

DIVERSIFICATION CENTRES

RESEARCH | EXTENSION | ADOPTION



SEPTEMBER 2023



HARVEST BEGINS AT MANITOBA'S CROP DIVERSIFICATION CENTERS

Harvest is well underway at Diversification Centres (DCs) across the province. Annual forages, field peas, winter wheat and fall rye were the first crops to come off, followed by teff-forage intercrops. Despite the dry and hot weather conditions this planting year, yields for most trials are decent. The Manitoba Crop Diversification Centre (MCDC) reported the harvesting, drying, and subsampling

of annual forages, teff, winter and spring cereals, peas, flax, pea-cereal silage, hemp-cereal silage, mustard bio-fumigation, and corn Goss's Wilt nursery trials. Staff will weigh and analyse wheat and barley samples for protein content and moisture. For the detailed information about DCs' project descriptions and results, please visit the DCs' website <https://mbdiversificationcentres.ca/> or follow us on X @CropCentres.

UPCOMING EVENTS

September 6

Sunflowers Production Workshop

Agassiz Soil & Crop Improvement Association (ASCIA) – Beausejour, MB

September 7

Soybeans Production Workshop

Agassiz Soil & Crop Improvement Association (ASCIA) – Beausejour, MB

September 13

Assiniboine Community College Field Tour

Manitoba Crop Diversification Centre (MCDC) - Carberry, MB

September 17

Discover the Farm

Bruce Campbell Farm & Food Discovery Centre - 1290 Research Station Rd, Glenlea, MB

MCDC HOSTS 30TH ANNUAL FIELD DAY IN CARBERRY

Manitoba's ag-community and growers got together at the MCDC in Carberry on August 9 to get a firsthand look at potato and crop diversification research in the region on its 30th Annual Field Day. The event covered the applied research in potatoes and information on high value crops options in rotation to processing potatoes (Crop Diversification). The Centre Manager, Garth Christison, welcomed all field day participants in the opening remarks and thanked Simplot Canada (II) and McCain Foods Canada for sponsoring the event.



Amy Unger (MHPRC Inc.), Kayla Moore (AAFC), Haider Abbas (MB Ag), Vikram Bisht (MB Ag), Marla Riekman (MB Ag), Elmer Kaskiw (Ducks Unlimited Canada), Brad Sparling (University of Manitoba), Manasah Mkhabela (MB Ag), Dennis Lange (MB Ag), James Frey (MB Ag), and Shauna McKinnon (MB Ag) spoke at the annual field day to update about current research initiatives of MCDC.

MCDC is hosting ag-students of Assiniboine Community College (ACC) on

September 13, 2023

to provide an overview of applied research methods, experimental designs, and seasonal work opportunities.

MCDC Demonstrates Soil Pit at the Annual Field Day

Soil pits help to better understand soil structure and reveal soil health secrets. Marla Riekman (MB Ag) gave the soil pit talk at the MCDC's annual field day in Carberry. Standing in a hole about 6 feet deep and 6 feet wide, the field day participants experienced crops' rootzone depth; layers of soil compaction several inches deep; earthworm activity and soil pores. The participants also learned the impact of tillage activities on crop root development, soil water infiltration and water holding capacity. "One of the effective ways to measure the soil health and the impact of crop production practices is several feet underground," stated Riekman. "Soil pits provide a good idea to a producer about their soil resources and crop yield potential," she added.



Month in Review at PCDF

The Parkland Crop Diversification Foundation (PCDF) organized its annual field day on August 3 in Roblin, MB. Here is a sneak peek at the field day topics and other activities for the month of August.

August 3: The PCDF held its annual Field Day, with about 70 people in attendance. The topics included greenhouse gas emissions, winter cereal varieties and fertility, intercropping wheat and forage legumes, and teff for forage and production. The presenters did a great job, and the delicious lunch, sponsored by Mazergroup, was a highlight for everyone.

Photo: Jessica Frey presents on wheat-legume intercrops at the PCDF field day.



August 11: We said farewell to Brieuc Laloux, a student at the École supérieure des agricultures in Angers, France. Brieuc worked as an intern with PCDF for 10 weeks during the summer and was a great help. He is a great fan of cycling and loved spending time in the big Canadian outdoors.

Photo: Brieuc Laloux (right) with PCDF staff at the MBFI centre in Brandon, MB.

August 14: Harvest began in earnest. Field peas, winter wheat and fall rye were the first crops to come off, followed by teff-forage intercrops. Despite the dry weather, yields for most trials are good. We expect that the teff, which was intercropped with forage grains, will increase the protein content of hay and silage mixtures, and that the regrowth will provide a late-season grazing option for livestock.

Photo: Teff hay



August 18: Spring cereal harvest began with 2-row barley varieties. The early start to harvest brings with it the welcome opportunity to start thinking about the 2024 season. This includes soil sampling and marking out where the upcoming winter cereals will be planted. How time flies when you're having fun!

Photo: Ripe 2-row barley

For further information about PCDF research program, please contact James Frey (James.Frey@gov.mb.ca)

PESAI Tests Pea-Oats Intercrop

The Prairies East Sustainable Agriculture Initiative (PESAI) has evaluated pea-oats intercrops for grain production for the second year. The objectives of the current study were to investigate the effects of intercropping oats with pea on grain yield, land equivalency ratio and economic returns in Interlake region of Manitoba. Different seeding rate ratios (50-50%, 50-75%, 75-50% & 75-75% of pea-oats, respectively) of both crops were tested to find out the most viable seeding rate combination. In intercrop treatments, both crops were seeded in the same row with row to row spacing as 9 inches. Preliminary results showed that pea-oats combination is economically viable for grain production. Land equivalent ratios were greater than one in most intercrop treatments. This is promising as it means that growing two crops together might be more economical than growing mono crops. Peas suffered more yield losses than oats when grown in combination, however this extend of loss is dependent on seeding ratio used for both crops. Pea-oat intercrops did not have any lodging. Oats had been reported to support lodge-prone pea varieties throughout the growing season until harvest.



Grasshoppers Issues at WADO

From May 1 until August 30, Melita has received 137 mm of rainfall to date which is only 46% of 30-year normal precipitation for the area. In addition to this, the "Banana Belt" has received 8% more crop heat units during this same time. With heat and dry weather usually comes with grasshopper pressure, and it sure did. The Westman Agricultural Diversification Organization (WADO) is growing cover crops below wide row corn and a couple trials this year. One trial in cooperation with the University of Manitoba under Dr. Yvonne Lawley and Dr. Emma McGeough named the Prairie Wide Corn intercropping project had various covers including hairy vetch, Italian rye grass, tillage radish, and crimson clover in between rows of 60" corn. Unfortunately, grasshoppers from a neighboring field infested the project despite being planted in a corn field and pesticides being sprayed multiple times. In addition, covers were already re-seeded due to drought and gopher pressure from before. Another trial adjacent was looking at forage soybeans in wide row corn, and unfortunately the hoppers and drought also took its toll. Mother Nature often has its own plan. Both projects will continue in 2024, hopefully Mother Nature will cooperate.



Year 2022: Without Grasshoppers Pressure in Radish



Year 2023: Impact of Grasshoppers Pressure in Radish

Grasshoppers are a diverse group of insects with many ecological roles. There are 85 species of grasshoppers in Manitoba, and 180 species in Canada. There are 4 species of grasshoppers on the Canadian prairies that when populations get high can potentially be pests of crops. Grasshoppers that can be pests generally feed on a wide range of plants (including crops), and are capable of laying considerably more eggs than non-pest grasshopper species. For farmers and agronomists needing to protect crops from grasshoppers, it is good to know pest from non-pest grasshopper species, different stages of grasshoppers, how to monitor for grasshoppers, how many is an economic threat to the crop, and what are the management options. (Source: Manitoba Agriculture: Grasshoppers: Identification, Monitoring and Management).

Workshops at PESAI Beausejour

Agassiz Soil & Crop Improvement Association (ASCIA) is organizing two crop workshops at PESAI sites in Beausejour. Terry Buss (Manitoba Agriculture) is coordinating these workshops.



The **first workshop** will be at sunflower site on September 6th.

Location: SE 15-13-7 E, R.M. of Brokenhead - One mile west on Hwy 44 from the Beausejour turn off, One mile north on Rd 40 E, ½ mile west on Rd 74N. Morgan Cott from Manitoba Crop Alliance will discuss the following topics during the workshop:

- Review of the 2023 Sunflower Growing Season – Challenges and Observations
- Sunflower Harvest Management Desiccation Timing, Combining, Drying and Storage
- Steps for Selecting a Sunflower Variety
- 2023 Sunflower Confectionary MCVET Trial
- 2023 Sunflower Oil Type MCVET Trial

The **second workshop** will occur at PESAI soybean site on September 7th.

Location: SE 8-13-7 E, R.M. of Brokenhead - North side of Hwy 44 at Intersection of Hwy 44 & Rd 38E, three miles west on Hwy 44 from the Beausejour turn off. Kim Brown-Livingston, Provincial Weed Specialist, will speak on the following topics:

- Update on Herbicide Resistant Weed Situation including Tall Waterhemp
- Selecting Soybean Herbicide Systems for your Farm

Provincial Pulse Specialist, Dennis Lange will interact with participants on:

- Review of the 2023 Soybean Growing Season – Challenges and Observations
- Herbicide Tolerant Soybean MCVET
- Conventional (Non-GMO) Soybean