



Croportunities 2023

Opportunities with Mustard

March 14, 2023

Topics

Hybrid Brown 18 Mustard

Yellow 80 Mustard

Benefits of each

Agronomic information

Mustard under irrigation

Mustard 21 and their role

Hybrid Brown 18

- Hybrid Brown 18 was launched in 2019
- First hybrid mustard in the world
- Developed by Dr Bifang Cheng with AAFC
- Going to a hybrid was similar when it was done with canola
- Growers are seeing the hybrid advantage with mustard
- Quicker plant development and more plant matter which results in higher yields

AAC Brown 18: Agronomics

	yield	index	maturity	height	lodging
	bu/ac		days	cm	
Centennial					
Brown	31.3	100	88	134	none
AAC					
Brown 18	38.8	124	89	138	none
N=17					

Source: 2016-2017 CFIA Registration Document

AAC Brown 18: Disease Rx

	White Rust		Blackleg	Clubroot	Verticillium
	2a	2v			
Centennial	susc.	res	highly	susceptible	susceptible
Brown			resistant		
AAC	susc.	res	highly	susceptible	susceptible
Brown 18			resistant		

N=2

Source: 2016-2017 CFIA Registration Document



Seeding rate and fertility

Hybrid Brown 18

Seeding rate is 4.5lbs to 6.0lbs per acre

Fertility recommendation is 80lbs to 100lbs of N

AAC Brown 18

This variety has proven to be a top performer in spite of the last three years of drought we had

Hybrid Brown 18 is showing yield advantage over Centennial Brown of 18% to 20%

This year a significant number of brown mustard acres will be Hybrid Brown 18



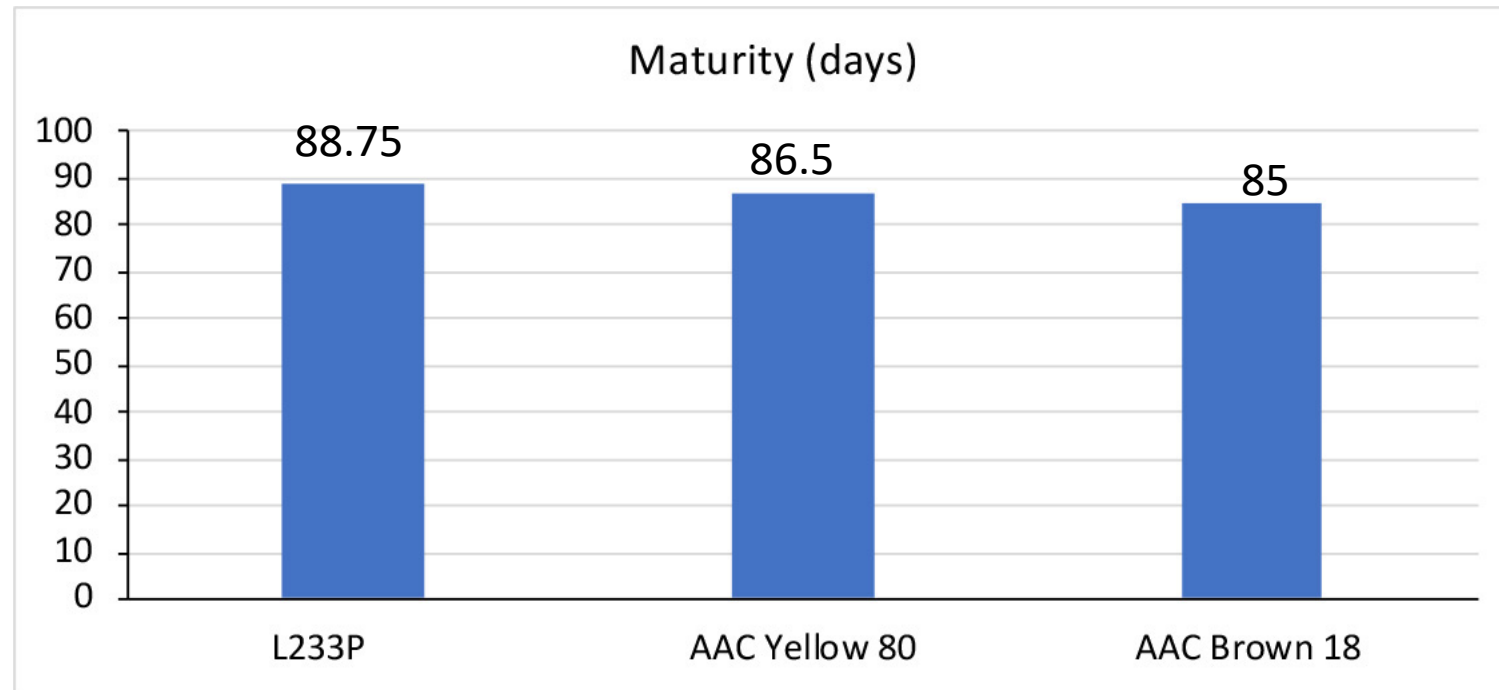
ICDC Irrigation 2022

- Seeding date: May 21, 2022
- Harvest date: August 17 (Hybrid) and August 24 (Yellow)
- Fertilizer and Soil test
 - Soil test (0 to 24): N – 60 lb/ac and P – 3ppm
 - Fall banding of P – 53 lb/ac (60kg/ha)
 - Spring – N 98 lb/ac (banded) and P 18 lb/ac (seed placed)
 - UAN – At the start of flowering, sprayed with 30 lb N and 20 lb P/ac to lessen vegetative growth and produce more flowers

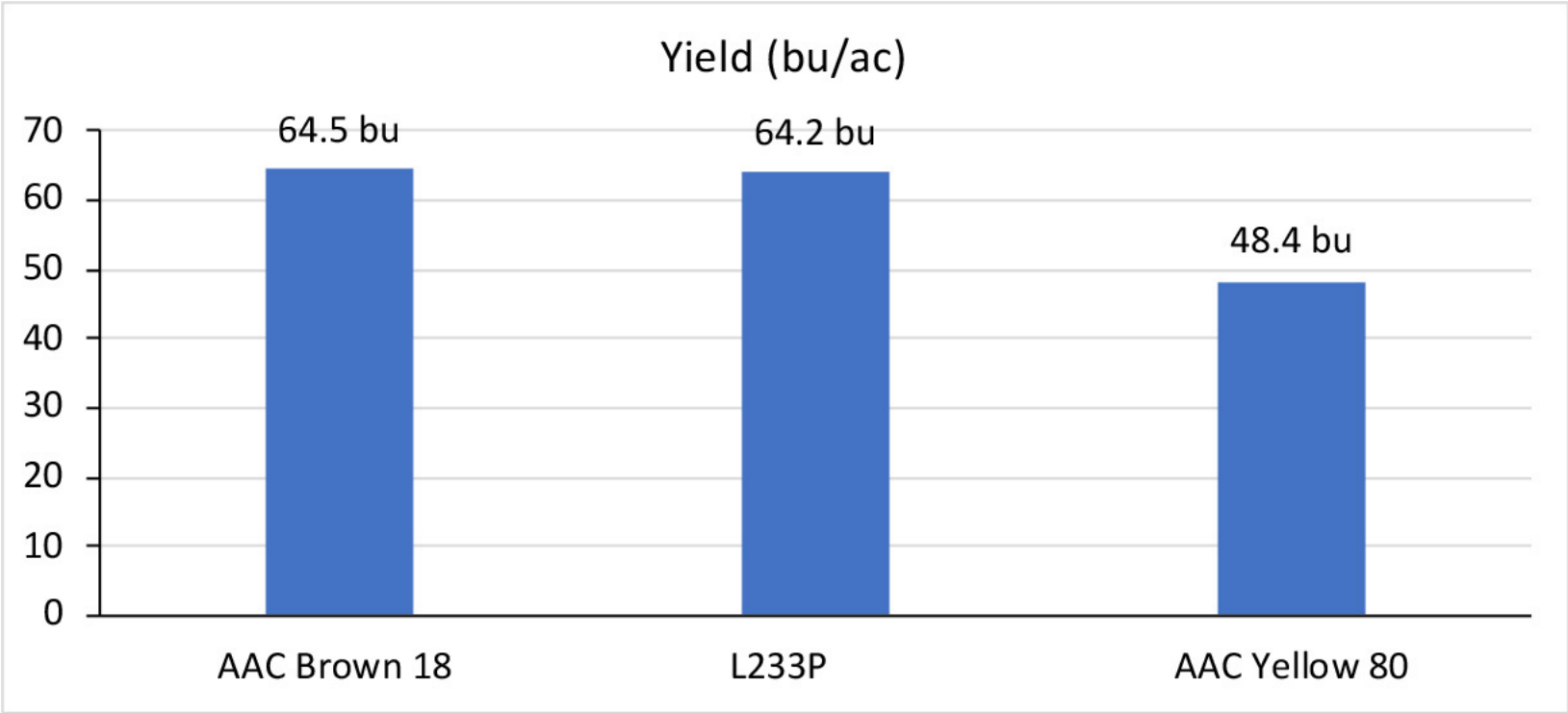
ICDC Irrigation 2022

- Crop Protection – Matador twice for flea beetles
- Irrigation/precipitation – 6.5 inches of irrigation and 4 inches of rain.

ICDC Irrigation 2022 Maturity Results



ICDC Irrigation 2022 Yield Results



AIM Site 2022 – Time Lapsed Photos

- At the Ag In Motion site in 2022 M21 had planted Hybrid Brown 18 as well as AAC Yellow 80.
- The site is light soil but there was adequate moisture at seeding.
- As time moved on the site dried out and required some irrigation.
- Once the plants emerged I took time lapsed photos to see how the crop advanced.

June 1, 2022



June 13 2022



June 22 2023



June 29 2022



July 10 2022



July 14 2022 during AIM show



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



AAC Yellow 80: Agronomics

	yield	index	maturity	height	lodging
	bu/ac		days	cm	
Andante	26.2	100	80	110	none
AAC					
Yellow 80	29.9	113	79	110	none

N=13

Source: 2022 MAT trials

AAC Yellow 80: Disease Rx

	White Rust 2a2v	Blackleg 7a7v	Clubroot	Verticillium
Andante	res.	res.	resistant	susceptible
AAC Yellow 80 N=2	res.	res.	resistant	susceptible

Source: 2020 CFIA Registration Document

Seeding rate and fertility

AAC Yellow 80

Seeding rate is 10lbs per acre, working on determining the optimum rate.

Fertility recommendation is 80lbs to 100lbs of N

Mustard 21 Update

Background

The vision for M21 was to drive the research projects and handle the duties of working with Ag Canada on these projects. Designed to span the entire value chain in our approach to government and in designing the goals of the work.

M21 board of director's consists of seven members. Three board members are from CMA, three from SMDC and one is from the industry.

Mustard 21

- In the last 2 years the role of M21 has changed and seed sales have become an important part of the duties of M21
- This involves sales, marketing, developing varieties and plant breeding work with Ag Canada.

Research Projects

The past 5 years had Mustard 21 and Sask Mustard have been involved in the Canadian Agricultural Partnership program.

The big wins that came out of that for mustard growers was Hybrid Brown 18 and Yellow 80.

Advancement was also made on clubroot resistance in mustard, herbicide tolerance and disease resistance.

Testing for new hybrids has also began to continue to build on the yield advantage.

Research Activities

- Mustard 21 is working hard to get non-GMO herbicide tolerance and club root resistance into mustard.
- In addition Mustard 21 is working with Ag Canada plant breeder Dr. Bifang Cheng to get higher yielding hybrid's in mustard as well.
- Mustard 21 has been working with Nuseed to develop a Carinata line of mustard that will fit into the bio fuel market as well.

What's Next

Advancement in clubroot resistance in mustard

Herbicide tolerance

Greater disease resistance.

Testing for new hybrids has also begun to continue to build on the yield advantage.

Hybrid Oriental mustard

Acknowledgments

M21 thanks the following organizations for their support:

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Our Industry Partners:

Western Grains Research Foundations (WGRF)

Saskatchewan Mustard Development Commission (SMDC)

Canadian Mustard Association (CMA)

Thank you – Questions?

