NEWSLETTER

Diversification Centres

July 2024

File photo of 2023 Annual Field Day at Westman Agricultural Diversification Organization (WADO)

Discover the Latest in Agricultural Innovation: 2024 Field Days

The Diversification Centres' (DCs) researchers and provincial Extension Specialists are gearing up to present their latest research and findings at the annual field days scheduled to take place across the province from July through September. These events will be hosted at the research farms of the four DCs located in Arborg, Carberry, Melita, and Roblin. Field days offer a unique opportunity to gain firsthand knowledge of the latest advancements in agricultural research and practices. Attendees will have the chance to learn about latest technologies, innovative crop management strategies, and sustainable farming practices that are tailored to the specific needs of their region. In addition to the educational benefits, field days serve as a valuable platform for networking and community building. Farmers, researchers, industry professionals, and other stakeholders can engage in

UPCOMING EVENTS*

July 3-11

Crop Diagnostic School
Carman, MB

July 25

WADO Field Day 2024
Melita, MB

July 31

PESAI Field Day 2024
Arborg, MB

August 1

Horticulture School 2024
Portage la Prairie, MB

August 7

MCDC Field Day 2024
Carberry, MB

August 8

PCDF Field Day 2024
Roblin, MB

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

meaningful conversations, share their experiences, and discuss the challenges and opportunities facing the agricultural sector. The informal setting of farm tours fosters open dialogue and collaboration, helping to drive the adoption of best practices and innovative solutions.

Each field day will feature a diverse lineup of topics and speakers, ensuring that there is something of interest for everyone. Detailed information about the events, including topics, speakers, event schedules, registration, and locations, can be found on the Diversification Centre's website and X handle. Producers and the public are invited to mark their calendars for these events and take advantage of the opportunity to learn, network, and share their farming experiences with fellow participants.

Glimpses from 2023 Annual Field Day – Source: MCDC

MCDC Scouts Bacterial Blight in Field Peas Variety Evaluation Trial

Bacterial Blight in Field Peas– Source: MCDC

The Manitoba Crop Diversification Centre (MCDC) observed the prevalence of bacterial blight in the ongoing field peas variety evaluation trials. Bacterial blight in peas is first identified by the appearance of dark-green, water-soaked lesions on various parts of the plant, including leaves, stipules, pods, and stems. These lesions are angular in shape and follow the leaf veins, which may eventually coalesce and turn necrotic, indicating the severity of the infection. The lesions on the pods, in particular, are sunken and take on an olive-brown hue. This disease thrives in conditions of high humidity or leaf moisture and warm temperatures, creating an optimal environment for its spread and impact. Control measures for bacterial blight in peas are crucial for managing this disease effectively. Crop rotation helps in breaking the life cycle of the pathogen.

A Glimpse of Innovative Potato Applied Research Trials in Carberry

Potato Row-Direction Trial. Photo Credit – Garth Christison

The Manitoba Horticulture Productivity Enhancement Centre (MHPEC) applied research experiments, spearheaded by the Agronomist Mohamed El-Shetehy, encompass a series of field studies designed to improve potato production through innovative practices. These trials focus on optimizing various factors such as row direction, disease management, fertilization, and intercropping to enhance potato yield, quality, and sustainability. By investigating different aspects of potato production, these trials aim to provide valuable insights and practical recommendations for growers. Here is a brief overview of each trial:

Row-Direction Trial:

This field trial examines how the direction of planting rows affects the yield of three potato varieties: Umatilla, Ranger Russet, and Russet Burbank. By testing different row orientations (N/S, NW/SE, NE/SW, and E/W), the trial seeks to determine the optimal way to plant potatoes to maximize sunlight utilization. Efficient use of sunlight can enhance crop growth and profitability. The study also investigates whether row orientation impacts soil temperature and moisture, which are crucial for disease management.

Early Blight and Leaf Spot Trial:

This trial aims to identify the most effective fungicides and biological control compounds to combat early blight and leaf spot diseases caused by Alternaria in potatoes. The study evaluates disease incidence, severity, and yield to determine the best treatments. By measuring the percentage of infected plants, symptom severity, total and marketable yields, and plant health, the trial provides comprehensive insights. Additionally, it monitors fungicide residues in plant tissues and soil to ensure safety and tracks environmental factors like weather and soil conditions.

Nitrogen Fertilizer Trial:

The goal of this field trial is to ascertain the optimal nitrogen fertilizer application rates and timing for potatoes. Various nitrogen fertilizers, including Urea, ESN, and SuperU, are tested at different application times (pre-plant, top dress, and fertigation) to find the best strategy for boosting yield and quality. This study helps growers optimize fertilizer use, promoting healthier plants and better harvests while potentially reducing costs and improving environmental sustainability.

Barley Intercropping in Potatoes Trial:

This trial explores the use of barley as a cover crop during potato hilling to reduce soil erosion and protect emerging potato plants from sandblasting, thereby mitigating the impact of Black Dot in the Early Die Complex. The study examines whether barley cover can stabilize soil temperature fluctuations, potentially enhancing potato yield and quality. It also evaluates different barley seeding rates and termination dates to develop optimal management practices alongside potatoes, aiming to establish sustainable and profitable recommendations for growers.

For information on MHPEC's current and past projects, research updates, agronomic recommendations, and annual reports, visit https://mbpotatoresearch.ca/

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

MCDC Collaborates with MCVET for Crops Variety Evaluations

Drone Photo of Multiple MCVET Experiments at Manitoba Crop Diversification Centre (MCDC)

The MCDC collaborates with the Manitoba Crop Variety Evaluation Team (MCVET) trials program, which is essential for assessing the performance of various crop types across the province. As one of the many contractors involved, MCDC is committed to helping Manitoba producers make informed decisions about their crop choices.

The MCVET trials aim to evaluate both familiar (check varieties) and new varieties of crops side by side in a replicated manner. This allows for a comprehensive comparison of various characteristics such as yield, maturity, protein content, disease tolerance, and many other vital factors. The ultimate goal is to provide farmers with reliable data to enhance their crop management strategies. During the 2024 planting year, MCDC is conducting extensive MCVET trials on a wide array of crops, including winter wheat, fall rye, flax, spring wheat, oats, barley, field peas, lupins, corn, sunflowers, and annual forages in Carberry. This rigorous testing process ensures that new and existing varieties are thoroughly evaluated under Manitoba's unique growing conditions.

Data collected from each MCVET site across the province is compiled and summarized in the annual 'Seed Manitoba' guide. This comprehensive resource is available in hard copies at most Manitoba Agriculture and Ag Industry offices. Additionally, farmers can access the variety performance information online through the websites www.seedinteractive.ca and www.seedmb.ca.

Contact us: info@mbdiversificationcentres.ca

MHPEC Welcomes Victor Akinwale Akinsunmade: A Passionate Advocate for Sustainable Farming

Victor Akinwale Akinsunmade, born in Akure, Ondo State, Nigeria, is passionate about sustainability and excellence in agriculture. In 2022, he moved to Canada to study Agribusiness, focusing on sustainable agriculture and global food security. He has been a dedicated soccer player since childhood and enjoys travelling and exploring new places, with a memorable visit to Nairobi, Kenya, which he found particularly fun and enriching. These travels have broadened his perspective, fueling his desire to implement sustainable farming practices. Victor aims to significantly impact Canada and Nigeria by promoting sustainable farming practices. In 2024, he joined MHPEC as a Summer Student for the planting year, bringing his academic knowledge and passion to the forefront. Through this role, he hopes to contribute to advancing sustainable farming techniques that can be applied in Canada and Nigeria.

WADO Partners with Verve Seeds to Test Hybrid Hemp Varieties for Fibre and Grain Production

It's been a couple of years since the Westman Agricultural Diversification Organization (WADO) last grew hemp in their plots. This year, WADO is excited to partner with Jeff Kostiuk of Verve Seeds to test hybrid hemp varieties for both fibre and grain production. This year's trial includes twenty-one different varieties. Those familiar with traditional open-pollinated hemp know it as a prolific and jungle-like crop. Hybrid hemp, however, may prove to be even more impressive, offering both uniformity and higher yields than open-pollinated varieties. At WADO, the plots were seeded on May 29th and emerged in about four days. The plots were fertilized similarly to a grain corn crop, with 160 lbs/ac of available nitrogen. It's great to have hemp back on the roster at WADO, and the trials will be showcased by Jeff Kostiuk himself at the field day on July 25th.

Hemp trial at WADO, Melita (Photo taken on June 27)

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Planting Wheat and Canola with Cover Crops (*Part 2*)

Canola in Alfalfa

Red Clover in Spring Wheat

Red Clover Sprayed with Ares Herbicide

In the spring of 2023, the Diversification Centres established intercropping trials with spring wheat and various cover crops, including red clover, white clover, sweet clover, alfalfa, and perennial ryegrass. The wheat and cover crops were seeded in the same row at the same depth. The cover crops were established well and did not impact wheat yield.

In 2024, Clearfield canola was seeded directly into the cover crops. Ares herbicide was applied to the trial on June 21, when the canola was at the 2 to 3-leaf stage. Ares is a systemic foliar herbicide that affects grassy and broadleaf weeds, inhibiting the production of acetolactate synthase (ALS), an enzyme required for amino acid formation. Within a week of application, non-resistant plants show signs of yellowing, especially at the growing points. Young plants are likely to die, whereas more mature plants show signs of malformation, stunting and reduced seed production.

In the canola-cover crop system, it is anticipated that the cover crops will not be completely killed by the Ares herbicide due to the advanced staging of the plants. Instead, the cover crops will be severely set back, creating space for the canola plants to develop. The cover crops are expected to create new growth using root reserves accumulated over the 12 months since planting with spring wheat. Importantly, the sudden shock to the cover crops caused by herbicide application is expected to trigger a release of nitrogen into the soil. This nitrogen will become available to the canola in a plant-available form. Nitrogen dynamics within the system are monitored at three-week intervals using Plant Root Simulator Probes (from Western Ag), soil nitrate samples, and the nitrogen contained in the canola, covering crops and weeds.

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

Testing of Corn-Legume Intercrops for Forage Production

Corn forage can fit well in the grazing system as it meets the nutritive requirements of beef cows in mid and late-stage pregnancy. Usually, corn forage has lower crude protein content than other cereal crops across the Canadian prairie environments. However, corn forage protein concentrations are not normally adequate for beef cattle diets at all physiological stages. Intercropping corn with legumes provides several advantages, such as improved forage yield and forage nutritive value.

The Prairies East Sustainable Agriculture Initiative (PESAI) is testing a few legume species intercropped with corn to see its effect on forage yield and quality. In previous years, five legume species, berseem clover, pinto beans, soybeans, hairy vetch & peas, were tested with corn. Regarding dry matter forage yield, the corn/berseem clover intercrop was superior to the corn/pinto beans intercrop. Still, it was similar to all other intercrops and corn mono-crops (see Table).

Treatment	Dry Matter Forage Yield (tons/acre)
Corn	4.7ab
Corn/Berseem clover	5.7b
Corn/Soybeans	5.4ab
Corn/Peas	5.2ab
Corn/Hairy Vetch	4.9ab
Corn-Pinto beans	3.9a
Sig. Difference	Yes
P Value	0.035

When soybeans were planted with corn, it resulted in an improvement in crude protein content. Only corn-soybean and corn-berseem clover intercrops met the nutritional requirements of a beef cow for all gestation periods. PESAI is again testing legume intercrops this year. Legumes (soybeans, peas, faba beans, and berseem clover) are planted with corn at the PESAI site. This year, a delayed planting of legumes (when corn is at the 2-3 leaf stage) is also being tested in addition to when both crops are planted simultaneously. This approach aims to optimize growth conditions and nutrient availability. The results will be published on Diversification Centres' website later this year, providing valuable insights for future intercrop strategies.

Corn-Legume Intercropping Experiment at PESAI

Contact us: info@mbdiversificationcentres.ca

2024 is Shaping-up to be Another Wet Year in the Interlake!

Flooding Conditions at PESAI's Arborg Site

Occasional spring rains have resulted in many unseeded acres in the Interlake and Eastman regions of the province. The frequent rainfall has significantly impacted agricultural activities, making it challenging for farmers to keep up with their planting schedules. The last trials were planted on June 9 at the Beausejour and Arborg sites of PESAI, later than usual due to the persistent wet conditions. While most trials are progressing well, some have sustained excess moisture damage at the Arborg site. Several plots, including those in the sunflower variety test, Manitoba Crop Variety Evaluation Trials (MCVET) silage corn, forage intercrops, and Manitoba Forage & Grassland Association (MFGA) regenerative agriculture trials, were submerged due to flooding. The Arborg site has received 158% of its normal rainfall between May 1 and June 23. The tiles at the PESAI's Arborg site are continuously running to drain excess water. Researchers at PESAI are closely monitoring the trials, hoping for a shift in weather patterns that will allow for better-growing conditions in the coming months.

Diversification Centres

Extending Ag-Innovations for Sustainable Agronomic Solutions

2024 Annual Field Days

Learning events featuring producers, researchers and agricultural professionals; all focused on ensuring Manitoba producers are equipped with the knowledge and tools to grow the best food and feed crops possible.

WADO	PESAI	MCDC	PCDF
July 25	July 31	August 7	August 8
10:00 am-3:00 pm	9:30 am-1:00 pm	10:00 am-3:00 pm	10:30 am-2:00 pm






Networking and Learning Opportunities

Variety Evaluation Insect, Disease and Weed Management
Crop Diversification **Regenerative Agriculture**
Forage Productivity Crop-Livestock Integration
Precision Agriculture **Water Management**
Technology Evaluation GHG Measurement and Management

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FOR MORE INFORMATION AND REGISTRATION, PLEASE CONTACT APPLIED RESEARCH SPECIALISTS AT DIVERSIFICATION CENTRES.

Diversification Centres Contact and Site Information

Manitoba Crop Diversification Centre

MCDC is located at the north-east corner of Highway No. 1 and Highway No. 5 in Carberry, MB.

Contact:

Haider Abbas
Applied Research Specialist
204-247-0768
Haider.Abbas@gov.mb.ca

Parkland Crop Diversification Foundation

PCDF

PCDF is located 3 miles south of Roblin, MB at the corner of Highway No. 83 and Road No. 148N.

Contact:

James Frey
Applied Research Specialist
204-247-0346
James.Frey@gov.mb.ca

Prairies East Sustainable Agriculture Initiative

PESAI

PESAI Research site is located two miles west of Arborg, MB on the Highway No. 68.

Contact:

Nirmal Hari
Applied Research Specialist
204-391-3623
Nirmal.Hari@gov.mb.ca

Westman Agricultural Diversification Organization

WADO

0.5 km East of the Big Banana at the ball diamonds in Melita.

Contact:

Scott Chalmers
Applied Research Specialist
204-522-5415
Scott.Chalmers@gov.mb.ca

WESTMAN AGRICULTURAL DIVERSIFICATION ORGANIZATION INC.



WADO Field Day & Bus Tour

Thursday July 25, 2024

Check-in at 9:15 Bus Leaves 10:00 a.m. Sharp & runs until 3:00 p.m.
At the **Melita Ball Diamonds**, ¼ Mile East of the Banana Statue
Bus Tour, Snacks, Refreshments and Washrooms

What to see:

- Pulse Variety Trials & Agronomy Update
- Intro to Hybrid Hemp
- Pea Fungicide Trial
- Flax Seed Treatment Trial
- Sunflower Varieties, Row Spacing Population Trial
- Greenhouse Gas Experiments with Nitrification Inhibitors
- Soybean Protein Irrigation Study
- Winter Cereals Fertility Trials & Legume Companion Crops

RSVP

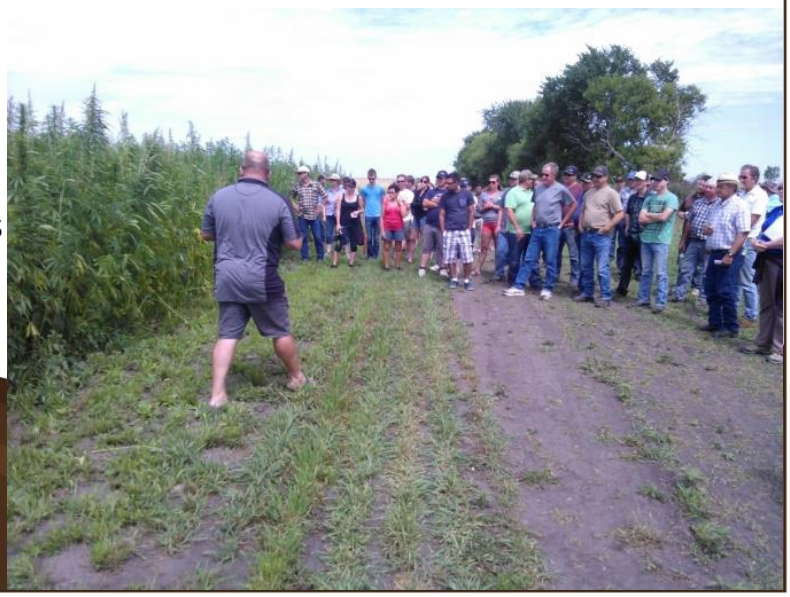
Melita MB Ag Office with Scott at 204-522-5415 or email scott.chalmers@gov.mb.ca

SPACE ON THE BUS IS LIMITED SO RESERVING YOUR SPOT IS IMPORTANT!

Free Lunch at Noon

BBQ Beef & Veggie Burgers, Salads, Cold Drinks

WADO



PESAI Crop Tour

July 31, 2024

Starts at Enns Brothers
@ 10085 Hwy 68, Arborg
(GPS - 50.90263, -97.21341)

PROGRAM

9.00 - 9.35 am	Registration & Coffee
9.35 - 9.50 am	Use of Fungicides to control foliar diseases of Peas **(Dr Baljeet Singh, Assiniboine Community College)**
9.55 - 10.20 am	Considerations for Sunflower production in Interlake **(Daryl Rex, Manitoba Crop Alliance)**
10.45 -11.10 am	Nitrogen Fertility and GHG Emissions in Winter Wheat **(Elmer Kaskiw & Alex Griffith, Ducks Unlimited)**
11.10 - 11.30 am	Linking optimal nitrogen management practices to soil moisture conditions **(Carlie Johnston, AAFC Brandon)**
11.40 - 12.05 pm	Managing adequate soil moisture using controlled tile drainage **(Dr Sri Ranjan, Uni. of Manitoba)**
12.10 - 1.00 pm	Lunch

This Crop Tour is free and open to all people who are interested to know about crop research in Interlake and Eastman areas of MB.

Please RSVP by July 24 @ 204-494-0480 or prairies.east@gmail.com

SAVE THE DATE

Annual Field Day 2024

August 7, 2024 (10:00 am to 3:00 pm)

Manitoba Crop Diversification Centre (MCDC)
Haider Abbas | 204-247-0768

Manitoba Horticulture Productivity Enhancement Centre (MHPEC)
Mohamed El-Shetehy | 204-890-4795

9:30 a.m. Registration and Coffee

10:00 a.m. Crop Diversification

Free Lunch at Noon

1:00 p.m. Potato Applied Research

3:00 p.m. Wrap-up

Detailed Agenda would be available soon!

North-East Corner of Highway No. 1 & 5, Carberry, MB

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

204-773-6423, pcdfroblin@gmail.com

FREE LUNCH INCLUDED

PLEASE RSVP

PCDF

Located 3 miles south of Roblin, MB

at the corner of Hwy 83 and Rd 148N

Horticulture School 2024

Thursday August 1, 2024
9:30 a.m. to 3:00 p.m.
Agriculture & Agri Food Canada Research Station
370 River Road, Portage la Prairie, MB

Agenda

9:30 a.m. - 10:15 a.m. - Registration, Exhibits & Refreshments

10:15 a.m. - 11:45 a.m. – Morning Sessions:

- **Fruit Agronomy:** Early season strawberry production in high tunnels.
- **Vegetable Fertility:** Discussion on soil testing and fertilizing of vegetable fields.

11:45 a.m. - 1:15 p.m. – Lunch and networking, including the following discussions:

- **Beneficial Insects / Bio-Control Products**: An interactive station to challenge and sharpen your ability to identify beneficial insects and to see how they can help in crop production. Commercially available biological control products will be on display.
- **Safe use of Pesticides:** Information on re-entry intervals, post harvest intervals, personal protective equipment, maximum residue limits and other related information.

1:15 p.m. - 2:45 p.m. – Afternoon Sessions:

- **Water Use and Management:** Discussion on water source and quality, types of irrigation systems and design, irrigation scheduling/efficiency and water management challenges.
- **Weed Identification:** Identification and control of weeds in horticulture production.

2:45 p.m. - 3:00 p.m. - Wrap-up & evaluation:

- **To register, please contact Jennifer.green@gov.mb.ca or (204) 745-5663.**
- **Cost to attend $40 (includes lunch and refreshments).**
- **Payment by cash, cheque (payable to PFGA) or e-transfer (pfgalocal@gmail.com).**
- **CCA Credits Available.**

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Manitoba