Monthly Newsletter

Diversification Centres

Applied Research – Extension – Adoption

July 2022

OFF TO A GOOD START

The Growing Season

Manitoba's Crop Diversification Centres conduct applied production research trials in collaboration with provincial Crop and Livestock Specialists, industry stake holders, academic institutions, and local producers to develop and support sustainable agronomic solutions for cereals, corn, oilseeds, pulses, special crops, forages, and potatoes.

Diversification Centres, located in four different climatic zones, experienced extremely wet and cold conditions at the beginning of spring, with receiving significantly higher than normal precipitation. It prevented soils from draining and drying ahead of planting. As a result, crop planting got delayed by at least two weeks behind normal starting dates.

Seeding progress is well underway at all Diversification Centres. Staff worked long hours in an effort to seed crops while soil and weather conditions permit. Availability of adequate soil moisture accelerated the rate of germination and emergence in crops. Centres' report good germination percentage in majority of trials.

New initiatives for this year include:

- Teff Forage Test
- Irrigated Quinoa Production
- Impact of Irrigation at White Mould in Dry Beans
- Nitrogen Dynamics within Potato Root Zone

Peas are an excellent source of protein, dietary fibre, vitamins and minerals.

Provincial Crop Specialist – Pulses "Dennis Lange" highlighting Manitoba Advantage in Pea Protein at CMCDC Carberry in 2021

Piezometer installed in Potato Nitrogen Study at CMCDC

Collaboration Continuum

Hand-in-Hand

The continuum of collaborative research and extension activities with provincial Crop Specialists at Diversification Centres provide Ag communities, organizations, and industry stakeholders with a concrete framework that captures the complexity of integrated service delivery and skill sharing!

Crop-Livestock Integration

Farm-Resilient Research at Diversification Centres

Currently in Manitoba, most producers separate livestock and pastures from cropping systems, relying on off-farm purchases of certified feed for their animal herds, or fertility for their crop fields. This can increase production costs, especially with the price premium for grain, as well as increase greenhouse gases for transportation. Integrating crops and livestock on a multi-function operation could have multiple benefits and the potential to improve the profitability of these kinds of operations. Researchers at Crop Diversification Centres in collaboration with provincial Forage and Livestock Specialists are conducting research projects to evaluate the production, environmental, and economic benefits of growing cash crops with forage crops for grazing, including small grains and hay crops for livestock feed.

PCDF seeded fall rye in September 2021, and mob-grazed part of the rye with sheep in early June 2022. The project will examine the effects of spring grazing on plant height, maturity, and grain yield. Grazing fall rye in May or early June would provide producers with a valuable forage option in spring, as well as a holistic means of controlling weeds in the crop.

Sheep grazing fall rye

Grazing comparison on fall rye

Sustainable Agronomic Solutions

The province's four diversification centres conduct applied research and demonstrations on crops, livestock, technology and best management practices. Our work advances primary production while supporting sustainable agronomic solutions that benefit local communities and supports the growth of agri-food and agri-product processing.

Prairies East Sustainable Agriculture Initiative (PESAI)

Featuring Research in Forages, Regen-Ag, Protein, & Climate Change

PESAI has conducted a number of forage projects in the past. During 2022, PESAI is evaluating MCVET Annual Forages. This trial has 15 different species of annual forages and they will be compared for forage potential and forage quality. This year, we are also testing Teff if we can grow it successfully in Interlake. Teff is a warm-season annual grass that originates in northeast Africa, where it is grown for grain and forage production. As a forage, the crop is notable for its high protein content and palatability, as well as its potential for high yields.

PESAI is mixing up cereals and corn with legumes to see how these companion-cropping systems improve forage yield and quality. Corn is planted with soybeans, peas, pinto beans, hairy vetch and berseem clover for the test.

PESAI Research Centre in Arborg, MB

Seeding Soybeans on Tiled Plots

Similarly, cool season and warm season grasses are seeded with hairy vetch and berseem clover in another test. PESAI had a talk on Regenerative Agriculture at Annual General Meeting during April 2022. PESAI is testing different seeding rates for Peas/oats and Peas/Barley intercrops to examine effects on grain yield at both Beausejour and Arborg sites.

PESAI site has tiled plots with different tile spacings (15 ft, 30 ft and 45 ft wide). University of Manitoba is testing how different tile spacings will affect crop production. PESAI is also recording soil temperatures from different tiled spacings to test the hypothesis that tiles warm up soils sooner than non-tiled land. In support of MB protein strategy, PESAI is evaluating MCVET Peas at Arborg site.

PESAI

Located in Arborg (MB) with sites in Beausejour, PESAI conducts applied research and technology transfer in annual forages, grains, oilseeds and water management (tile drainage and excess moisture). Specialty areas of applied research include forage adaptation testing, new cropping opportunities, intercropping and cover crops, water management (e.g. tile drainage research site with some irrigation capacity) and fertility issues in watersheds.

Staff Appreciation

James Lindal – Applied Research Technician at PESAI, Arborg MB

James started his career in 1986, with Manitoba Agriculture in Arborg, as a Land Representative with the Agriculture Crown Lands Branch. In 2005, his title changed to Farm Production Advisor-Crown Lands. In 2006, in the newly formed Diversification Centre in Arborg with the Agri -Food Innovation and Adaptation Knowledge Centre, he became a Diversification Technician. His current job title is Applied Research Technician with Manitoba Agriculture – Primary Agriculture Branch. James played an important role in establishing the DC in the beginning along with the Diversification Specialist. In the recent years, he was instrumental in building new storage / grain drying facilities and buying/selling plot equipment to strengthen DC's research capabilities. James has a strong local connection and that has been of great help to the DC in finding land for research projects, hiring summer staff and encouraging producers in DC's board.

Upcoming Extension Events:

July 13 ***Watershed Districts Staff Training at CMCDC***
Carberry, MB

July 14 ***Potato Herbicide Drift Demo at CMCDC***
Carberry, MB

July 20 ***Annual Field Day at WADO***
Melita, MB

July 26 ***Annual Field Day at PESAI***
Arborg, MB

July 27 ***Annual Field Day at PCDF***
Roblin, MB

CMCDC PCDF PESAI WADO

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