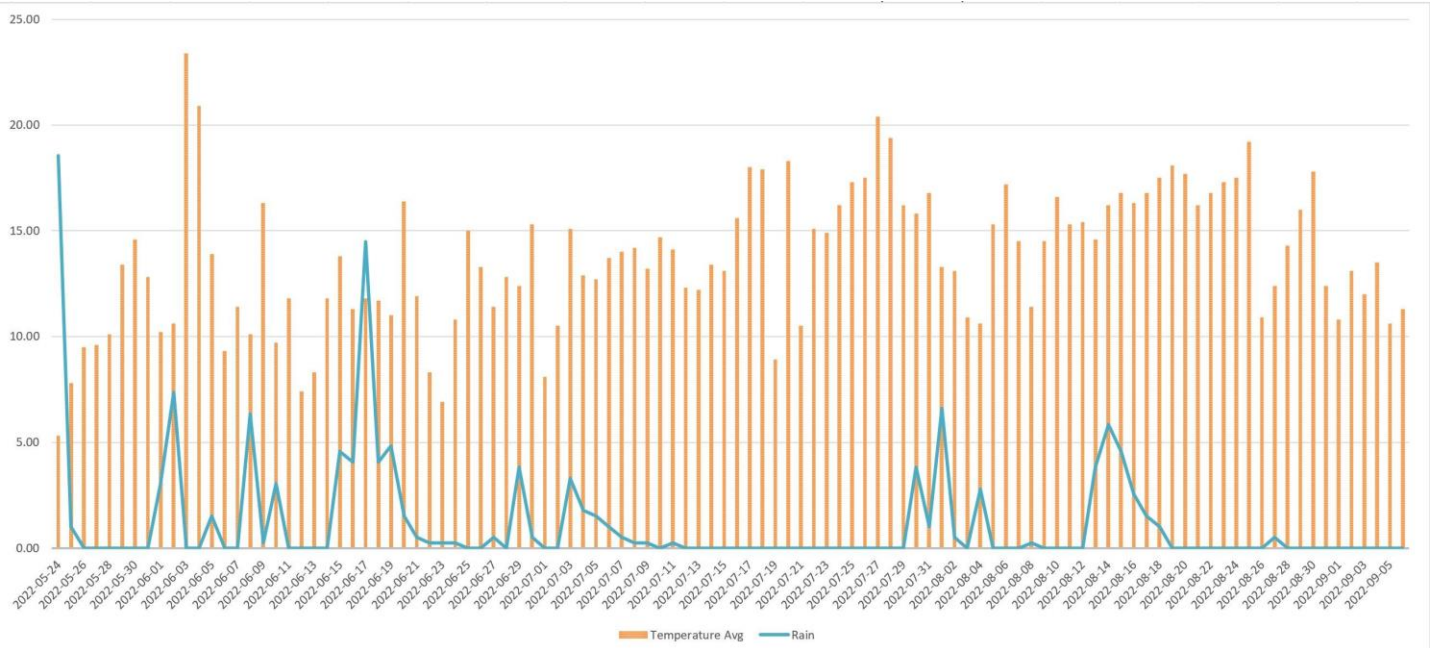


Seeding May 24th, 2022

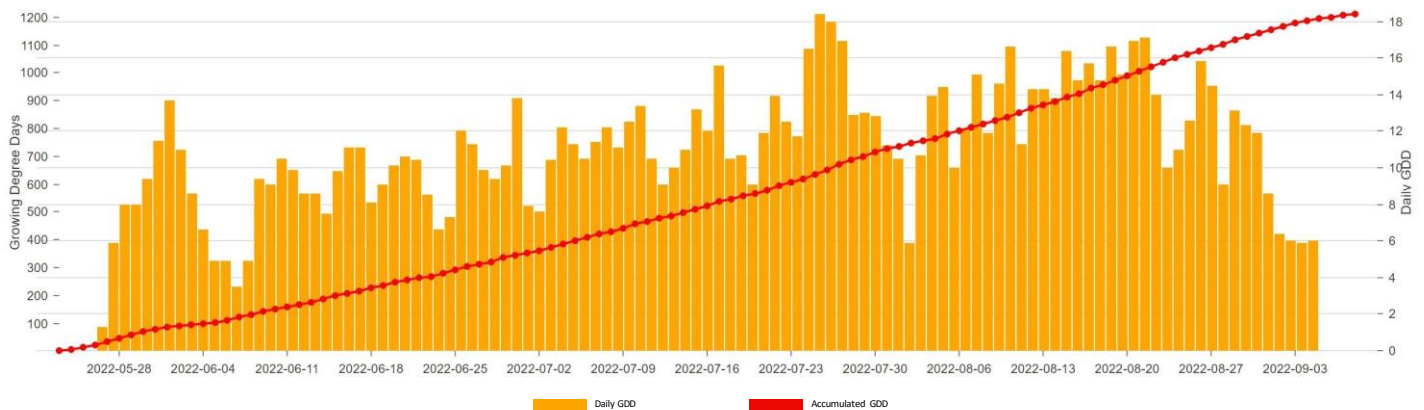
season, the field handled the moisture well. In the spring, the field was wet but not saturated. The top began to dry out in mid-June but did not crust over. Moisture was just below the surface throughout the season. On September 6th, 2022, the trial was harvested, and the Crystal Green Synchro side averaged 4.79Bu/ac more than the S15.

Weather May 24th – September 6th

Weather data was pulled from the BC Peace Agri Weather Network (Flatrock station)



We can see with the weather data that there were a few heavy rain events early in the season, such as 18.54mm on May 24th, right after seeding, and 14.48mm on June 17th. The organic matter in the soil and the spring field work these rains did not affect this field as much as others in the area. As stated on the previous page, the field began to dry out as the summer progressed but did not crust over in early June. Temperatures stayed moderately low, and the rainfall tapered off from mid-June to mid-July.



With a growing season between May 24th and September 9th (107 days) the accumulated growing degree days (GDD) (base 5) was 1211. On average crops need a minimum of 1200 GDD to mature.

PW Farms look at Crystal Green Synchro



PW Farms (Dave, Karen and Miles Wuthrich) seeded this trial on May 24th, 2022. When asked, Dave described the field as "just right" at seeding. The trial was seeded with a Bourgault 3320 with pair link openers and midrow banders. Dave and Karen's son, Miles, seeded the trial, and the S15 and Crystal Green Synchro flowed well during seeding.

This trial was hit by the heavy rain though it was not affected, stated Dave. He explained the field was an old hay field; they had disced in the spring. The discing helped the field absorb the spring rains. Along with the weather, Dave mentioned there was a significant quantity of wildlife in the field throughout the season, including deer, moose and elk.

Other than weed control, the trial did not need to be sprayed for any bugs or diseases. Dave could not see a visual difference between the S15 and Crystal Green synchro throughout the season. While harvesting, both treatments ran through the combine with an equal amount of ease. When talking about yield results, Dave said, "Cannot always go off what things look like." Though both

treatments looked the same throughout the season, Crystal Green Synchro yielded four bushels an acre more.

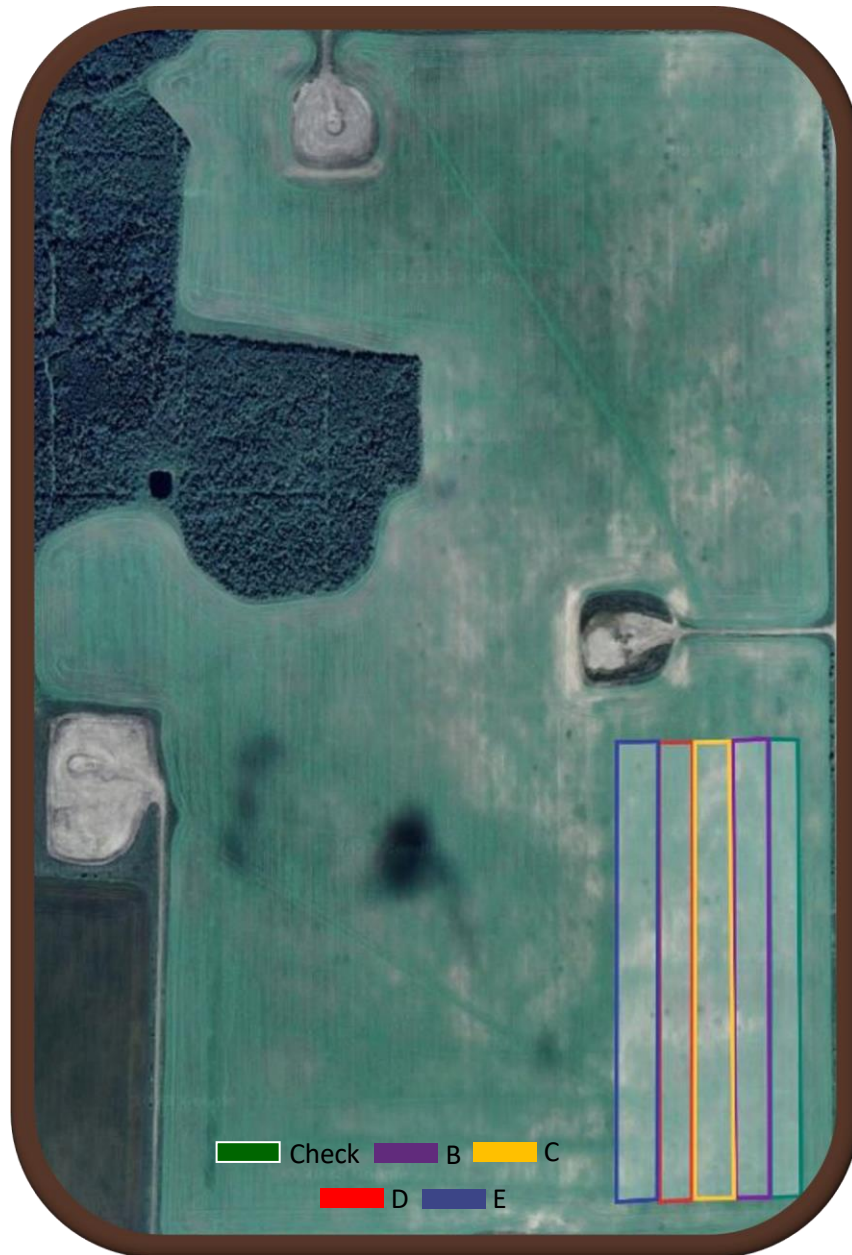
Crystal Green Synchro Cost Analysis

| | Cost Of Phosphorus | Oat Price | Bushel per Acre | Gross Profit per Acre | Profit after treatment Cost per Acre |
|-----------------------|--------------------|-----------|-----------------|-----------------------|--------------------------------------|
| Crystal Green Synchro | \$53.34 | \$4.87 | 129.17 | \$629.06 | \$575.72 |
| S15 | \$61.23 | \$4.87 | 124.53 | \$606.46 | \$545.23 |

**Crystal Green
Synchro
\$30.49/ Acre
More**

Trial Two

Wide Spread Farms Oat Fertility Trial



Seeding Date: May 25, 2022

Harvest Date: September 16, 2022

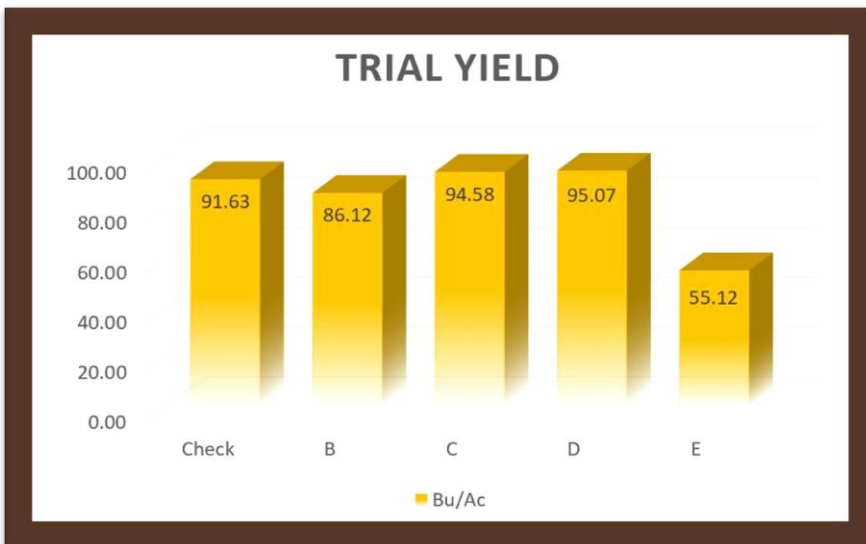
Variety: Mustang Oats

Trial Area: Buick, BC

Wide Spread Farms Oat Fertility Trial

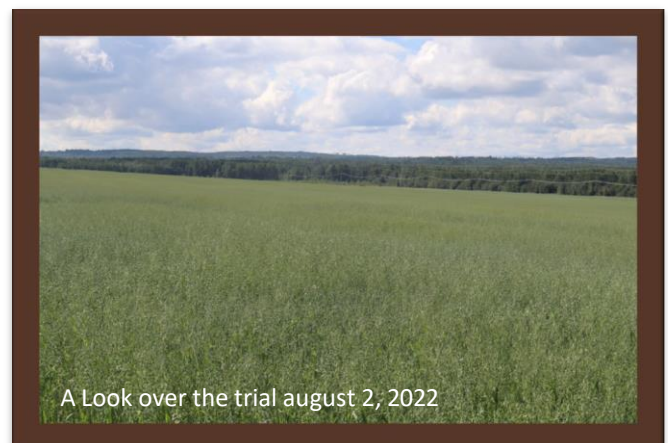
| | Emergence Date | Plant Count | Height | Weight (Lbs) | Acres | Bu/Ac |
|-------|----------------|-------------|--------|--------------|-------|-------|
| Check | June 1-8th | 18.6 | 39" | 2932.15 | 1 | 91.63 |
| B | June 1-8th | 18 | 36.5" | 2755.78 | 1 | 86.12 |
| C | June 1-8th | 19.1 | 37" | 3026.47 | 1 | 94.58 |
| D | June 1-8th | 17.4 | 36" | 3042.38 | 1 | 95.07 |
| E | June 1-8th | 18.3 | 38.5" | 1763.7 | 1 | 55.12 |

| Check | B | C | D | E |
|---|----------------------------------|---------------------------------|------------------------------|---|
| 46-0-0 (nitrogen) (98lbs/ac) Crystal green (Phosphorus), Sulphur plus(75lbs/ac), 12L G22 (phosphorus), 4L K-19-S (potash), 1L Boron, 2L Humic acid | Add .5L of Manganese to Check | Remove all liquid From Check | Add 1L Manganese to check | Remove Crystal green and s Sulphur plus from check add 1L Manganese to check |



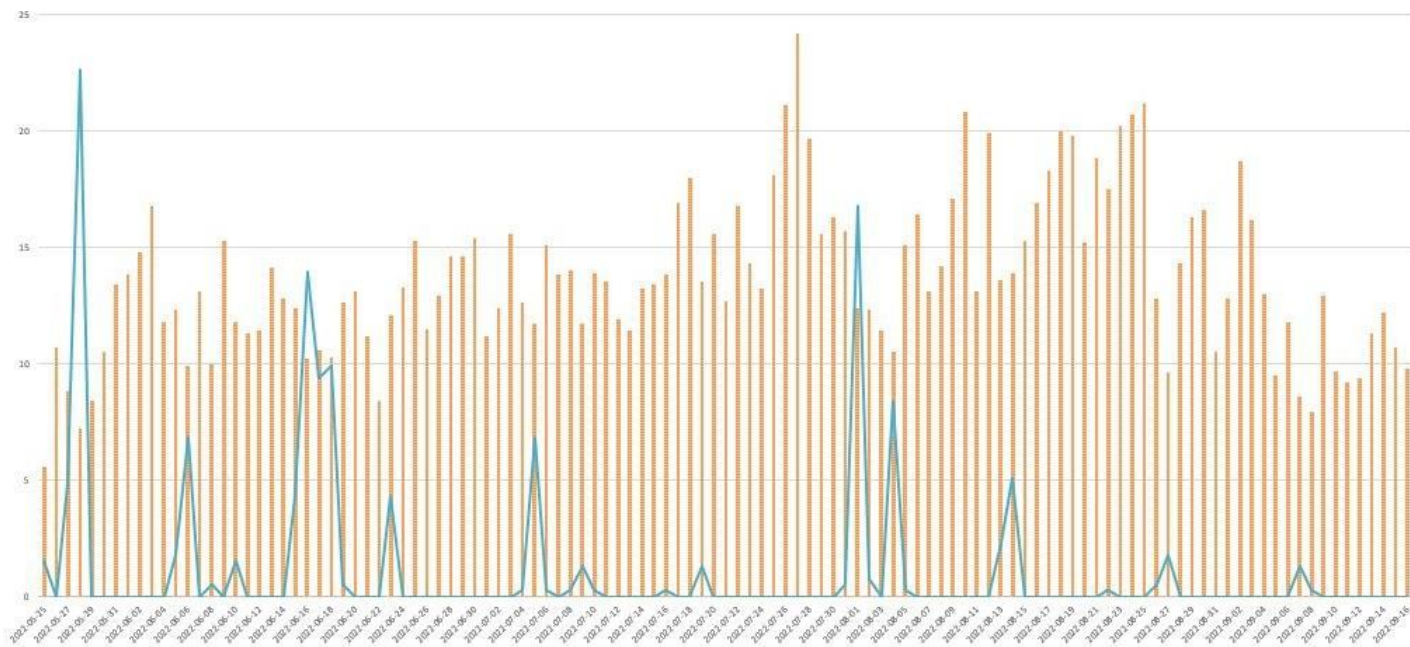
On May 25, 2022, this trial was seeded in Rose Prairie, BC. This trial was seeded on a hillside and split into five equal passes, with the check being at the top of the hill and treatment E at the bottom. On May 30th, it was observed that weeds such as dandelions and volunteer canola had begun to emerge. The oats had not yet emerged, but germination had begun on all treatments. As of June 10th, 2022, plant emergence had happened.

Plants were 1" in height, and emergence looked uniform across the trial. Though early emergence appeared to be uniform later in the month, the Check, B, and C treatments had most plants at five leaves and the first tiller stage, while other plants were at only two leaf stage. Treatments D and E emergence became more uniform with fewer late emergent plants. At maturity, the height of the plants ranged from Check 39", A 36.5", B 37", C 36" and D 38.5". Height was slightly different throughout the trial, but visually there was no outlier in this trial. The yield winner was treatment D.

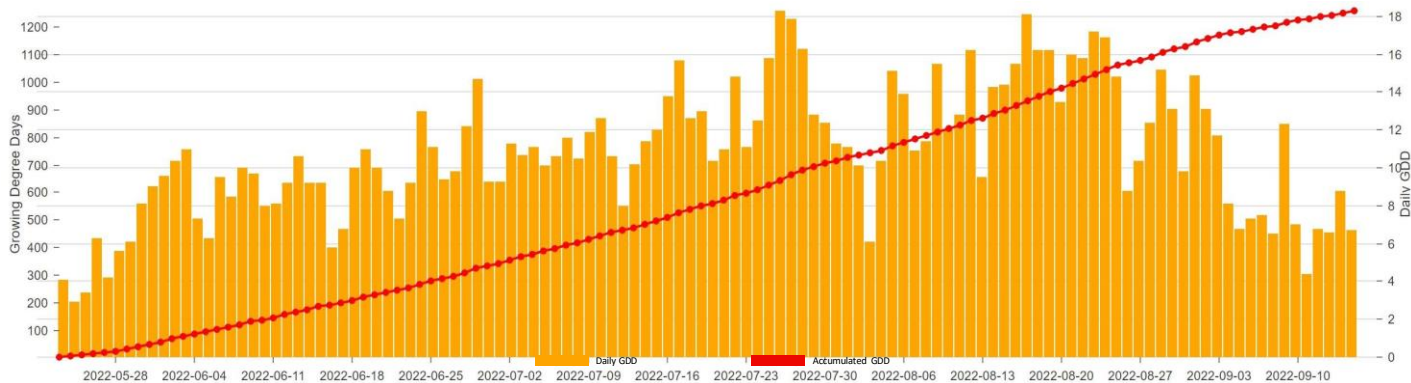


Weather May 25th - September 16th

Weather data was pulled from the BC Peace Agri Weather Network (Buick station)



The weather data shows that the area received a significant rainfall of 22.61mm four days after seeding, which contributed to the sporadic emergence of this trial. A large amount of rain fell throughout the year, with the most notable rainfall events being June 6th (13.97mm) and August 1st (16.76mm). These rainfall events caused some water runs through this trial, even though the drainage was good on this field. The average daily temperature stayed below 20 Celsius until July 26th. There were only six days that average temperatures rose above 20 Celsius, causing a mild growing season.



With a growing season between May 25th and September 16th (107 days) the accumulated growing degree days (GDD) (base 5) was 1256.

A Wide Spread Take On Fertility

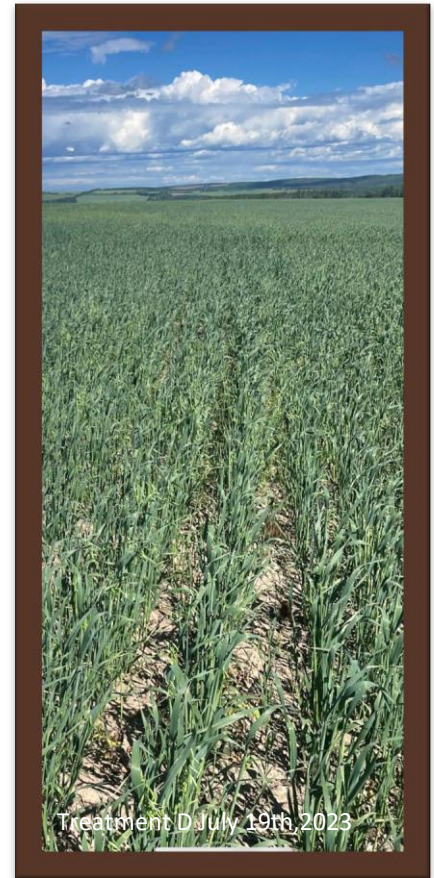
Wide Spread Farms has been using a combination of liquid and granular fertilizers for several years. They wanted to know which combination gave the best return on investment. That question led to Wide Spread modifying their current fertilizer program in four different ways and comparing it in a side-by-side trial.

Wide Spread Farms run a Case IH 800 contour drill with atom jet dual shoot openers. They also have an alpine liquid kit installed onto the drill. When asked about the field conditions at the time of seeding, Ernest said they were close to ideal. The field has an east-facing slope that helps this field dry out in the spring.

Like most areas, this season, four days after seeding, the field was hit with a substantial amount of rain. When talking to Ernest, he mentioned this rainfall negatively affected the trial. On top of the initial precipitation, this field received significant rain throughout the season. The rain caused water runs and drowned out areas across the trial.

When asked if any treatments stood out during the season, Ernest stated where the liquid fertilizer was put down; the oats appeared greener and healthier. During harvest, all the treatments ran through the combine equally as well. It was during harvest Ernest noticed the drown-out spots in the trial.

Wide Spread Farms would like to do this trial again next year to get more data. Ernest said this year, "our trial has not fully accomplished what it should because of inclement weather." Due to the rainfall this year, the potential for the fertilizer to leach into the other treatment areas was high. If they are to do this trial again next year, they would like to move it to a more even field.



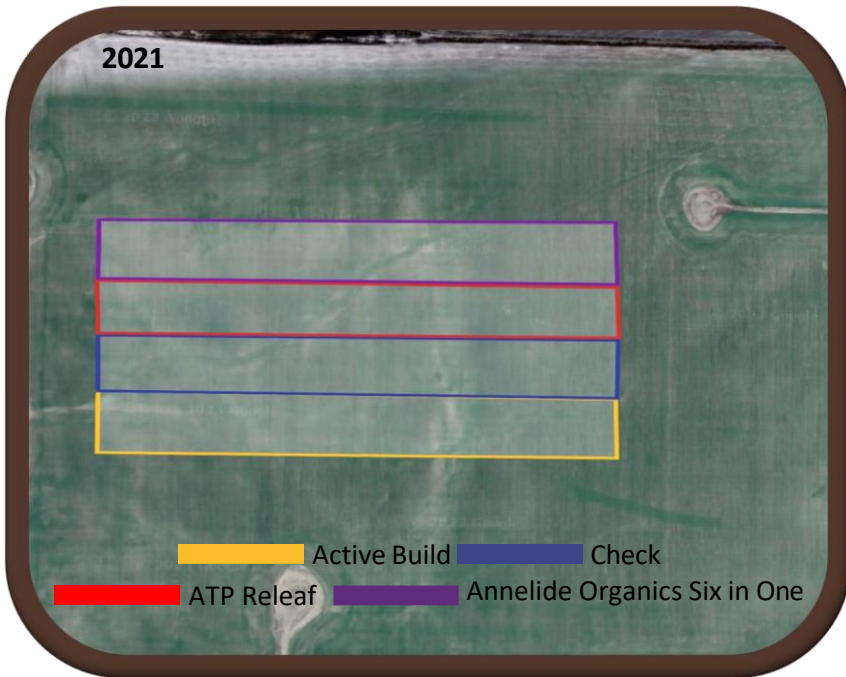
Fertilizer Cost Analysis

| | Cost of fertilizer per Acre | Oat Price | Bushel per acre | Gross Profit per Acre | Profit after Fertilizer Cost per Acre |
|-------|-----------------------------|-----------|-----------------|-----------------------|---------------------------------------|
| Check | \$92.20 | \$4.87 | 91.63 | \$446.24 | \$354.04 |
| B | \$96.70 | \$4.87 | 86.12 | \$419.40 | \$322.70 |
| C | \$57.32 | \$4.87 | 94.58 | \$460.60 | \$403.28 |
| D | \$101.20 | \$4.87 | 95.07 | \$462.99 | \$361.79 |
| E | \$42.32 | \$4.87 | 55.12 | \$268.43 | \$226.11 |

Trial Three

Summit Acres Micronutrient

Pea Trial



Seeding Date: May 5, 2021 & May 20, 2022

Spraying Date: June 13, 2022

Harvest Date: July 31, 2021 & August 13, 2022

Crop: Green Peas

Trial Area: Pineview, BC

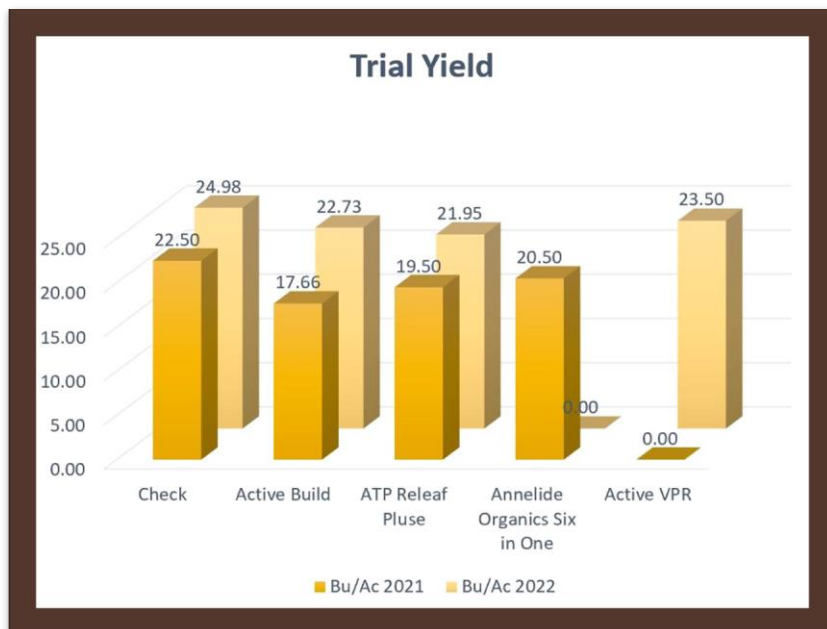
Summit Acres Micronutrient Pea trial

| | Weight (Lbs) (2021) | Weight (Lbs) (2022) | Acres (2021) | Acres (2022) | Bu/Ac(2021) | Bu/Ac (2022) | Moisture (2022) | Test Weight (2021) | Test Weight (2022) |
|------------------------------|---------------------|---------------------|--------------|--------------|-------------|--------------|-----------------|--------------------|--------------------|
| Check | 48,600 | 14,166 | 36 | 9.45 | 22.50 | 24.98 | 14.3 | 63 | 65.5 |
| Active Build | 52,768 | 10,842 | 49.8 | 7.95 | 17.66 | 22.73 | 14.3 | 62 | 65 |
| ATP Releaf Pulse | 42,822 | 12,996 | 36.6 | 9.87 | 19.50 | 21.95 | 14.2 | 62 | 65.6 |
| Annelide Organics Six in one | 61,500 | N/A | 50 | N/A | 20.50 | N/A | N/A | 61 | N/A |
| Active VPR | N/A | 8092 | N/A | 5.74 | N/A | 23.50 | 14 | N/A | 65 |

Check Active Build Releaf Pulse Annelide Organics Six Active VPR

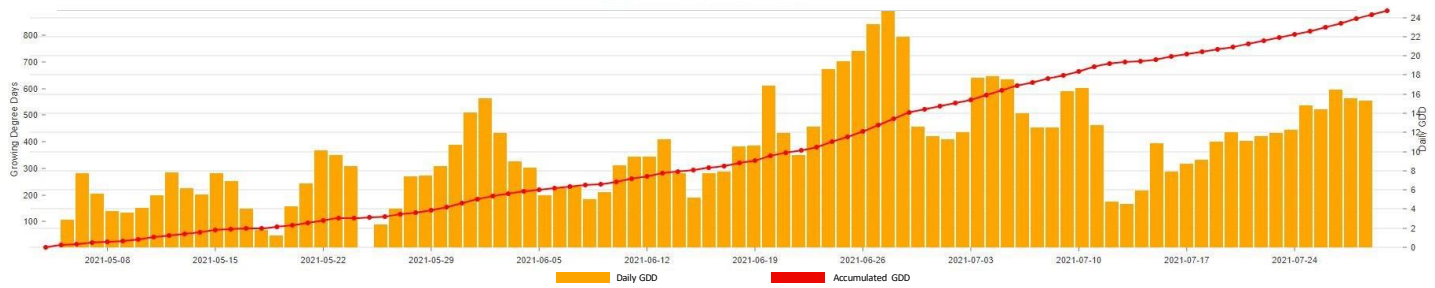
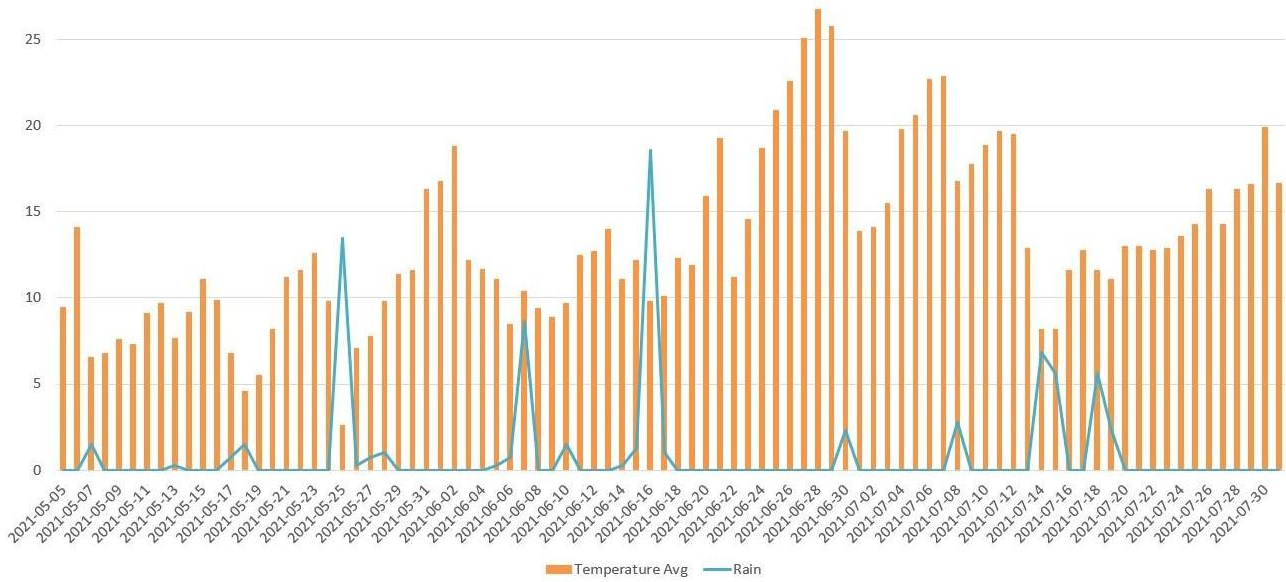
| Viper and UAN | Viper, UAN & Active Build | Viper, UAN & Releaf Pulse | Viper & Annelida Organics Six (No UAN) | Viper, UAN & Active VPR |
|---------------|--------------------------------|-----------------------------------|--|--------------------------------|
| | Total Nitrogen (N) 2% | Calcium (Ca) actual 4% | Total Nitrogen (N) 3.00% | Total Nitrogen (N)14% |
| | Available Phosphate (P2O5) 30% | Magnesium (Mg) actual 1% | Phosphoric Acid (P2O5) 6.00% | Available Phosphate (P2O5) 10% |
| | Soluble Potash (K2O) 6% | Cobalt (Co) actual 0.001% | Soluble Potash (K2O) 3.00% | Soluble Potash (K2O)10% |
| | Boron (B)(actual) 0.3% | Molybdenum (Mo) actual 0.005% | | |
| | Manganese (Mn)(actual) 1.0% | Nickel (Ni) actual 0.001% | | |
| | Zinc (Zn)(actual) 2.3% | Sea kelp extract 3% | | |
| | Molybdenum (Mo)(actual) 0.13 | Polymeric Polyhydroxy Acid 0.009% | | |

The micronutrient pea trial was initially done in 2021; BCGPA was informed about it and received yield data from the producer (taken from the producer's grain cart scale). The producer decided to do the trial again in 2022 due to the poor growing conditions in 2021. During the 2021 season, the peas began to flower just as the heat dome hit, causing flower blast. When planning the 2022 trial, the producer decided to change out the Annelide Organics Six in One for Active VPR. The 2022 trial was sprayed on June 13th; the crop was at the three-node stage. The field had begun to crust over, but moisture was still close to the surface 1". In early July, the field had begun to yellow across the entire field. Through July, there was no visual difference between the

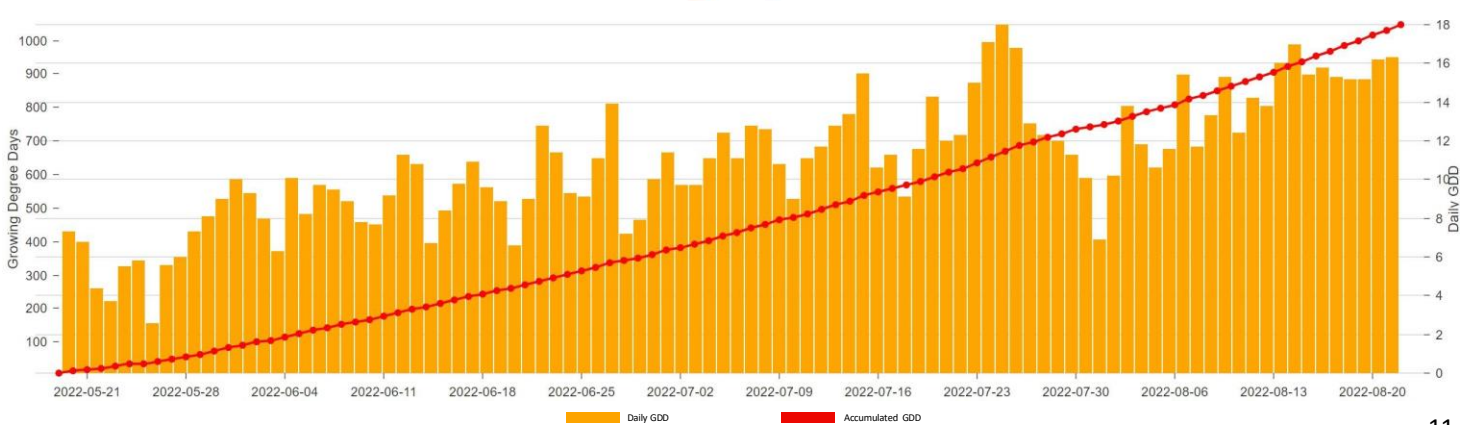
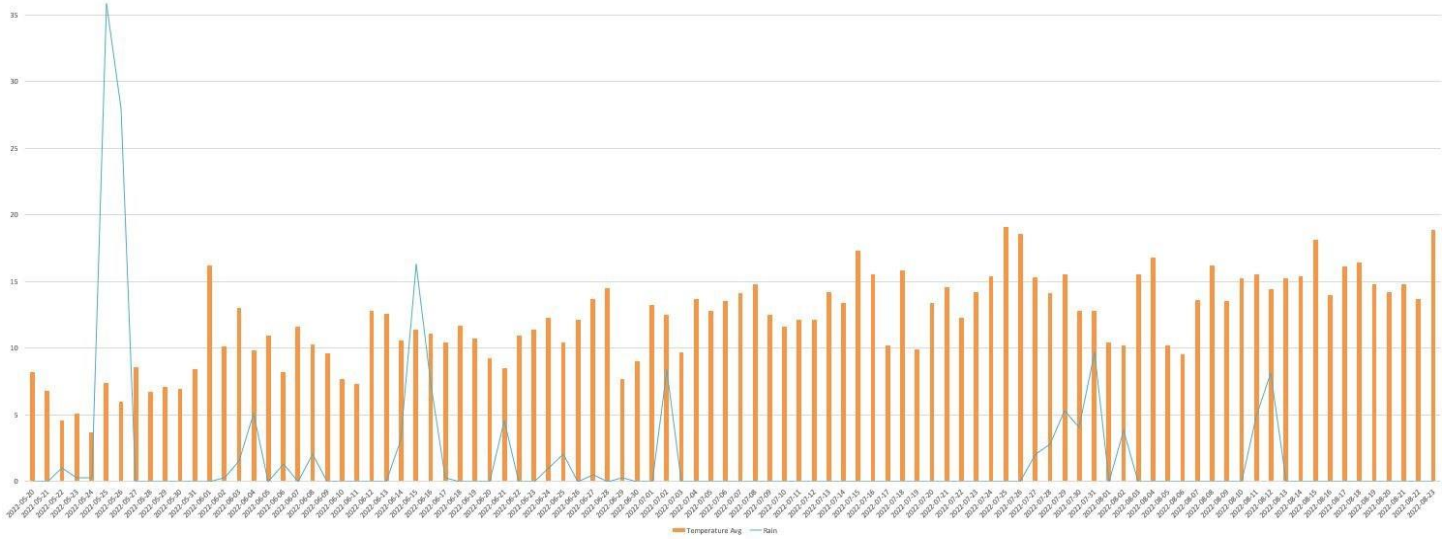


treatment, unlike in 2021, where the Active build and ATP releaf treatments appeared slightly ahead of the rest of the trial. As of July 23rd, flowering was underway, with podding just starting to begin. In early August, the field continued to yellow, with the low spots being the worst. August 2nd podding was underway. Plants had 3-6 pods per plant, with 4-8 peas per pod. There was still no visual difference between treatments. The trial was desiccated on August 17th and harvested on August 23rd. The big winner of this trial in both years was the check.

Weather May 5th – July 31st, 2021



Weather May 20th – August 23rd, 2022



Micro-nutrient from Ty's eyes

Summit Acres did this trial two years in a row. They wanted to see what product worked best on their farm in year one. The heat dome of 2021 hit at flowering, causing Ty to question if the product had worked with the treated sections being further ahead. The heat hit the treated sections the hardest. These questions led to Summit re-doing the trial in 2022.

Ty Cusack was interviewed about the 2022 trial. The trial was seeded with a Seed Hawk with paired row openers. At the seeding time, the field was wet and not in ideal conditions. The area was hit with rain shortly after seeding. The wet spring caused the peas to struggle, "they never recovered from the rain," says Ty.



Though some leaf disease was present in the trial, it was minimal. On the other hand, root rot greatly affected the trial Ty had observed throughout the season. When talking about the roots, Ty mentioned that due to the wet spring, the roots stayed shallow, so once the ground dried up and hardened in late June, even the healthy roots struggled to get to the nutrients and moisture.

The field was sprayed on June 13, 2022. Ty said that after spraying, he could not see a noticeable difference between the treatments. In 2021 you could see a slight difference between Active Build and ATP Releaf being a bit ahead of the rest of the trial.

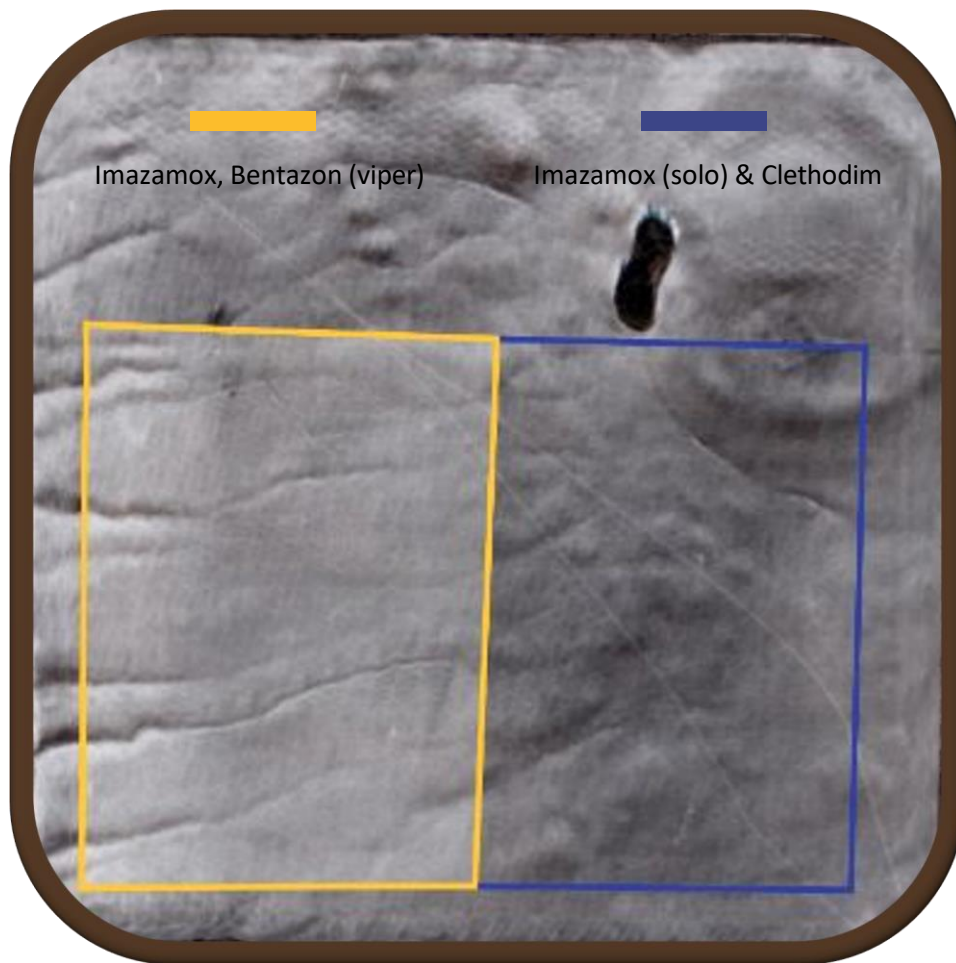
The past two years' weather events have caused not ideal growing conditions, from extreme heat in 2021 to large amounts of rain in spring 2022. Ty pointed out that both years, though different, should have highlighted these products.

Micro Nutrient Cost Analysis

| 2021 | Micro-nutrient Cost/ac | Pea Price | Bushels per Acre | Gross Profit per Acre | Net Profit per Acre |
|------------------------------|------------------------|-----------|------------------|-----------------------|---------------------|
| Check | \$0.00 | \$15.51 | 22.50 | \$348.98 | \$348.98 |
| Active Build | \$8.07 | \$15.51 | 17.66 | \$273.91 | \$265.84 |
| ATP Releaf Pulse | \$8.40 | \$15.51 | 19.50 | \$302.45 | \$294.05 |
| Annelide Organics six in one | \$4.00 | \$15.51 | 20.50 | \$317.96 | \$313.96 |
| 2022 | Micro-nutrient Cost/ac | Pea Price | Bushels per Acre | Gross Profit per Acre | Net Profit per Acre |
| Check | \$0.00 | \$12.94 | 24.98 | \$323.24 | \$323.24 |
| Active Build | \$9.50 | \$12.94 | 22.73 | \$294.13 | \$284.63 |
| ATP Releaf Pulse | \$9.64 | \$12.94 | 21.95 | \$284.03 | \$274.39 |
| Active VPR | \$5.40 | \$12.94 | 23.50 | \$304.09 | \$298.69 |

Trial Four

Summit Acres Imazamox, Bentazon (viper) vs. Imazamox (Solo) & Clethodim Pea Trial



Seeding Date: May 20, 2022

Spraying Date: June 13, 2022

Harvest Date: August 13, 2022

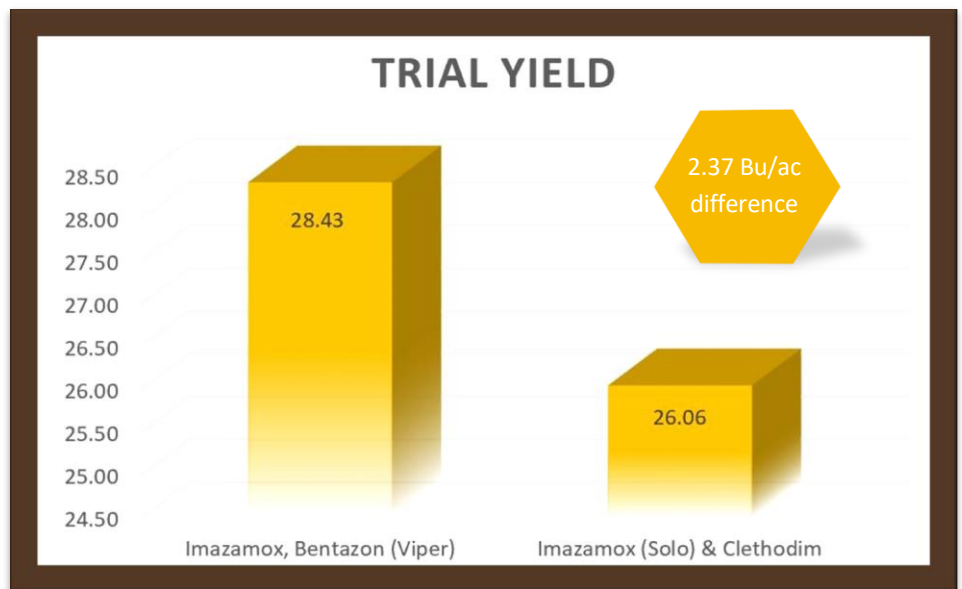
Crop: Green Peas

Trial Area: Pineview, BC

Imazamox, Bentazon (viper) vs. Imazamox (Solo) & Clethodim Pea Trial

| | Plant Count | Weed Count | Weight (Lbs) | Acres | Bu/Ac | Moisture | Test Weight | Dockage | Weed seed in 1000g of sample |
|-----------------------------|-------------|------------|--------------|-------|-------|----------|-------------|---------|------------------------------|
| Imazamox, Bentazon (viper) | 6.2 | 2.2 | 12,878 | 7.55 | 28.43 | 13.1% | 66.5 | 1% | 2.4g |
| Imazamox (solo) & Clethodim | 5.7 | 3.1 | 11,664 | 7.46 | 26.06 | 13.4% | 65 | 1% | 2.6g |

This trial was seeded on May 20th to peas. On June 13th, the field was split in half, with the west half sprayed with Imazamox and Bentazon (Viper) and the east half with Imazamox (Solo) and Clethodim. This trial was seeded on the quarter straight west of the pea micronutrient trial. This field had a slight slope to it which provided reasonably good drainage. This trial did not yellow as severely as its neighbour to the east. At the time



of spraying, the peas were at the three-node stage. This field's weeds included stinkweed, cleavers and hawk's beard. On July 19th, plant counts were taken in one square foot, and the Imazamox Bentazon was

found to have, on average, 1.1 more weeds than the Imazox & Clethodim side. As seen in the photo above, flowering had just begun as of July 19th. On August 17th, this trial was desiccated and harvested on August 23rd. The yield was shown to be 2.37 bu/ac more on the Imazamox and Bentazon treatment. After harvest, the seed samples were cleaned, and weed seeds were separated from the pea seed; in 1000g of the sample, there were found to be .2g more weed seeds in the Imazamox & Clethodim sample.



Summit Acres a view on herbicides

On May 20th, Summit acres seeded green peas into wet soil. They used a Seedhawk with paired row



openers. This field was directly west of their micronutrient trial on slightly higher ground. Like the micronutrient trial, Ty said field conditions at seeding were not ideal.

On June 13th, 2022, Ty split the field in half, spraying the west half with Viper and the east with Solo and Clethodim. Summit acres spray Solo and Clethodim on many of their pea acres. With this trial, he wanted to see weed control using the traditional Viper vs. Solo and clethodim and its effects on yield.

After spraying, Ty could visually see a difference in weeds, “Viper was (cleaner). Ty said the field looked good in June, but the roots stayed shallow due to the heavy rains. Once the field began to dry up, the peas struggled to find moisture and nutrients. The struggling peas gave the weeds a chance to out-compete and take over.

Summit uses a combination of Viper and Solo, Clethodim, across their whole farm. With the dirtier fields getting Viper. Ty mentioned that Solo worked very well on other fields on the farm this year, where peas established well and were able to compete. When asked if he would do the trial any differently if he were to do it again, Ty said no.

Viper Vs. Solo & Clethodim Cost Analysis

| | Cost of herbicide per Acre | Pea Price | Bushel per Acre | Gross Profit per Acre | Net Profit per Acre |
|--|----------------------------|-----------|-----------------|-----------------------|---------------------|
| <u>Imazamox, Bentazon (viper)</u> | \$20.40 | \$12.94 | 28.43 | \$367.88 | \$347.48 |
| <u>Imazamox (Solo) & Clethodim</u> | \$17.51 | \$12.94 | 26.06 | \$337.22 | \$319.71 |

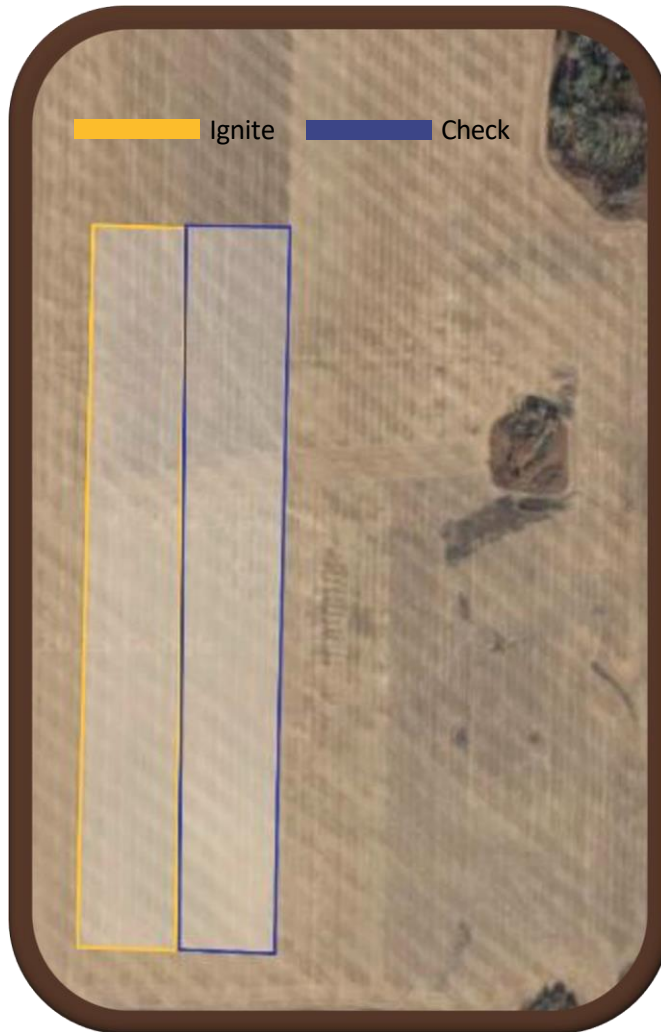
Imazamox,
Bentazon (viper)
**\$27.77/ Acre
More**

See Page 11 for trial weather data



Trial Five

George Bergen Ignite Inoculant Trial



Seeding Date: May 24, 2022

Harvest Date: September 27, 2022

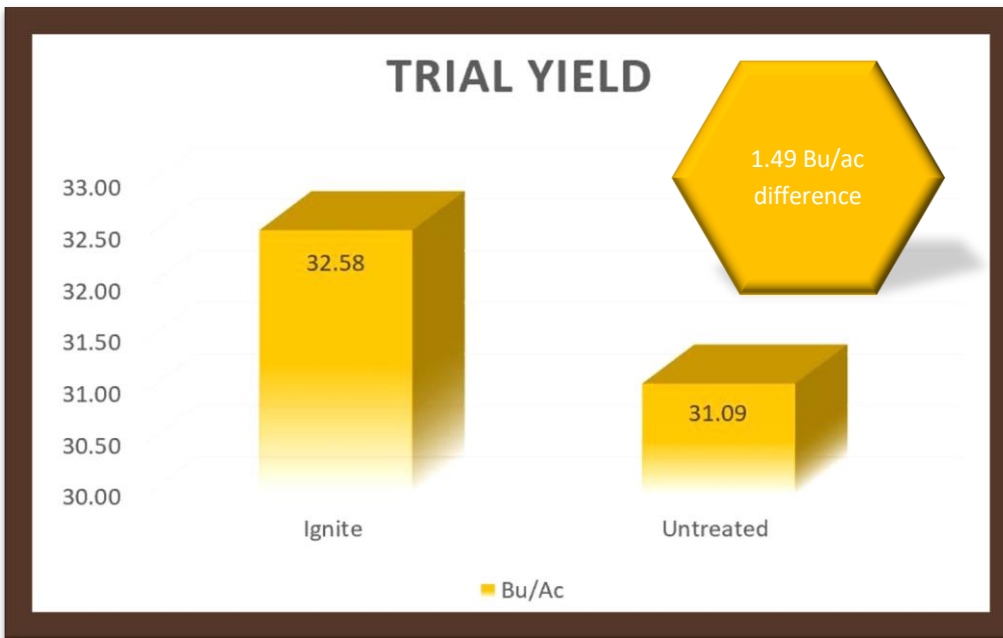
Variety: PV760

Trial Area: North Pine, BC

George Bergen Ignite Inoculant Trial

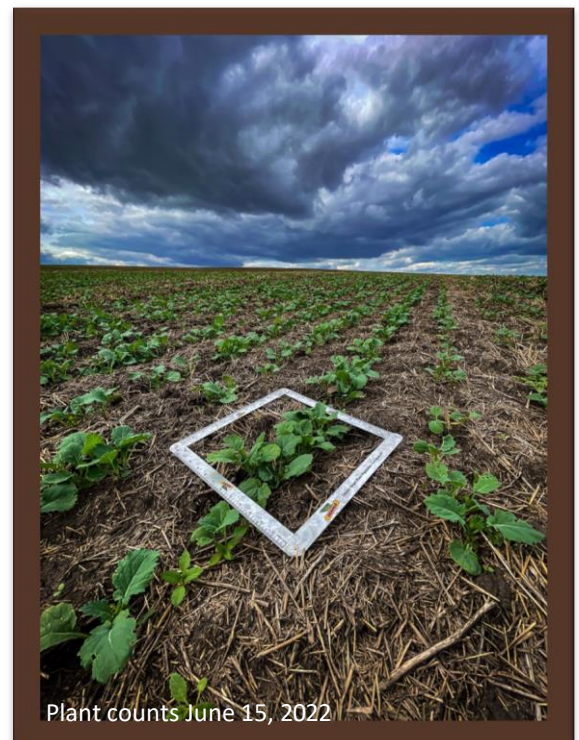
| | Emergence Date | Plant Count | height | Weight (Lbs) | Acres | Bu/Ac | Moisture | Oil% | Green | Test Weight | TKW | Dockage |
|------------------|----------------|-------------|--------|--------------|-------|-------|----------|-------|-------|-------------|------|---------|
| Ignite | June 6-9th | 3.4 | 33" | 3160 | 1.94 | 32.58 | 6.94% | 44.7% | 2% | 54.5 | 4.2g | 1% |
| Untreated | June 6-9th | 4.6 | 35" | 3016 | 1.94 | 31.09 | 7.42% | 43.2% | 3% | 54.6 | 4.2g | 2% |

Ignite is a liquid microbial inoculant for canola and cereals



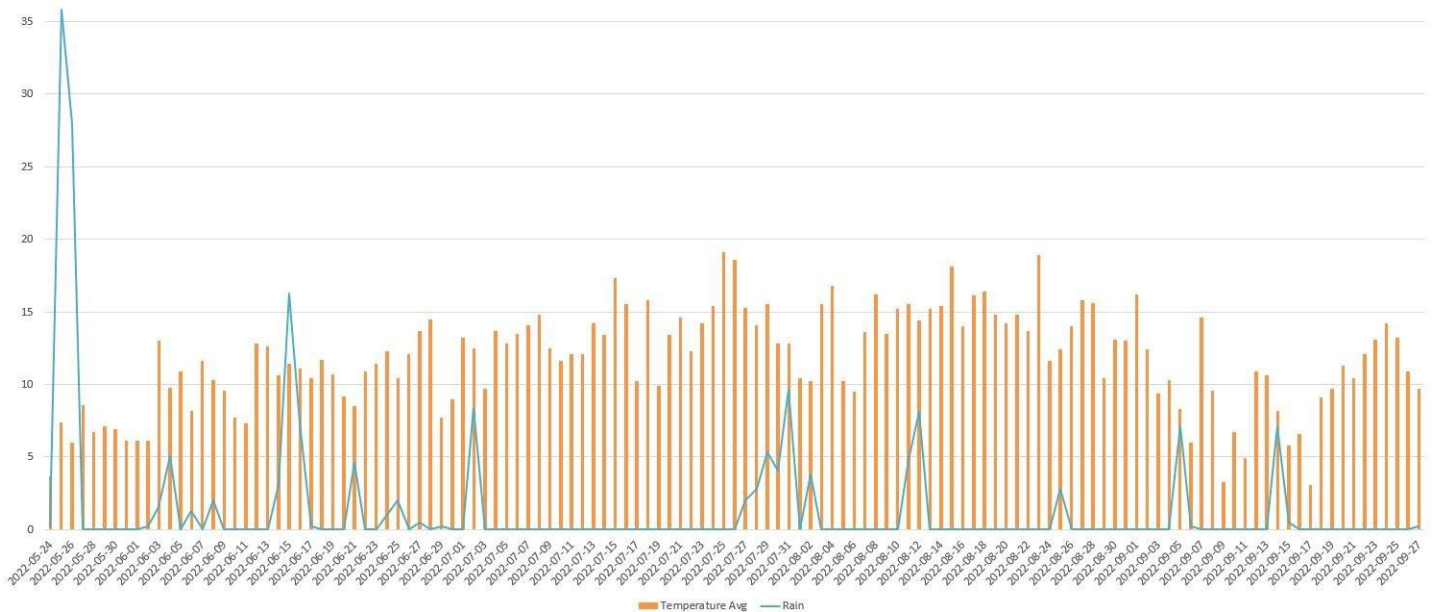
This trial was seeded on May 24th to PV760 Canola. A strip was treated with Ignite microbial inoculant. Ignite contains the microorganism *Serendipita indica*, which associates with the roots of plants such as Canola, inducing some gene expression and phytohormone production. Ignite is supposed to help with reducing abiotic stresses and increase chlorophyll

content. The Canola was seeded at 4.8 lbs/ac on both treatments. On June 1st, the field was walked; germination had just begun. It was observed that both treatments had water runs through them, and the soil had begun to crust over. Emergence happened between June 6-9th. As of June 15th, both treatments were at the second leaf stage. Flea beetle damage (20%) was also observed in both treatments. Plant counts were taken on June 15th and again on June 28th, and the average was 3.4 plants per square foot for the ignite and 4.6 plants per square foot on the untreated side. Flowering began July 13th; the treated side appeared to be slightly ahead of the untreated side, with 15% (treated) flowering as opposed to 10% (untreated). The trial was in full flower by August 2nd. In mid-August height measurements were taken. Ignite-treated Canola was 2" shorter than untreated. The trial was swathed. George harvested the field on September 27th. Yield results showed Ignite yielded 1.49 bu/ac more than the untreated.

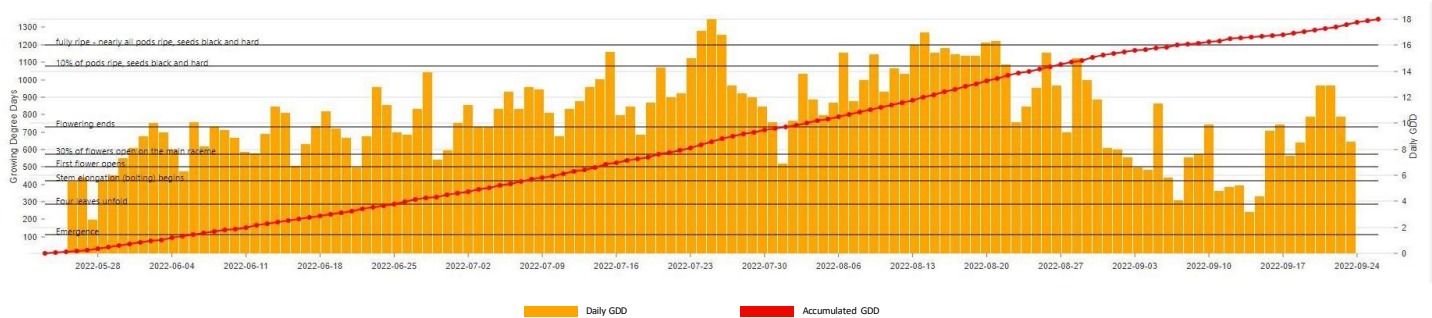


Weather May 24th– September 27th

Weather data was pulled from the BC Peace Agri Weather Network (Montney-Bickfords station)



Looking at the weather data, we can see significant rainfall events early in the season. Between May 25th and 26th, the area received 63.75mm of rain. Through June, the area continued to receive rain; during a three-day period between June 14th and June 16th, the area got another 26.68mm. From July 3rd till July 26th, the area did not receive a drop of rain. From the graph, we can see that through August and September, the area received sporadic rainfall events. The total rainfall for the year was 176.53mm, 75% of the average rainfall for the area. The average daily temperature throughout the season never broke 20 degrees, with the average temperature for the whole season being 11.9 degrees Celsius.



With a growing season between May 24th and September 27th (127 days) the accumulated growing degree days (GDD) (base 5) was 1346.6.

George Reflects on Ignite trial

George treated PV760 canola with ignite inoculant this spring prior to seeding. He wanted to see the inoculant's effects on his canola and decided to do a side-by-side trial, seeded on May 24th, 2022. He seeded with a Seedhawk drill with the icon Fenix metering system.

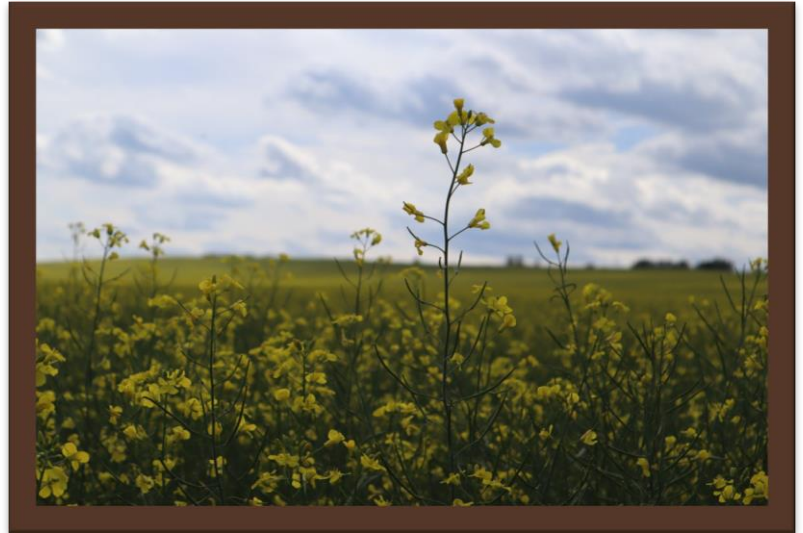
Like many of the fields in the area this spring, George described the field as wetter than ideal. The field was already so wet when the rain hit two days after seeding.

The rain and cool temperatures contributed to slow emergence. George noticed flea beetle damage in early June. With the tough spring, he wanted to give his canola the best shot and sprayed for flea beetles. Closer to

harvest, he also noticed grasshoppers; he kept a close eye on them and decided to spray his outside rounds, as the field had a hay field on one side and large grass ditches surrounding it.

George "Could not tell the difference" between the treated and untreated sections throughout the growing season. Both treatments, though slow growing, had good establishment and continued to grow evenly throughout the season. Both treatments did have a small amount of water runs through them from the mass amount of rain throughout the early days of this trial.

Harvesting occurred on September 27th; the field had been swathed from north to south. A struggle was had when trying to choose swaths to weigh as the wind had blown many of the swaths in this trial. When asked what he would change, if anything, about the trial if he were to do it again, George said he would find a more even field and would do a replication trial.



Ignite Cost Analysis

| | Cost Of Inoculant | Canola Price | Bushel per Acre | Gross Profit per Acre | Profit after treatment cost per Acre |
|--------|-------------------|--------------|-----------------|-----------------------|--------------------------------------|
| Check | \$0.00 | \$19.33 | 31.09 | \$600.97 | \$600.97 |
| Ignite | \$6.58 | \$19.33 | 32.58 | \$629.77 | \$623.19 |

Ignite
\$22.22/ Acre
More

Trial Six

Trans Pine Seeding Rate Trial



Seeding Date: May 21, 2022

Harvest Date: October 4, 2022

Variety: 45CS40

Trial Area: Cecil Lake, BC

Trans Pine Seeding Rate Trial

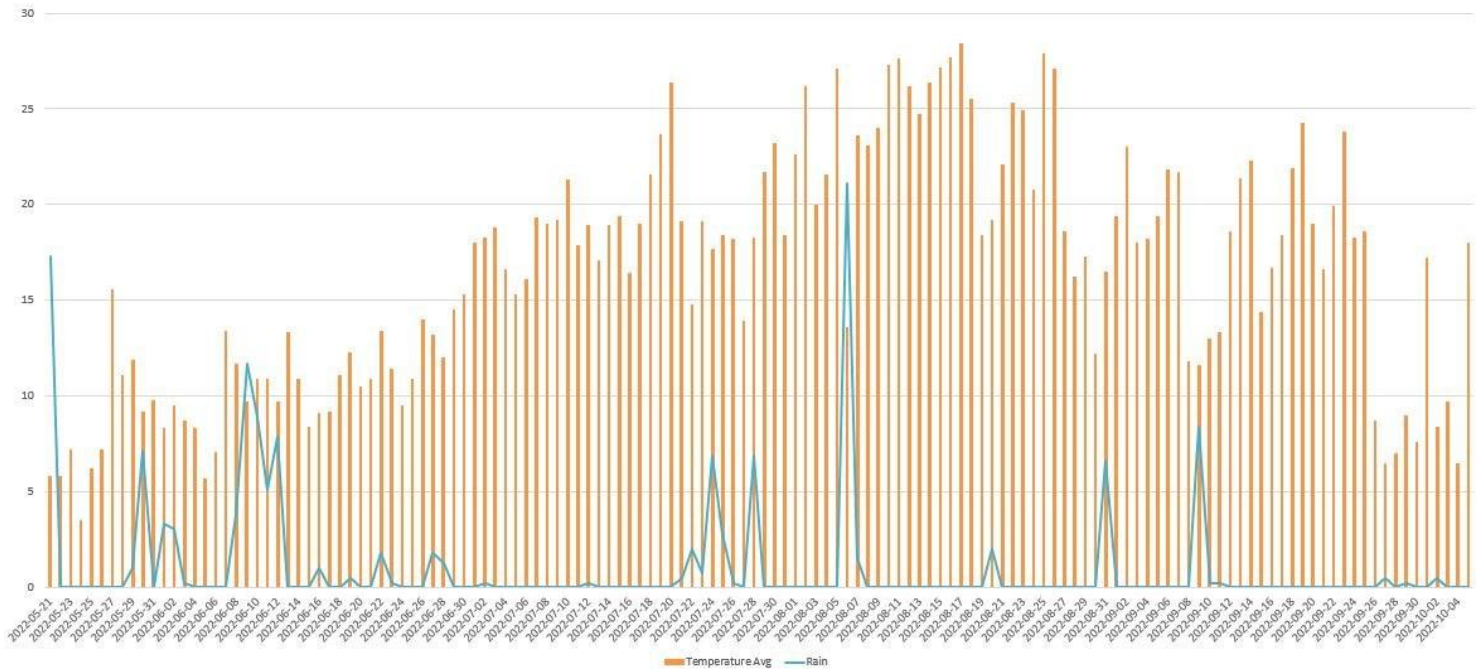
| | Emergence date | Plant Count | Height | Weight (Lbs) | Acres | Bu/Ac | Moisture | Oil % | Green | Bu Weight | TKW | Dockage |
|---------------------|----------------|-------------|--------|--------------|-------|-------|----------|-------|-------|-----------|------|---------|
| 5Lbs | June 6-9th | 4.6 | 41" | 5566 | 10.15 | 10.97 | 10.10% | 46.8% | 0% | 48.1 | 4.0g | 4% |
| 5.5Lbs (TKW) | June 6-9th | 5.6 | 45.5" | 5474 | 7.44 | 14.72 | 9.75% | 46.3% | 0% | 48.4 | 3.7g | 4% |
| 3.3lbs | June 6-9th | 4.8 | 36.5" | 5804 | 10.71 | 10.84 | 10.70% | 46.4% | 0% | 48.1 | 3.8g | 7% |



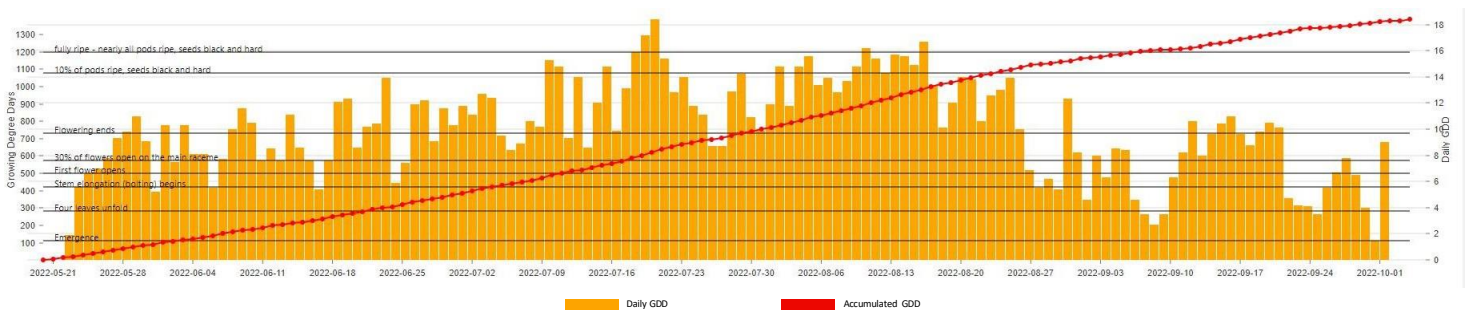
This trial was seeded on May 21st, a replicated trial with one replication. The field was separated into six different quadrants. Going from north to south 45CS40 was seed at 5Lbs , 5.5Lbs(TKW), 3.3Lbs, 5.5lbs 3.3lbs and 5lbs. On May 31st, the field was walked again, and no emergence was seen, but the field was wet enough to stick to the boots. Emergence happened sometime between June 6th and 9th. On June 16th, the 5Lbs and 5.5Lbs (TKW) emergence was looking even in both quadrants. The only outlier in June was the 3.3 lbs, where emergence was struggling on both quadrants, and the stand was very thin. Throughout all of June, the field had a thin stand. In July, the 3.3 lbs treatment was slightly behind the rest of the trial. As of July 21st, when walking through the stands, both the 5lbs and the 5.5lbs treatments were waist-high, while the 3.3 was still knee-high. On August 3rd, podding had begun across the whole trial, but uniformity on all treatments was lacking due to the thin stand in all treatments. In September, height measurements were taken. The 5Lbs treatments both averaged out to 41 inches, the 5.5 averaged out to the north being 45 and the south being 46 inches. The last height is taken on the 3.3lbs It ranged from the north being 34 inches and the south being 39 inches. Late September moisture samples were also taken from the field, with the 5 lbs being 23.7% moisture, 5.5 averaging out to 19.8% moisture and 3.3 averaging out to 22.5%. This trial was straight-cut on October 5th. With the yields being; 5lbs yielding 10.97 bushels per acre, 5.5 yielding 13.68 bushels an acre, and the 3.3 being 10.84 bushels per acre.



Weather May 21st– October 5th



Cecil Lake received 17.27 mm of rainfall on the same day as seeding. In June, 47.85mm of rain fell. June’s average temperatures also remained low, ranging from 5.7C to 15.3C, contributing to the low growth early on. In July, rainfall tapered off, and temperatures rose, causing soil crusting on trial. On August 6th, 2022, the area received another 21.08mm of rain. The early rain contributed to this trial's slow lack of emergence, causing a thin stand throughout the year.



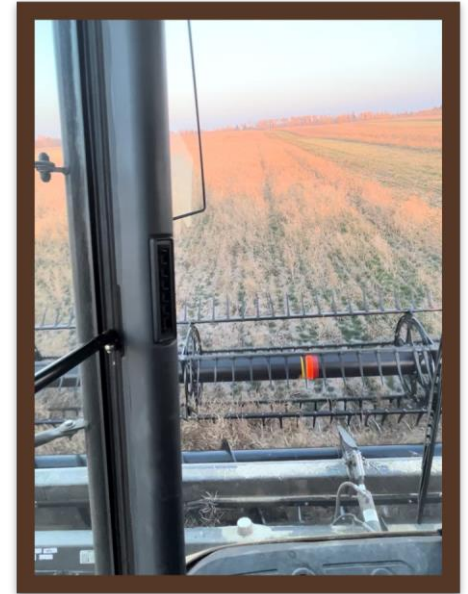
This trial was in the ground for 138 days; the growing degree days (GDD) base 5C is 1384. Looking at the graph we see the predicted fully ripe stage according to GDD is September 8th, 2022. On September 22, 2022 this trial was hand threshed and moisture samples taken ranging between 19.8% to 23.7%. The thin stand could contribute to why the trial took so long to ripen.

Weather data was pulled from the BC Peace Agri Weather Network (Cecil Lake station)

Seeding Rate Trial from Fred's Perspective

Fred seeded this trial on May 21, 2022, with a Bourgault 3320 air drill. The drill has mid-row banders. He seeded at a 3.5km/hr speed with a targeted depth of 1/2 inch. Fred placed 100 lbs of S15 with the seed and 200 lbs 46-0-0 beside the seed.

At the time of seeding, the field was highly wet; in Fred's words, "if that was a neighbour working his field like that. I would have said that is not going to work". He went on to describe the soil as having a putty-like consistency. Due to the wet cold, spring, emergence and growth were slow. Fred wonders if the flea beetles were missed due to the slow emergence. The thin stand made it hard to notice if plants had stem-feeding and been



"If that was a neighbour working his field like that. I would have said that is not going to work"

blown off the field. He did not see any signs of flea beetles, so he did not spray for them.

With the weather through the spring being cold and wet, the field was saturated at the seeding time. Fred mentioned the rainfall that came the day after seeding pooled on the surface for several days. This caused the seed to rot in the ground and have drowned out spots throughout all treatments.

Before harvest, Fred expected the 3.3 lbs treatment to be substantially lower than the 5.5 lbs and 5 lbs treatments. He also predicted that the 5.5 and 5 lbs yield would be similar. That being said, the trial results surprised Fred.

The trial was desiccated on September 5, 2022, with Heat. Like all standing canola in the region, this year's dry down took a long time. The trial was not ready for harvest until a month later, on October 5th, 2022. Fred has a Macdon D50 straight-cut header which Fred says is not ideal for canola. This caused him to have a loss at the header.

When summing up this trial, Fred mentioned that we need more years of data to learn from it. Unfortunately, the weather highly affected the trial. Even with replication, this field had many drown-out spots across the entire trial. Fred would like to have this trial done again next year.

Seeding Rate Cost Analysis

| | Bag Price | Price of Seed per Acre | Canola Price | Bushel per Acre | Gross Profit per Acre | Profit after Seed Cost per Acre |
|----------------------|-----------|------------------------|--------------|-----------------|-----------------------|---------------------------------|
| 5 lbs | \$562.50 | \$56.25 | \$19.33 | 10.97 | \$212.05 | \$155.80 |
| 5.5 lbs (TKW) | \$562.50 | \$61.88 | \$19.33 | 14.72 | \$284.54 | \$222.66 |
| 3.3 lbs | \$562.50 | \$37.13 | \$19.33 | 10.84 | \$209.54 | \$172.41 |

**5.5lbs (TKW)
\$50.25/ Acre
More**

Trial Seven

River Crest Farms Planter vs.

Air Drill Canola Trial



Seeding Date: May 17, 2022

Harvest Date: October 4, 2022

Variety: L234P

Trial Area: Flat Rock, BC

Air Drill

5.2 lbs seeding rate

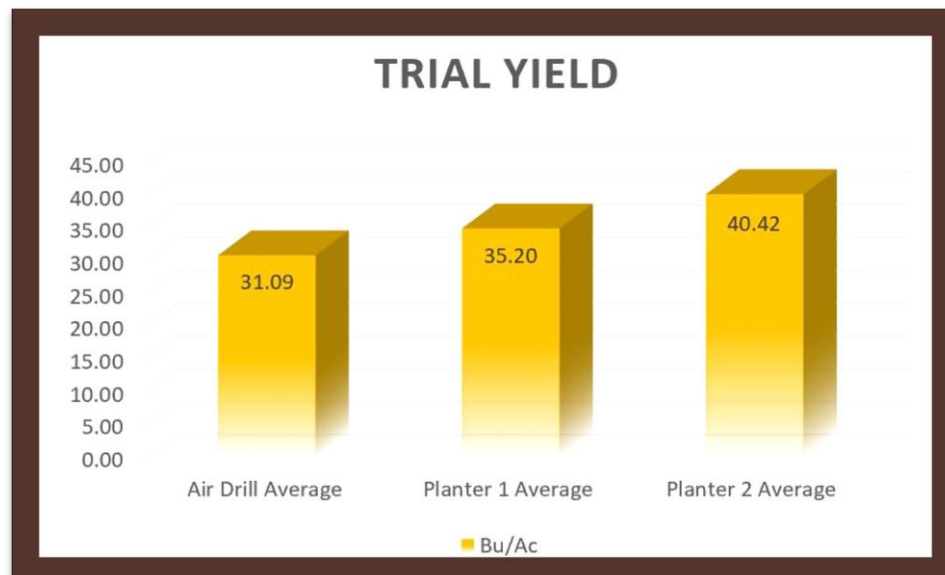
Planter 1

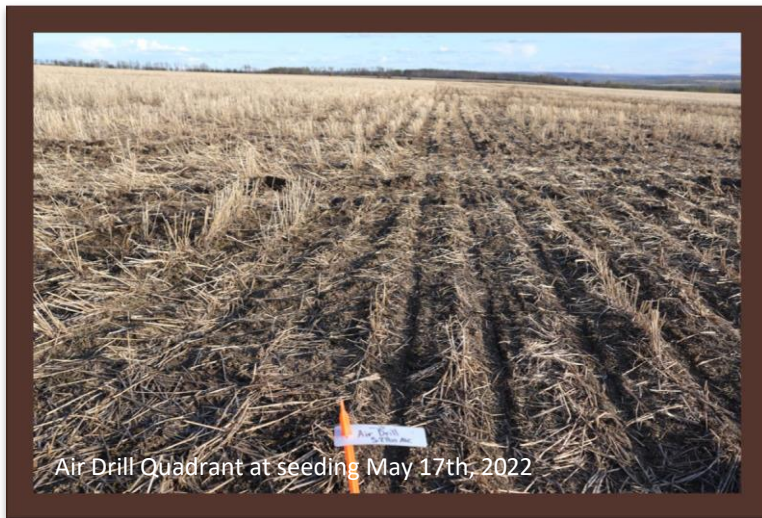
2.74 lbs seeding rate

Planter 2

1.80 lbs seeding rate

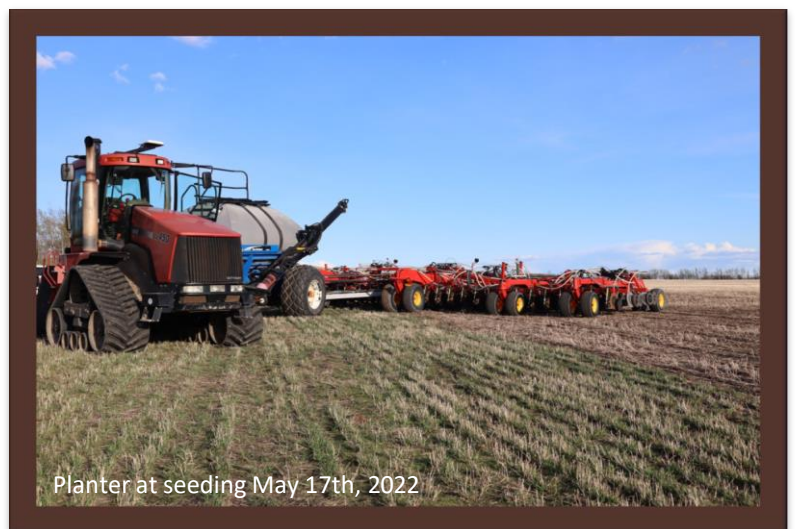
| | Emergence Date | Plant Count | Height | Weight (Lbs) | Acres | Bu/Ac | Mois-ture | Oil % | Green | Test Weight | TKW | Dockage |
|-------------------------|----------------|-------------|--------|--------------|-------|-------|-----------|--------|-------|-------------|------|---------|
| Air Drill West | May 24-28th | 6 | 49" | 1782 | 1.07 | 33.31 | 8.82% | 44.20% | 0% | 50.8 | 3.6 | 4% |
| Air Drill Middle | May 24-28th | 5.4 | 45.5" | 1506 | 1.11 | 27.14 | 8.99% | 43.40% | 0% | 50.2 | 4 | 4% |
| Air Dill East | May 24-28th | 7.1 | 47" | 1838 | 1.12 | 32.82 | 7.37% | 46% | 0% | 50.7 | 3.8 | 3% |
| Average | | 6.17 | 47.17" | 1708.67 | 1.1 | 31.09 | 8.39% | 44.53% | 0% | 50.57 | 3.8 | 4% |
| Planter 1 West | May 24-28th | 5.2 | 43.5" | 2136 | 1.15 | 37.15 | 8.70% | 44.20% | 0% | 51 | 3.9 | 3% |
| Planter 1 Middle | May 24-28th | 4.3 | 45" | 1710 | 1.11 | 30.81 | 8.00% | 44.80% | 0% | 50.5 | 3.8 | 2% |
| Planter 1 East | May 24-28th | 4.6 | 44.5" | 2102 | 1.12 | 37.54 | 8.08% | 44.30% | 0% | 50.3 | 4 | 2% |
| Average | | 4.7 | 44.33" | 1982.67 | 1.13 | 35.20 | 8.26% | 44.43% | 0% | 50.6 | 3.9 | 2% |
| Planter 2 West | May 24-28th | 5.4 | 39" | 2228 | 1.1 | 40.51 | 6.94% | 45.10% | 0% | 50 | 3.9 | 2% |
| Planter 2 Middle | May 24-28th | 4.6 | 42" | 2218 | 1.12 | 39.61 | 7.99% | 44.70% | 0% | 50.9 | 3.9 | 2% |
| Planter 2 East | May 24-28th | 3.5 | 43" | 2284 | 1.11 | 41.15 | 7.31% | 44.90% | 0% | 49.9 | 4 | 2% |
| Average | | 4.45 | 41.33" | 2243.33 | 1.11 | 40.42 | 7.41% | 44.90% | 0% | 50.27 | 3.93 | 2% |





This trial was seeded on May 17th. The trial was replicated two times across the field. The replication was chosen at random with the order going, air drill planter 1, planter 2, planter 1, air drill, planter 2, planter 1, Planter 2, air drill. The air drill was seeded at 5.2 lbs/ac, while planter 1 was seeded At 1.8 lbs/ ac and Planter 2 was seeded at 2.7lbs/ac. Emergence was predicted to have begun between May 24th and 28th. On June 2nd, the field was walked. The air drill east emergence mainly had happened, and flea beetle damage of 10% was noted. Some plants had started to form their first true leaf, with a couple of patches seeming to have one

to two true leaves. Uniformity in those at this point was dismal. Planter 2 east had less emergence than the previous treatment, air drill; germination was still occurring underground. The plants that had emerged were noted to have flea beetle damage of about 10%. Planter 1 east had primarily emerged, and much like the rest of the field, flea beetle damage of about 10% was noted. There was still some seed germinating below ground. The air drill middle had less emergence than the initial air drill quadrant.



Flea beetle damage was more significant than the rest of the field at 15%, and the weed pressure was higher in this quadrant. Planter 1 in the middle emergence was well underway. There were still some just starting to push through the soil. Germination was still occurring below ground and the flea beetle damage was at 10%, much like most of the rest of the field. The planter 2 West emergence had started like the rest of the field, and flea beetle pressure was also higher, with 15% damage. In this quadrant, some plants were noted to have begun to form their first true leaves. Planter 1 west, like the rest of the field, emergence had started, and flea beetle damage was noted to be 15%. Like most of the planter quadrants, germination was still occurring. Lastly, air drill west mainly had emerged, plants were slightly larger, true leaf beginning to form on most of the plants, and flea beetle damage was noted to be 10%. Throughout June, the air drill Quadrants continued to show more uniformity and have a thicker stand than either of the planter treatments.



Plant count was taken post-harvest. The air drill averaged 6.17 plants per square foot, Planter 1 averaged 4.7 plants per square foot and planter 2 averaged 4.45 plants per square foot. As flowering began in early July, the air drill was ahead of the rest of the quadrants in this trial.

This trend continued into mid August with the airdrill sections beginning to pod two to three days earlier than the planter 1 and 2 sections. In September planter 1 was ahead of planter 2 With a 20% colour change, while planter 2 only had 10%.



Looking over the middle of the plot August 3rd, 2022

The air drill was ahead of both at 85% colour change, and the air drill was the tallest quadrant averaging 49 inches, while planter 1 was 43 inches, and planter 2 was the shortest at 39 inches. This trial was left to be straight-cut, and due to the season, it ripened slowly. On October 4th, the trial was harvested. To our surprise, Planter 2 yielded the highest at an average of 40.42, With Planter 1 being our second-highest yielder at 35.20. The lowest yielding of this trial was the air drill which yielded 31.09

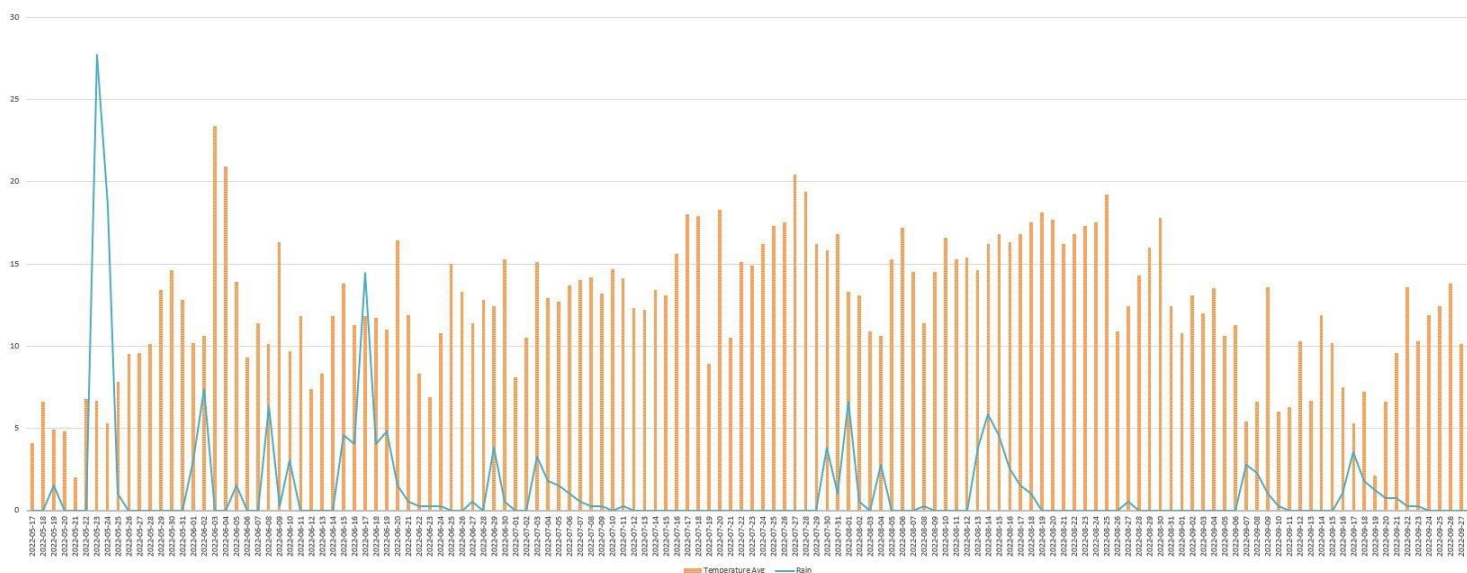


Planter

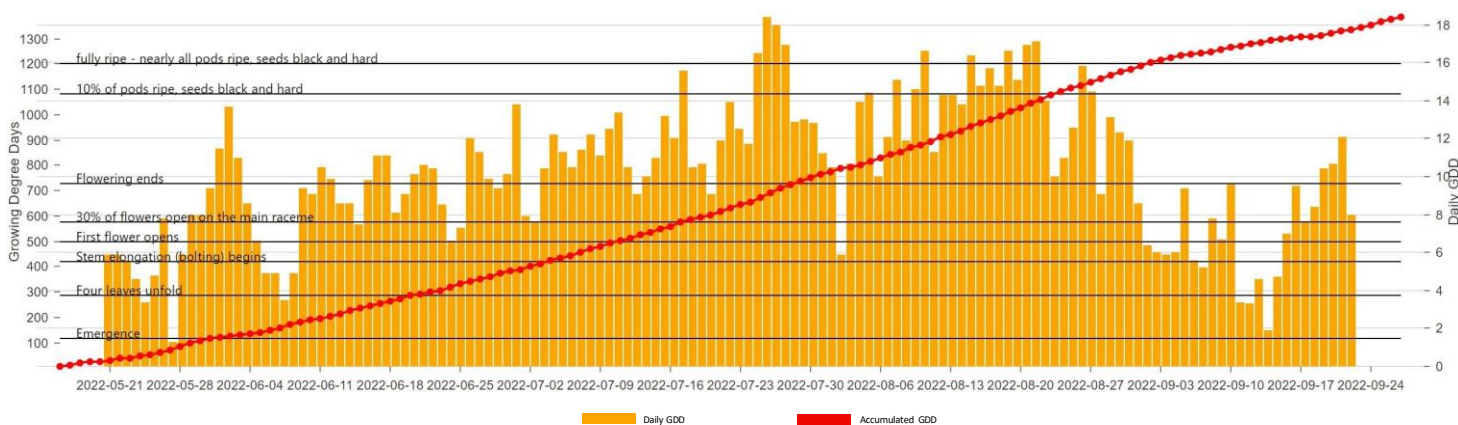


Harvest October 4th, 2022

Weather May 17th– October 4th



From the graph above we can see a large weather event occurred seven days after seeding. Between May 23rd and 24th the area received 46.23mm of rain. Throughout June the area continued to get rain events with a total rainfall in June being 58.16mm. July received minimal rain events. August and September had a few sporadic rain events. The season total was 169.93mm, 67% of the average. In this area three days had a daily average temperature over 20 degrees Celsius with two of them being in June. Like many areas the temperatures stayed mild throughout the season.



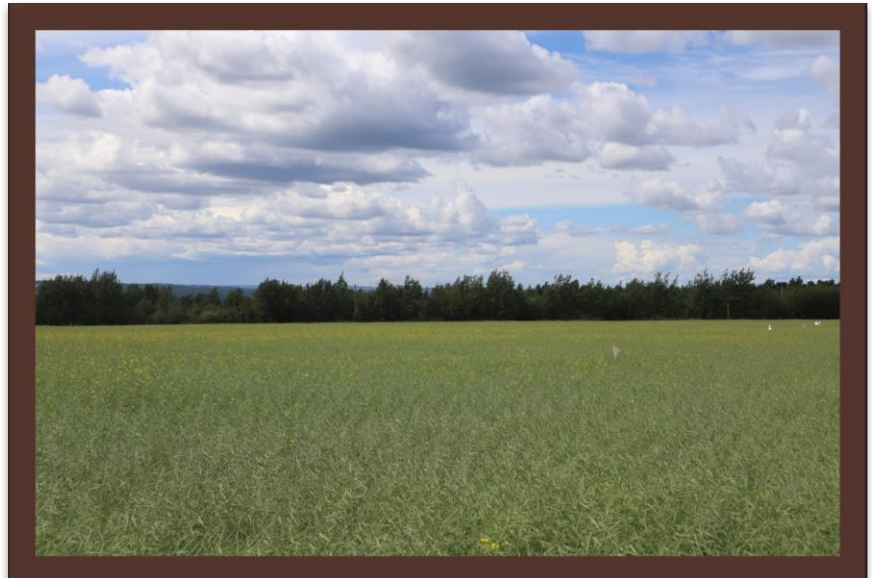
With a growing season between May 17th and October 4th (141 days) the accumulated growing degree days (GDD) (base 5) was 1427.

Weather data was pulled from the BC Peace Agri Weather Network (Flatrock station)

River Crest Reflects on Planter trial

River Crest seeded this trial on May 17, 2022. They attempted to seed the trial the day before, on May 16th, but got rained out. When asked to describe the field at seeding, Tobin said it was borderline too wet to seed; they were leaving tracks where they turned. They seeded this trial with a Bourgault 3710 air drill with upgraded low disturbance scrapers and a Case 1245 planter with 15” spacing. River Crest aimed for 20 lbs of actual phosphorus; they put down 5gal/ac liquid 11-34-0 with the planter and Granular 11-52-0 with the air drill. The trial was under seeded to perennial rye; Tobin did a pass with the air drill seeding the grass seed across the entire trial.

The trial received 1.5”-2” of rain a couple of days after seeding. With the wet field already, the rain contributed to the late, slow emergence. Throughout the season, Tobin figured the “air drill looked like it was going to out-yield the planter.” The air drill section was established better and looked about a day ahead of both planter sections. When asked about



wildlife Tobin said there was minimum wildlife, but near harvest, their cows did get into the north side of the trial. Due to the cows, the first 50 meters of the trial were excluded when collecting yield data. The trial was desiccated on September 23, 2022. When discussing the yield, Tobin talked about how shocked he was by the planter’s yields. He figured the long hot fall gave the two planter treatments time to catch up with the air drill.

River Crest would like to do this trial again. This was their first year with the planter, and the trial field was the first one they seeded with it. They were still learning how to set depth and row cleaners. Now with more experience, they would like to do it again.

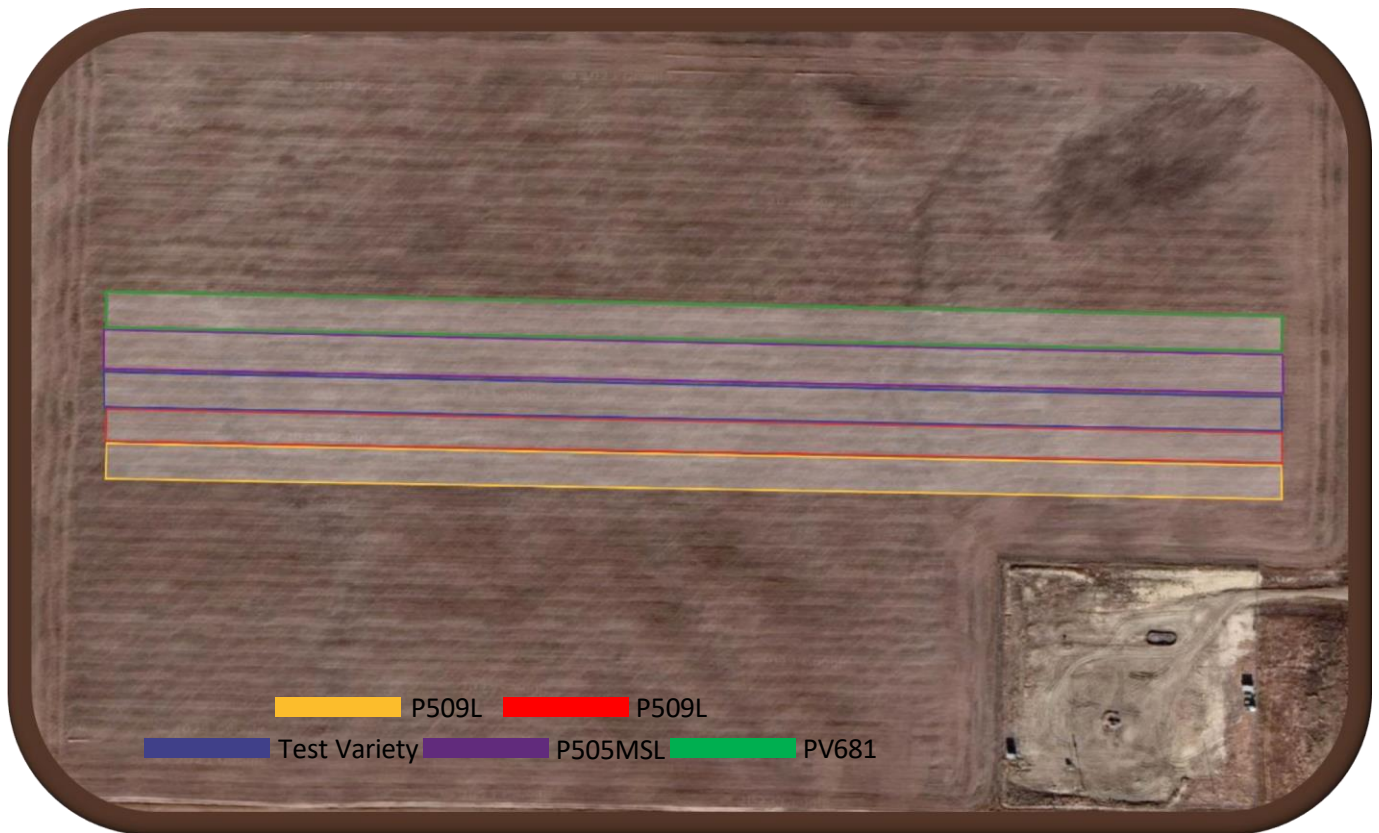
Planter Cost Analysis

| | Bag Price | Price of Seed per Acre | Canola Price | Bushel per Acre | Gross Profit per Acre | Profit after seed cost per Acre |
|--------------------------|-----------|------------------------|--------------|-----------------|-----------------------|---------------------------------|
| Air drill 5.2 lbs | \$635 | \$63.76 | \$19.33 | 31.09 | \$600.97 | \$537.21 |
| Planter1 2.74 lbs | \$635 | \$33.58 | \$19.33 | 35.20 | \$680.42 | \$646.84 |
| Planter2 1.80 lbs | \$635 | \$22.06 | \$19.33 | 40.42 | \$781.32 | \$759.26 |

**Planter 2
(1.80lbs)
\$112.42/ Acre
More**

Trial Eight

Odermatt' Pioneer Seeds Liberty Trial



Seeding Date: May 23, 2022

Harvest Date: September 23, 2022

Crop: Liberty Canola

Trial Area: Baldonnel, BC

Thank you for your sponsoring this trial:



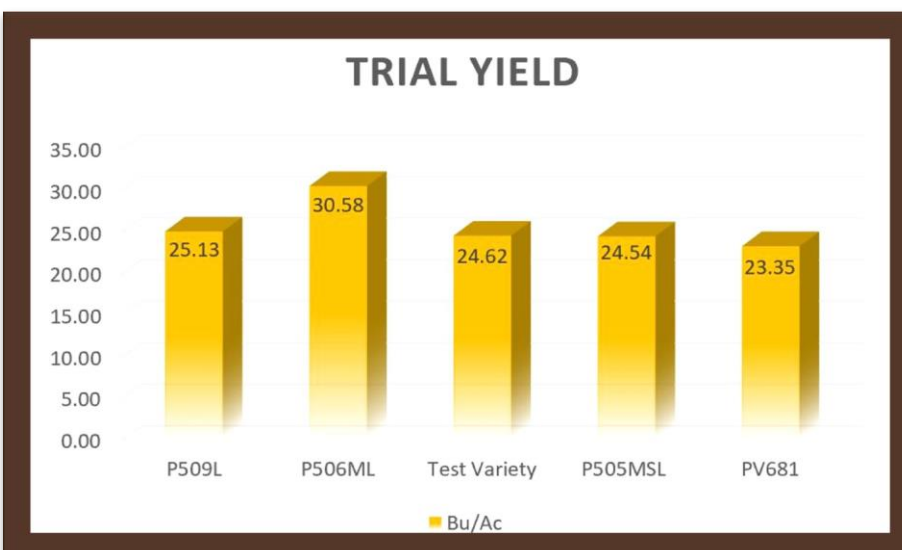
Odermatt' Pioneer Seeds Liberty Trial

| | Emergence Date | Plant count | Height | Weight (Lbs) | Acres | Bu/Ac | Moisture *2 weeks prior to harvest |
|--------------|----------------|-------------|--------|--------------|-------|-------|------------------------------------|
| P509L | May 30-June 2 | 4 | 42.6 | 4184 | 3.33 | 25.13 | 22% |
| P506ML | May 30-June 2 | 4.75 | 45 | 5092 | 3.33 | 30.58 | 22% |
| Test Variety | May 30-June 2 | 5.5 | 47.4 | 4100 | 3.33 | 24.62 | 15% |
| P505MSL | May 30-June 2 | 4.25 | 58 | 4086 | 3.33 | 24.54 | 15% |
| PV681 | May 30-June 2 | 3.5 | 49.4 | 3888 | 3.33 | 23.35 | 11% |
| | | | | | | | |

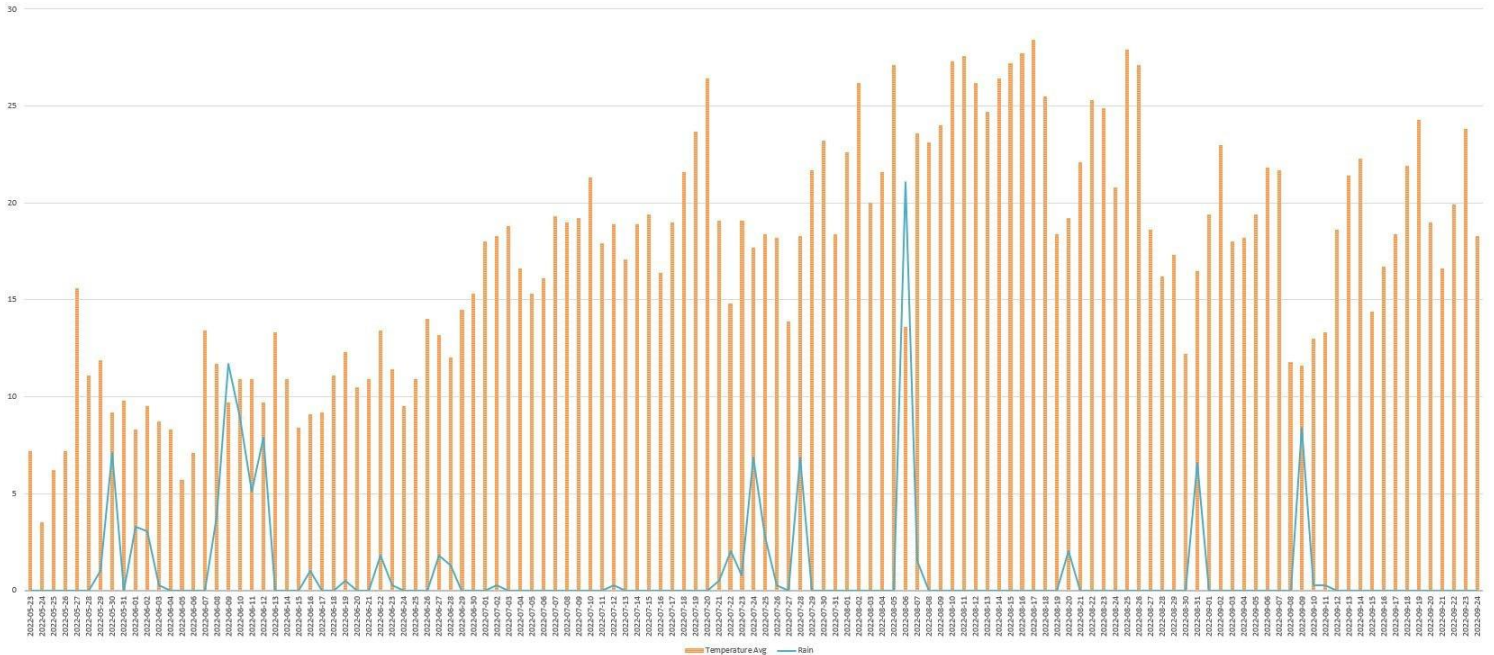
This trial was seeded on May 23rd and was organized by LH Willms with Pioneer Seed. It was a side-by-side canola variety trial with the Liberty trait and one experimental. The five different varieties in this trial were P509L, P506ML, the test variety, P505 MSL and PV 681. Emergence is predicted to have begun between May 30th and June 2nd. On June 2nd, the field was walked; the emergence had just begun across the entire field, with germination still happening in most varieties. The test variety had the most emergence out of all the varieties in this trial. Flea beetle damage of 10% was only noted in the P509L variety. By June 15th, the majority of the varieties were at the 2-3 leaf stage. With P509L being slightly behind at the 1- 2 leaf stage. On June 27th, plant counts were taken P509L had an average of four plants per square foot, P506ML had 4.75 plants per square foot, the test variety had 5.5 plants per square foot, P505ML had 4.25 plants per square foot, and the PVS 681 had 3.1 plants per square foot. In July, this trial was hit with hail



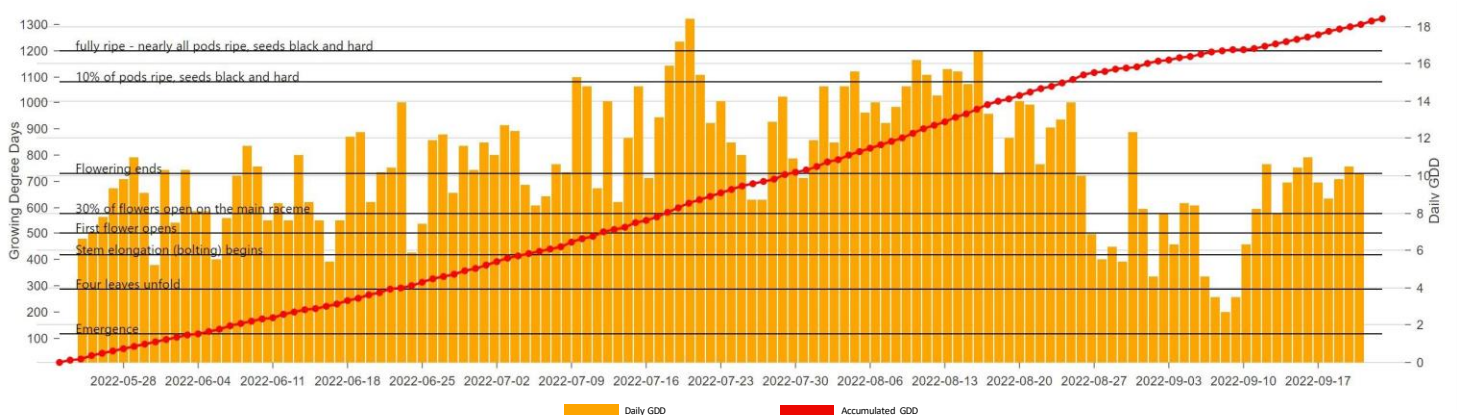
that caused plant damage. Throughout July and August, you could see some visual differences in this trial, as seen in the picture from August 18th. The test variety, along with P505, MSL and PV681 was ripening slightly faster than the other two varieties in the field. This trial was swathed on August 31st and then harvested on September 24th. The yield varied 7.23bu/ac from the highest yielder P506ML to the Lowest PV681.



Weather May 23rd– September 23th



Unfortunately the BC Peace Agri Weather Network does not currently have a weather station in Baldonnel or Fort St. John. This trail was located across the Beatton river from Cecil Lake. From the graph we can see there were no major rain events until August 6th when 21.08mm fell. The season rainfall total was 119.38mm, 51% of the average. During the season the trail had 14 days where the daily average temperature got above 25 degrees Celsius. With the overall season average being 17.2 degrees Celsius. This was one of the warmest areas BCGPA had trials in this year.



With a growing season between May 23rd and September 23rd (124 days) the accumulated growing degree days (GDD) (base 5) was 1309.

Weather data was pulled from the BC Peace Agri Weather Network (Cecil Lake station)

Malcolm's look Over The Canola

On May 23, 2022, Odermatts seeded this Pioneer Seed trial. The field it was seeded on is at the top of a hill and relatively level. At the time of seeding, the field had begun to dry up. Odermatts seeded with a Seed Master drill with an ultra-pro metering system. With this system, the seed goes directly from the meter to the opener for improved accuracy. Fertilizer was placed 1" from the seed.

Malcolm described the spring as cold, wet and late. The canola took its time emerging but was looking good. Though there was some flea beetle damage, Malcolm told me the canola grew through it without spraying. The pioneer varieties were treated with lumiderm,



which Malcolm has seen as very effective in controlling flea beetles. Unfortunately, hail hit this trial on August 1st. Malcolm talked about the hail; it came down for about 5 to 10 minutes and was around the size of a quarter. He says it was a fairly targeted storm that seemed to affect theirs and the neighbour's farms. We can see how damaging the storm was from the photos he supplied. Malcolm said that the canola went into survival mode once the storm rolled through.

Leading up to harvest, Malcolm could not see a front-runner out of the varieties. When swathing the trial, all five varieties cut well; none stood out. When harvest rolled around, Malcolm had to say all five varieties gave them trouble. Overall it was the most challenging field for

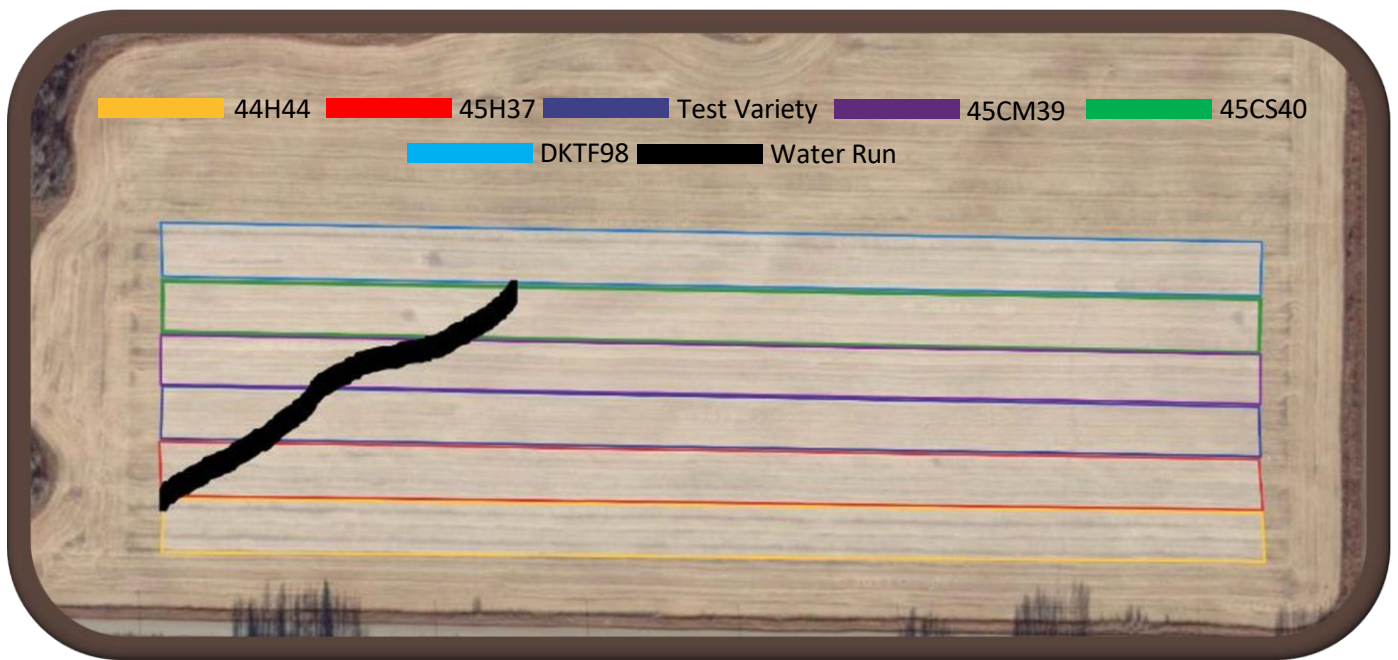
Odermatts this year.

Odermatts have been doing variety trials for a number of years; this was the first year Malcolm does not feel the data holds value due to the weather. Though he went on to say it is an "incredible opportunity to partner with industry," and they will continue to do trials like these.



Trial Nine

LH Willms Pioneer Seeds Round Up Ready Canola Trial



Seeding Date: May 25, 2022

Harvest Date: September 26, 2022

Crop: Roundup Ready Canola

Trial Area: Fort St. John, BC

Thank you for your sponsoring this trial:



LH Willms Pioneer Seeds Canola Trial

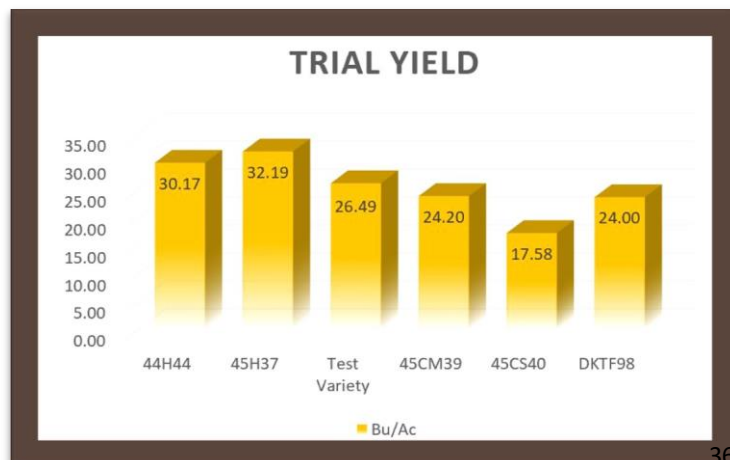
| | Emergence Date | Plant count | Weight (Lbs) | Acres | Bu/Ac | Mois-ture | Oil % | Green | Test Weight | TKW | Dockage |
|---------------------|----------------|-------------|--------------|-------|-------|-----------|-------|-------|-------------|------|---------|
| 44H44 | June 10-17th | 2.8 | 4164 | 2.76 | 30.17 | 8.55% | 43.9% | 2% | 50 | 4g | 5% |
| 45H37 | June 10-17th | 3.2 | 4442 | 2.76 | 32.19 | 7.23% | 46.1% | 0% | 50.2 | 3.8g | 5% |
| Test Variety | June 10-17th | 5.4 | 3656 | 2.76 | 26.49 | 7.70% | 45.8% | 4% | 50.2 | 4.6g | 4% |
| 45CM39 | June 10-17th | 2.4 | 3340 | 2.76 | 24.20 | 8.48% | 44.3% | 3% | 50 | 4.4g | 3% |
| 45CS40 | June 10-17th | 5.2 | 2426 | 2.76 | 17.58 | 8.56% | 44.3% | 0% | 49.5 | 4.3g | 4% |
| DKTF98 | June 10-17th | 5 | 3312 | 2.76 | 24 | 8.80% | 44.2% | 2% | 51.8 | 4.7g | 4% |



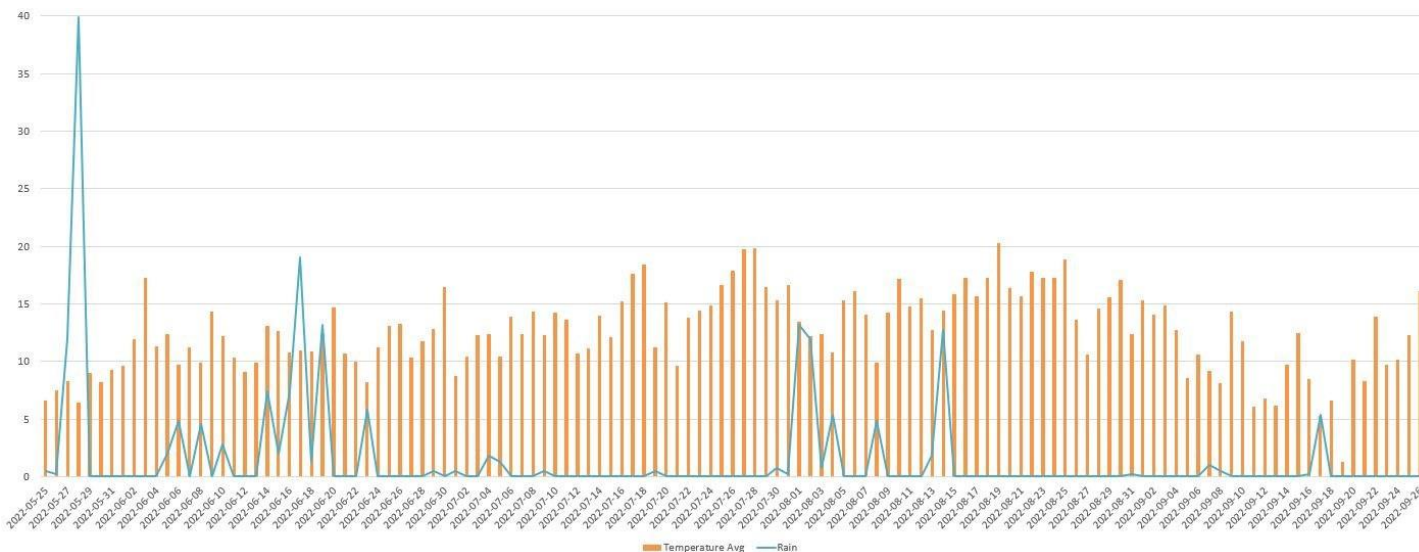
This trial was seeded on May 25th. It is a canola seed variety trial organized by LH Willms with Pioneer Seeds. This trial had six Roundup-ready varieties, including one test variety. Varieties were 44H44, 45H37, the test variety, 45CM39, 45CS40 and DKTF 98. This trial was walked on June 1st, and no emergence was found across the entire field. Seeds were dug up, but no germination could be found. The soil had good moisture but had begun to crust over. Emergence is predicted to have happened between June 10th and 17th. On June 15th, the field was walked; 44h44, 45H37, 45CM39 and 45CS40 had inconsistent emergence and staging between cotyledon and the first leaf. The test variety had more consistency in its

emergence, and its plants were bigger but still had the cotyledon to the first leaf stage. DKTF98 was the most inconsistent emergence at this time and was at the cotyledon stage. In late June, plant counts were taken. 44H44 had an average of 2.8 plants per square foot.

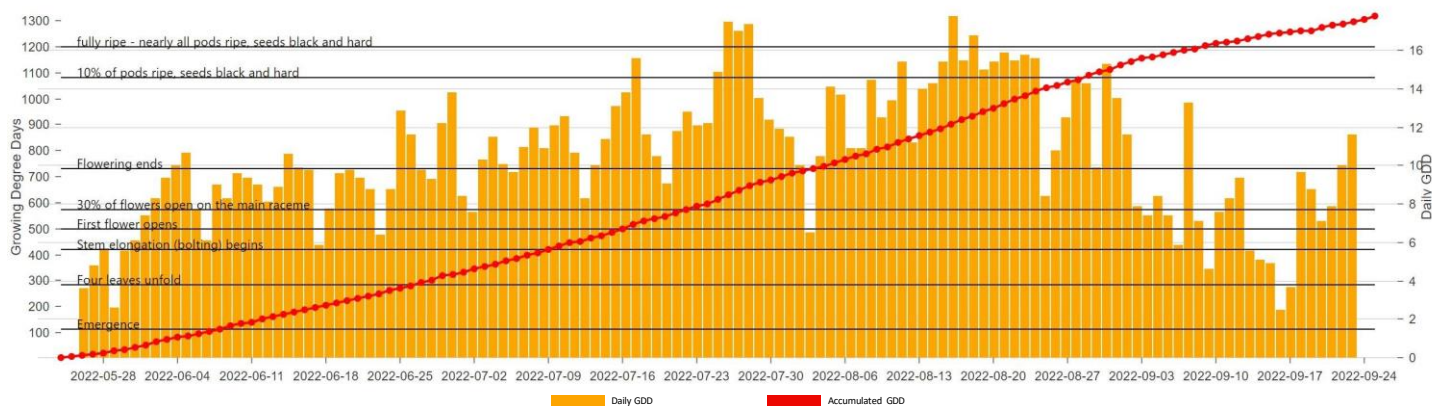
45 H 37 had an average of 3.2 plants per square foot. The test variety had an average of 5.4 plants per square foot. 45CM39 had 2.4 plants per square foot. 45CS40 had 5.2 plants per square foot, And DKTF98 had five plants per square foot. By July 13th, flowering across the trial was at 85%. Throughout July, there is very little visual difference between the varieties in this trial. On June 2nd, when this trial was walked, it was noted that 45H37 and DKTF98 were the furthest ahead and nearly done flowering. While 44H44 was the furthest behind and the thinnest stand. This trial was swathed and harvested on September 26th. The yield for 44H44 was 30.17 bushels per acre. 45H37 yielded 32.19 bushels per acre, while the test variety yielded 26.48 bushels per acre. 45CM39 yielded 24.2 bushels per acre. 45 CS 40 yielded 17.58 bushels per acre, and DKTF 98 yielded 24 bushels per acre.



Weather May 25th – September 26th



From the weather chart we can see that four days post seeding this trial was hit with 39.88mm of rain which contributed to the late emergence on this field. We can also see in a six day period between June 14th and 19th this area received 50.3mm. By June 24th the rain had tapered off until August 1st this caused hardening of the soil. When looking at the average temperature we can see the growing season was mild with only August 19th having an average temperature above 20 Celsius.



With a growing season between May 25th and September 26th (125 days) the accumulated growing degree days (GDD) (base 5) was 1315. On this Growing degree Avg chart we can see the predicted canola staging based off of GDD. According to the GDD, emergence should have happened on June 9th, from our observations it is predicted ripe emergence was 1-7 days behind, this could be due to the heavy rainfall four days post seeding.

Weather data was pulled from the BC Peace Agri Weather Network (Rose Prairie station)

The Round up on canola variety trial

Les and Hannah Willms seeded the trial on May 25, 2022. They seeded the trial with their New Holland drill with atom jet paired row openers. The day before seeding, a hail storm came through the area. Les says the edge of this storm hit the field and yet it did not affect the ability to seed the following day. When asked how the field looked at seeding, Les said they were “getting into the better seeding conditions.”

Last fall, Les got a post-harvest burn-off with glyphosate done on the outside rounds and two passes on the south side. The Burn-off meant the 44H44 had better weed control than the rest of the trial. The rest of the trial was heavily covered in dandelions. Les noticed the dandelions were protecting the soil from crusting over as severely in the spring. This helped the trial come up more evenly than the 44H44 strip.

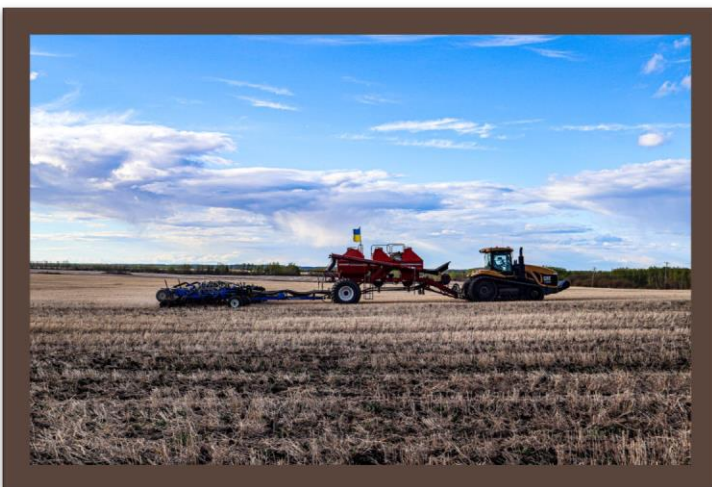
Another problem that occurred in this trial was a water run. Les and Hannah showed on the map that this field has a water run on the



west side. The water run went through the 45CM39 and 45CS40. Hannah combined the trial and noticed the swaths got smaller where the water run was.

When asked if one variety stood out at swathing, none of them did stand out, but Les was pleased with how the swaths looked across the whole trial. Les mentioned that all the varieties swathed well. Hannah also said no variety gave her trouble when combining. She was able to keep the speed consistent throughout all the varieties.

Les and Hannah were happy with the trial overall. The heavy rain after seeding and continued rains in June highly affected the trial. The weather had a significant effect on this trial though it pulled through.



Trial Ten

Tea Creek Liberty Trial



Seeding Date: May 24, 2022

Harvest Date: September 13, 2022

Crop: Liberty Canola

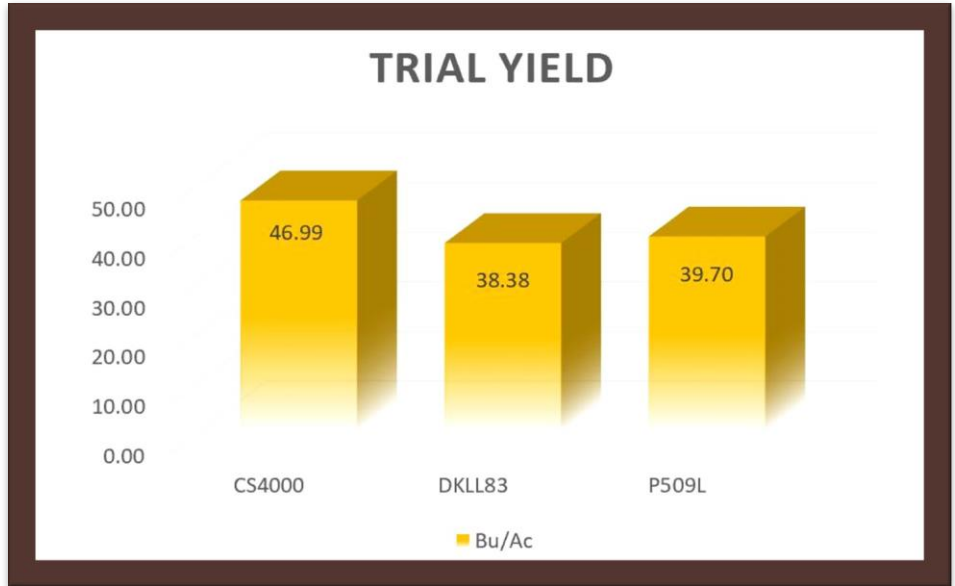
Trial Area: Fort St. John, BC

Tea Creek Liberty Trial

| | Weight (Lbs) | Acres | Bu/Ac | Moisture | Oil % | Green | Test Weight | TKW | Dockage |
|--------|--------------|-------|-------|----------|--------|-------|-------------|-----|---------|
| CS4000 | 2138 | 0.91 | 46.99 | 8.15% | 44.30% | 0% | 54.4 | 3.3 | 1% |
| DKLL83 | 1708 | 0.89 | 38.38 | 7.94% | 43.30% | 1% | 54.4 | 3.6 | 2% |
| P509L | 1588 | 0.80 | 39.70 | 7.99% | 43.80% | 0% | 53.7 | 3.3 | 1% |

Jason seeded this trial on May 24, 2022. He did this trial to find a liberty canola that worked in his fields.

Tea Creek Farms seeded the trial with a Seedhawk Icon electric drill meter system with 12" spacing and fertilizer set 2" to the side of the seed. Each variety was seeded at a rate based on the thousand kernel weight (TKW). CS4000 had a TKW of 6.3 and was seeded at 6.8 lbs/ac. DKLL83's TKW was 5.12 and seeded at 5.6 lbs/ac. The P509L TKW was 5.8 with a seeding rate of 6.2 lbs/ac. Soil samples of the field showed potash was low, and the fertilizer put down was a blend of 95-35-35-23 at 365lbs/ac.



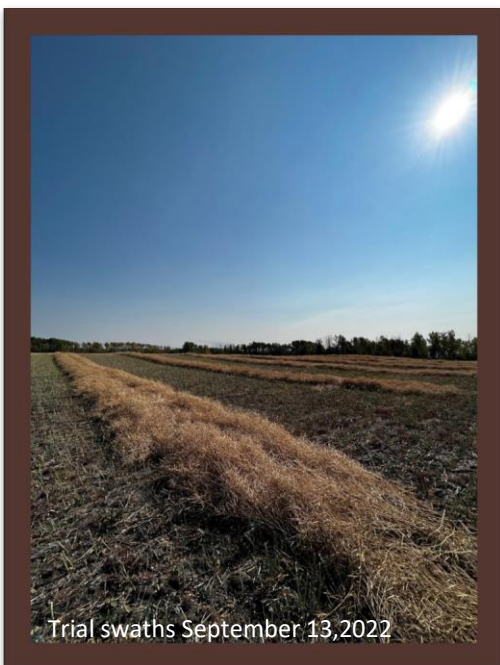
This field has a gentle south-facing slope. This made for excellent seeding conditions this spring. Jason said it is always one of their first fields seeded in the spring. Three days after seeding, a heavy rainfall came through; due to the field's drainage, this rainfall did not affect the trial, said Jason. Because this field got a good start before the heavy June rain, Jason said flea beetles were not an issue on this trial. The trial also

had no other bugs or diseases affect it.

It was Tea Creek's first year growing CS4000 and P5509L. When asked if any one variety stood out above the rest, Jason said they all looked the same and were "fairly early maturing." All three varieties stood well and cut easily at swathing.

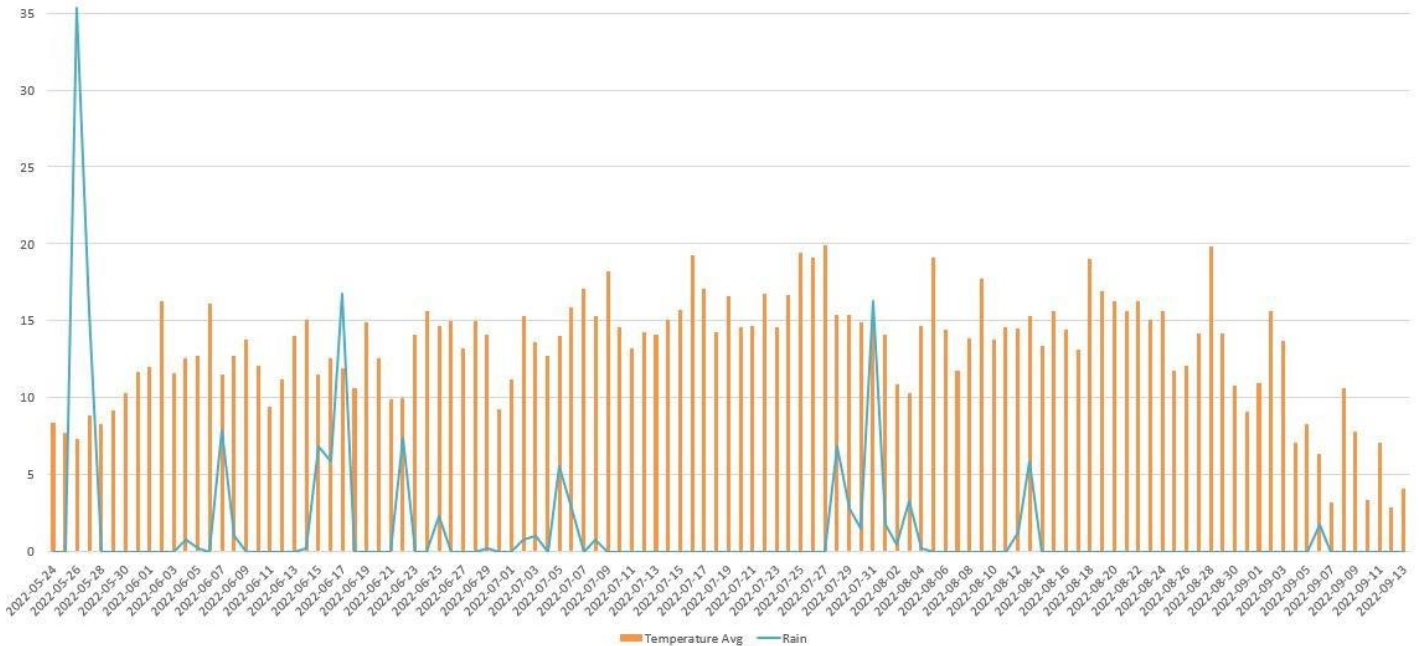
At 8:00 pm on September 13, 2022, the trial was harvested. The CS4000 was the big winner yielding 47 bushels per acre before dockage, the P509L yielded second best at 39.7 bushels/ acre before dockage, and lastly, the DKLL83 yielded 38.38 bushels per acre before dockage.

This trial was planned and seeded by Tea Creek farms. When the BCGPA put out a call for variety of trials in the area, Tea Creek contacted us. Tea Creek allowed us to take yield data off with a weigh wagon. They also shared all in-season insight and data they had.

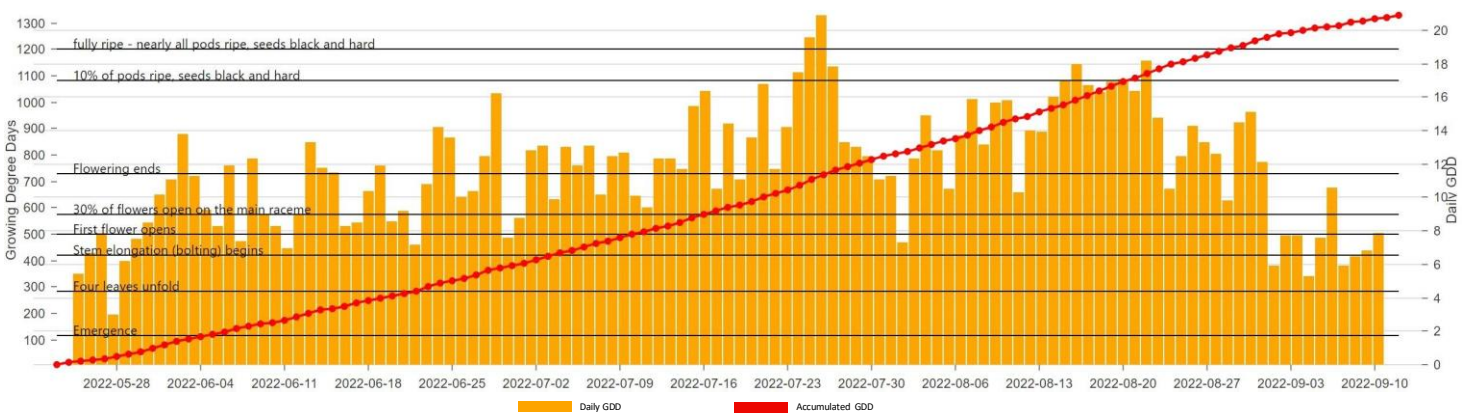


Weather May 24th– September 13th

Weather data was pulled from the BC Peace Agri Weather Network (Bear Flats station)



This trial was just to the south of the Fort St. John City limits , towards Old Fort. Unfortunately the closest BC Peace Agri Weather Network weather station is the Bear Flats station. Three days after seeding the area received 51.06mm of rain over two days. Throughout June the area continued to receive rain events with 49.53mm falling in June. The season total was 153.67mm 73% of the average. Over Half of the rainfall happened in May and June. The average temperature for the whole season was 13.2 degrees Celsius. With no days in the season having an average temperature over 20 degrees Celsius.



With a growing season between May 24th and September 13th (111 days) the accumulated growing degree days (GDD) (base 5) was 1327.

Liberty Canola Trial Cost Analysis

| | Bag Price | Price of Seed per Acre | Canola Price | Bushel per Acre | Gross Profit per Acre | Net Profit per Acre |
|--------|-----------|------------------------|--------------|-----------------|-----------------------|---------------------|
| CS4000 | \$630 | \$85.71 | \$19.33 | 46.99 | \$908.32 | \$822.61 |
| DKLL83 | \$562 | \$62.93 | \$19.33 | 38.38 | \$741.89 | \$678.96 |
| P506L | \$562.50 | \$69.79 | \$19.33 | 39.70 | \$767.40 | \$697.61 |

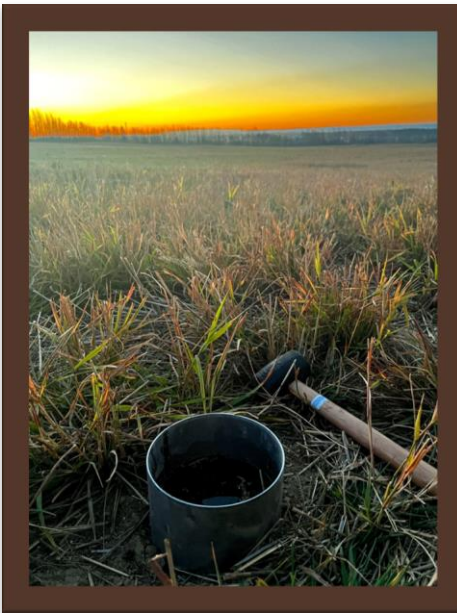
CS4000
\$125.00/ Acre
More





PEACE REGION

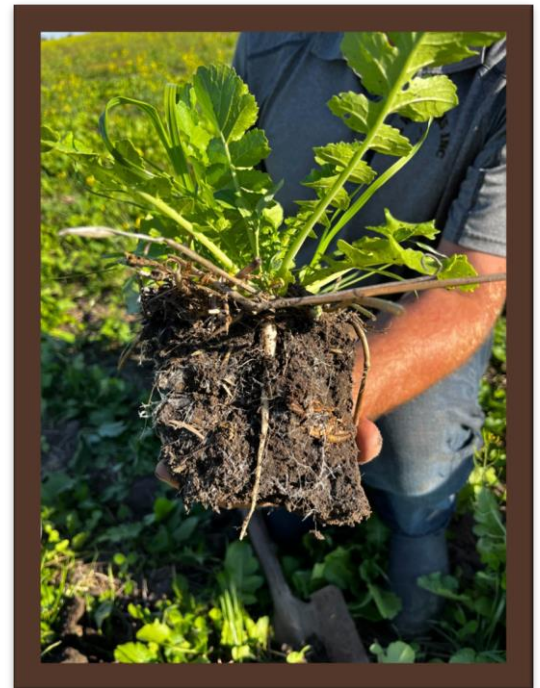
LIVING LAB



The Peace Region Living Lab project is a region-wide collaboration led by the Peace Region Forage Seed Association (PRFSA). Seven other producer groups and an Indigenous Partner, Fourth Sister Farm, have joined the PRSFA to bring together a project that will serve agricultural producers and land stewards of the region. *Enhancing agroecosystem services in the Peace River Region* is the focus of the Peace Region Living Lab (PRL), with the goal of adoption of practices that improve productivity, profitability and environmental resiliency. This Living Lab is unique in that it will encompass the Peace Region in both Alberta and BC. The PRL will look at agricultural operations as whole systems, considering land management, economic analysis and the social

aspect of implementing innovative practices.

BCGPA has seven producer sites across the BC Peace Region. With a focus on cover cropping, minimum till, perennial crop integration into an annual rotation, intercropping and cattle integration into a perennial and annual crop rotation.



Funding for this project [in part] has been provided by Agriculture and Agri-Food Canada through the Agricultural Climate Solutions – Living Labs program.

Crop Varieties Grown in the BC Peace in 2022

The table below shows the varieties with the most acreage reported to the Business Risk Management Branch in 2022. These variety's represent more than 50% of all seeded acres for each crop type in the BC Peace Region.

| Barley | Canola | Peas | Oats | Wheat |
|---------------|----------|-------------|------------|---------------|
| AAC Connect | L233P | AAC Carvers | AC Morgan | AAC Brandon |
| CDC Copeland | 75-45 RR | CDC Meadow | AC Mustang | AAC Viewfield |
| Brahma | L340PC | | CDC Arborg | CDC Go |
| CDC Austenson | L234PC | | | |

For more information about Business Risk Management programs and production insurance please contact:

Fort St. John Ministry Of Agriculture and Food

250-787-3240 or productioninsurance.ftstjohn@gov.bc.ca

Dawson Creek Ministry of Agriculture and Food

250-784-2236 or productioninsurance.dawsoncreek@gov.bc.ca



Products Used In The 2022 Trials

Use the photos app on your phone to scan QR codes



Tarus.ag

Scan the QR code above for more information about Crystal Green, Sulphur Plus, Active Build Active VPR and Ignite.



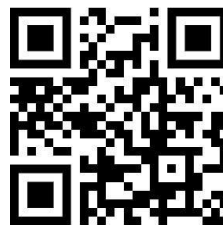
www.alpinepfl.com

Scan the QR code above for more information about G22, K-19-S, liquid boron, humic acid and liquid manganese



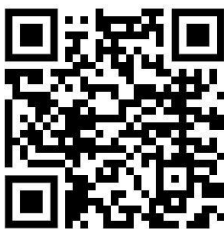
www.atpag.com

Scan the QR code above for more information about ATP Releaf



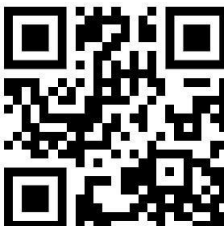
www.pioneer.com

Scan the QR code above for more information about Pioneer canola, P509L, P506ML, P505MSL, 44H44, 45H37, 45CM39 and 45CS40



www.cropscience.bayer.ca

Scan the QR code above for more information about Dekalb canola DKTF98 and DKLL83SC



www.cropscience.bayer.ca

Scan the QR code above for more information about Canterra canola CS4000



