



Research Projects for 2024 & Seed Variety Update

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Research Projects

- The past 5 years Mustard 21 (M21) and the Saskatchewan Mustard Development Commission (SMDC) were involved in the Canadian Agricultural Partnership program.
- The big wins that came out of that for mustard growers were Hybrid Brown 18 and Yellow 80.
- Advancement was also made on clubroot resistance in mustard, herbicide tolerance and disease resistance.
- Testing for new hybrids continues to build on the yield advantage.

Research Projects - SCAP

- SCAP refers to the next round of funding for research and it stand for Sustainable Canadian Agricultural Partnership.
- The priorities for AAFC in the SCAP program are:
 - Climate Change and Environment – Green House Gas Reduction
 - Economic Growth and Development
 - Sector Resilience and Societal Challenges

Proposed SCAP for 2023 to 2028

Projects for next round of funding are:

1. Greenhouse Gas Study

- Objective is to study baseline nitrous oxide emission measurements from the following crops: mustard, camelina, flax, sunflower, wheat, and carinata.
- The study will vary the rates of nitrogen and trace the flow of the nitrogen to get a better understanding of the flow of nitrogen.

Proposed SCAP for 2023 to 2028

2. Climate Smart condiment mustard for crop productivity and resilience.

- Objective is to develop brown and oriental mustard hybrids and yellow mustard composite varieties with herbicide tolerance.
- In addition, screening of brown mustard germplasm for low cadmium content to meet the EU standards. Also work to develop clubroot mustard lines as well as lines with saline tolerance.

Projects outside of SCAP for 2023 to 2028

- Objective is to work closely with the industry partners to develop new uses for mustard.
- Work with the Saskatchewan Food Industry Development Centre (Food Centre) in Saskatoon on adding mustard to pet food.
- Goal is to increase gut health in pets.

New Varieties – AAC Hybrid Brown 18



- M21 launched Hybrid Brown 18 in 2009
- This was the first hybrid brown mustard in the world
- The thanks for this needs to go to Bifang Chang and her staff at AAFC
- This variety has proven to be a top performer in spite of the last three years of drought we had

New Varieties - AAC Yellow 80



- AAC Yellow 80 is a composite variety
- It yields 10% higher than the OP variety Andante
- This year I had several calls from growers saying how good it looks in the field and the same was said about the research plots







New Varieties – Oriental Hybrid

- AAFC and M21 are working on a hybrid oriental line of mustard.
- A candidate will be selected in 2024 and brought forward for advancement.
- M21 expects to have small amounts of this variety available for the spring of 2025

New Varieties – Brown Elite Hybrid

- AAFC and M21 have been working on developing a replacement line for AAC Brown 18.
- The goal was to come up with a hybrid brown with milling characteristics very close to centennial brown.
- This variety recently received registration, and some is being produced for sale in the spring of 2024.
- This variety gives a slight increase in yield over Brown 18 and most importantly helps with some of the milling issues with Brown 18.

New Varieties – AAC Guard

- AAFC Mustard is becoming a more important crop in the bio fumigation market and there is also potential in the cover crop market.
- Potato growers started using AAC Brown 18 as a bio fumigation product. Those growers asked M21 if there was a way to develop a variety that does not set seed?
- M21 developed AAC Guard for the bio fumigant market and now it is creating interest in the cover crop market as well.

What's next?

AAFC and M21 are working on:

- Herbicide tolerance
- Club root resistance
- Saline Tolerance
- Pod shatter

These projects are all part of SCAP

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Our Industry Partners:

Western Grains Research Foundation (WGRF)

Saskatchewan Mustard Development Commission (Sask Mustard)

Canadian Mustard Association (CMA)



Thank you! Questions?