

NEWSLETTER

Diversification Centres

August 2024



File photo of 2024 Annual Field Day at Manitoba Crop Diversification Centre (MCDC)

Annual Field Days at Diversification Centers Province-wide

The Diversification Centres (DCs) are excited to share updates on current research projects at their annual field days. DCs invite everyone with an interest in agriculture to join these events and explore various topics, including crop varieties, disease and weed management, innovative technologies, special and novel crops, and companion cropping. These field days provide an excellent opportunity to network with fellow producers and

researchers. Presentations will feature insights from industry stakeholders, researchers, and provincial crop specialists. Participation is free, but please register in advance to ensure an accurate lunch count. For detailed information about upcoming field days, topics, and speakers, visit the Diversification Centre's website at <https://mbdiversificationcentres.ca/> or follow us on X (formerly Twitter) @CropCentres.

UPCOMING EVENTS*

August 7

MCDC Field Day 2024
Carberry, MB

August 8

PCDF Field Day 2024
Roblin, MB

August 16

**Natural Systems
Agriculture Field Tour**
Glenlea, MB

October 30

**Manitoba Beef & Forage
Conference**
Portage la Prairie, MB

November 7

**Agriculture Enlightened
Conference**
Winnipeg, MB

**Click event's link for more details.*

Potato Scout School Held in Carberry at the MCDC Site



Marla Reikman (MB Ag) demonstrating soil structure in soil pit under annual cropping/tillage versus undisturbed soil

The Manitoba Crop Diversification Centre (MCDC) hosted the annual Potato Scout School, offering valuable insights into modern agricultural practices and technologies.

Participants were introduced to a comparative soil analysis under annual cropping/tillage versus undisturbed soil in a soil pit demonstration. Marla Reikman from Manitoba Agriculture shared her expertise on soil health, demonstrating the significant differences in soil structure and fertility. The event featured a demonstration of the Amazone single pass cultivator, which reduces soil compaction. Kevin Snaith from Mid-Plains and Kelly Manikel from Amazone showcased the capabilities of this innovative tillage implement. Kevin Hood generously provided his tractor and time for the demonstration. Mike Wall from GenAG provided a practical session on timing harvester chains to meet farm needs and calculating losses behind the digger. Mitch Wright from McCains explained the mathematical calculations necessary to minimize these losses.

The Potato Scout School provided attendees with practical knowledge and hands-on experience, fostering improved agricultural practices in the region.



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WADO Hosts Westman Producers in Melita



Participants visiting the sunflower site, to view sunflower variety trials at WADO's field day

The Westman Agricultural Diversification Organization (WADO) field day was held on July 25 at the Melita plots. It was the hottest day of the year in the Banana Belt, breaking the 30-year record daily temperature of 32.5°C, but it felt like 43°C. This year was different in that participants could travel from site to site on a bus rather than visiting the many sites WADO has to offer. Brandon Bus Lines offered a convenient and comfortable ride to all participants, complete with air conditioning, a smooth ride, comfy seating and bathrooms.

The field day guests visited the broadleaf site first with Laura Schmidt from Manitoba Pulse & Soybean Growers, who presented with live pea weevil larvae and discussed *Aphanomyces* and *Phytophthora* root rots in pea and soybean, respectively. Then Jeff Kostiuk from Verve Seeds and Clarence Shwaluk from Manitoba Harvest Hemp Foods discussed opportunities with industrial hybrid Hemp. Baljeet Singh and his students from Assiniboine College presented the pea fungicide trial. Morgan Cott from Manitoba Crop Alliance presented the flax seed treatment trial showcasing various fungicide seed treatments being investigated.

The bus then drove to the sunflower site, where guests viewed the confectionary and oilseed sunflower variety trials and the row spacing by population trials. Just after lunch, Dr. Manasah Mkhabela (MB Ag) and Dr. Aaron Glenn (AAFC) discussed the long-term greenhouse gas experiment in cooperation with the University of Manitoba and the soybean protein irrigation experiment in cooperation with AAFC, respectively.



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The final afternoon tour was held at the winter cereals site viewing the small legume companion trial in winter wheat presented by Scott Chalmers from MB Ag, the greenhouse gas experiment, and the split nitrogen experiment in cooperation with the Brandon Research and Development Centre and Ducks Unlimited Canada, respectfully presented by Dr. Aaron Glenn, Alex Griffiths & Elmer Kaskiw. WADO thanks to all speakers, staff and participants for helping with such a successful day!



WADO Displays Small Plot Combine Harvester at Reston Fair Parade

On July 20th, WADO participated in the Reston Fair parade, showcasing their advanced plot combine. The impressive machinery caught the eyes of many attendees, especially the little ones, fascinated by its size and functionality. The parade saw a fantastic turnout, with community members of all ages coming together to enjoy the festive atmosphere. WADO's participation provided a unique opportunity to raise awareness about their organization and its initiatives. The event also served as a valuable platform to promote the upcoming field day.



View our videos on YouTube: www.youtube.com/@mbdiversificationcentres

Glimpses from PESAI Field Day



PESAI's Annual Crop Tour at Arborg site

The Prairies East Sustainable Agriculture Initiative (PESAI) had its annual crop tour on July 31 at the Arborg site. About 40 participants attended the tour. Participants were local producers, industry professionals, Manitoba Ag staff and staff from commodity groups, AAFC and the University of Manitoba. Heather Martens (Director, MB Ag) also attended the tour. From the PESAI Board, Andy Buehlmann and Paul Gregory were there to interact with the audience.

The following is the list of various speakers / talks –

1. Use of Fungicides to control foliar diseases of Peas (Sandeep Singh, Assiniboine College & Jennifer McCombe-Theroux, MPSG)
2. Considerations for Sunflower production in Interlake (Daryl Rex, Manitoba Crop Alliance)
3. Nitrogen Fertility and GHG Emissions in Winter Wheat (Alex Griffith, Ducks Unlimited)
4. Linking optimal nitrogen management practices to soil moisture conditions (Carlie Johnston, AAFC Brandon)
5. Managing adequate soil moisture using controlled tile drainage (Dr Sri Ranjan, U of M)

The participants were quite interested in sub-surface irrigation and fertility projects. At the end of the tour, lunch was served.



Visit our website: mbdiversificationcentres.ca

Lupins: A Promising New Crop for Manitoba



Lupins Varieties Development at PCDF

The Parkland Crop Diversification Foundation (PCDF) is collaborating with other Diversification Centres to test the suitability of lupins to Manitoba's growing conditions. The trial includes white and blue varieties, as well as a yellow variety that was developed in South America. Lupins naturally contain alkaloids, which can be toxic at high levels to humans and livestock. However, commercial lupin varieties have been bred to contain low levels of alkaloids. Additionally, they have a favourable nutrient profile, with about 30-40% protein and 25% fibre. In contrast to peas, which may consist of up to 40% starch, lupins consist of just 2-5% starch. This difference is important for food processors, for whom starch may be a less marketable bi-product of grain fractionation.

As a nitrogen-fixing crop, lupins can help to reduce nitrogen inputs. However, the inoculant type is different from that used with legumes, such as peas, faba beans, or soybeans. Because lupin is a relatively new crop in Canada, sourcing the appropriate type of inoculant for lupin can be a challenge. Soil pH and seasonal moisture are also important factors in lupin production. Soils above 7.2 pH should be avoided, as these can limit the formation of nitrogen-fixing nodules. Likewise, cultivation in drier areas is to be avoided, as this can result in reduced yields.

Early observations at PCDF suggest that blue lupin varieties may be better suited to the Parkland region than white or yellow lupin varieties. Slightly higher pH (7.8) may also have caused low levels of nodulation, resulting in reduced nitrogen availability for the developing plants. PCDF aims to continue evaluating the varieties over a few years to observe the yield potential under different weather conditions.

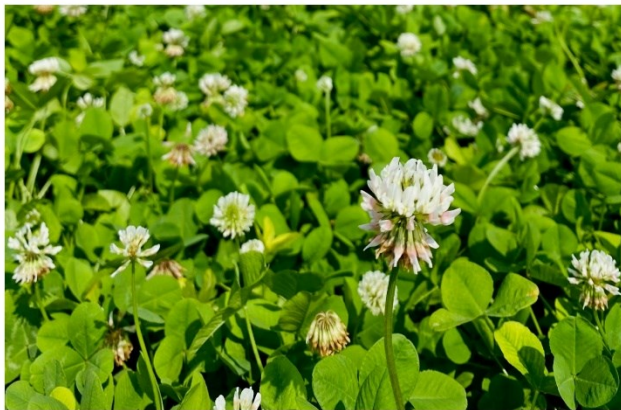


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DU Forage library established at PESAI site

During 2023, PESAI took on a project from Ducks Unlimited to establish various forage species as a part of a forage library. The plots were seeded in June 2023. This library has five native grasses, 20 grass species, 10 legume species and five grass-legume blends (see Table). The blends were tested with and without adding any phosphorous. Most of the plots were established and overwintered except plots of Valerio Perennial Ryegrass and Birdsfoot Trefoil as they did not survive winter. Plots of Orchard grass, Alsike Clover and Sainfoin were also severely affected by winter. The following table illustrates the forage species along with wet forage yields (tonnes/acre) from the first cut.

| Native grasses | Grasses | | Legumes | Blends |
|-----------------------------|--------------------------------------|-------------------------------------|--|---|
| Purple Prairie Clover (1.9) | Tall Fescue Rough (6.6) | Saltlander + Green Wheatgrass (9.7) | Birdsfoot Trefoil (2.7) | Exceed Alfalfa & AC Knowles HB (10.9) |
| Slender Wheatgrass (7.9) | Orchard grass (1.4) | Hybrid Brome (12.6) | Sainfoin (1.4) | Premium Hay Max (Northstar) (9.5) |
| Blue Grama (0.3) | Meadow Fescue (5.5) | Tall Wheatgrass (16.6) | Alfalfa tap root variety (9.6) | Dual Purpose Blend (Brett Young) (11.0) |
| Side-oats Grama (2.7) | Creeping Red Fescue (7.5) | Festulolium (9.5) | Alfalfa creeping root variety (9.9) | Hay Blend (Brett Young) (9.6) |
| Canada Milkvetch (4.7) | Meadow Fescue (9.6) | Tall Fescue Satin (8.2) | Red Clover (8.9) | Pasture Blend (Brett Young) (11.2) |
| | Saltlander (7.4) | Valerio Perennial Ryegrass (0.0) | Alfalfa (Variety?) (8.4) | |
| | Fleet Brome (10.5) | Pubescent Wheatgrass (12.6) | White Clover (4.2) | |
| | Russian Wildrye (3.7) | Crested Wheatgrass (9.0) | Exceed - Branch Root (10.5) | |
| | Intermediate Wheatgrass (13.1) | Timothy (8.8) | Alsike Clover (4.1) | |
| | Preval or Tetrax Meadow Fescue (3.9) | Kentucky Blue (2.2) | Revolution - low lignin/tap root (9.9) | |
| | AC Killarney Orchard grass (10.0) | Carlton Smooth Brome (11.8) | | |



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MCDC Field Day 2024



Participate to Experience the Innovative Applied Research in Potato & Crop Diversification

August 7, 2024

- 9:30 AM** **Registration and Coffee at MCDC Onsite**
Sponsored by Simplot Canada (II) Limited.
- 10:00 AM** **Opening Remarks**
Susan Ainsworth – MCDC Board Chair
- 10:15 AM** **Crop Diversification & Potato Rotational Options**
*Intelligent Technologies in Digital Agriculture – EMILI
GHG – If You Can Measure It, You Can Manage It – Dr. Mario Tenuta
Legumes in Annual Crop Rotations – Dr. Joanne T. Martens
Lupins – Promising Yet Challenging – Laura Schmidt
Annual Forages or Cover Crops? – Shawn Cabak
Diversified Crop Rotations – Options & Opportunities – Morgan Cott*
- Noon** **Free Lunch**
Sponsored by McCain Foods Canada
- 1:00 PM** **Heading to the Potato Research Site (off-site)**
2-miles north of the MCDC site
- 1:15 PM** **MHPEC Research Consortium**
KPPA, McCain Foods Canada, J.R. Simplot Canada (II)
- 1:25 PM** **BMPs in Potato Applied Research**
*Nitrogen Fertilizer Trial – Mohamed Elshetehy
Leaf Spot Trial – Tracy Shinnars-Carnelley
Row-Direction Trial – Scott Graham
Barley Intercropping in Potatoes Trial – Mitchel Wright
Digital Agriculture for Potato Fertility – Nasem Badreldin
Updates on Manitoba Potato Issues – Vikram Bisht*
- 3:00 PM** **Wrap-up**





Parkland Crop Diversification Foundation

Field Day — August 8, 2024 — 10:30-2:00

Lupins: Agronomy for a New Crop - Scott Chalmers

Peas: Best Management Practices - Laura Schmidt & Baljeet Singh

Perennial Hay: Best Practices for Establishment - Alex Griffiths

Flax: Maximizing Yield - Manitoba Crop Alliance

For more info, contact Sara Marzoff

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**FREE LUNCH INCLUDED
PLEASE RSVP**



PCDF

**Located 3 miles south of Roblin, MB
at the corner of Hwy 83 and Rd 148N**