

# FLAX BEST MANAGEMENT PRACTICES

What is the optimum seeding depth for flax? When should I seed? What is a realistic yield target for fertilization rates?

These are just some of the questions we are trying to nswer with the Flax Council of Canada Demonstration Trials that are being conducted across six locations in Manitoba. Initiated in 2015 at two locations, Roblin (PCDF) and Portage la Prairie (ICMS), this project was expanded to 4 additional locations in 2016: Melita (WADO), Carberry (CMCDC), Arborg (PESAI) and Richardson's Kelburn Research Farm. In addition to creating a more robust and representative answer to our questions, we also have the opportunity to connect with more growers. A wider audience may also provide the added benefit of demonstrating flax as a crop, in general, encouraging an increase in the number of acres and increasing average yield, which is an overall goal of this program.

The concept is to have an 'ideal' plot in each field test and then remove one factor at a time to quantify the impact of each factor on yield and dockage.

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Factors associated with an "Ideal Plot" are:

- 1. Choose well drained soil with very little salt
- 2. Soil tested for macro and micro nutrients
- 3. Sown on pulse or cereal stubble
- 4. Pre-plant soil residual herbicide + glyphosate burn off
- 5. 9.6" row spacing or similar commercial row spacing
- 6. Seed treatment
- 7. Fertilizer target of 45 bushels/acre, considering soil tests
- 8. Optimum start-up fertilizer (seed placed 15 lbs. P2 O5 /acre)
- 9. Side-band rest of fertilizer if possible
- 10. Optimum seeding date target May 15th
- 11. Seed rate 45 pounds/acre
- 12. Seeding depth < 1 "
- 13. Certified seed variety
- 14. Fungicide for Pasmo
- 15. All recommended herbicides as required
- 16. Desiccate at maturity





## FLAX BEST MANAGEMENT PRACTICES (cont'd)

The genetic potential for flax yield is much higher than the average commercial yields (21 bushels/acre). For example, Seed Manitoba 2014 yield comparison table for flax states that the highest yielding flax cultivar at Rosebank was 76 bushels/acre equivalent.

Flax is also characterized not just by low yields, but also by erratic yields. Therefore, updating our understanding of Best Management Practices is critical in order for flax to effectively compete with other Canadian crop choices.

To come see for yourself, be sure to add the following dates to your calendar where flax agronomy will be on the program: Roblin, Melita, Portage AAFC, Portage ICMS, Morden AAFC, Carberry.

#### **Field Tour Dates:**

Melita (Wado) - July 19th Portage la Prairie (AAFC & ICMS) - July 21st Arborg (PESAI) - July 26th Roblin (PCDF) - July 27th Carberry (CMCDC) - August 9th (tentative)

## Our New #2TbspFlax Muffin

Featured at Dietitians of Canada Conference

The Manitoba Food Development Centre in partnership with the Flax Council of Canada have created four flax recipes each containing 2 tablespoons of ground flax per serving. The food prototypes developed consist of a bread, muffin, nutritional bar and smoothie mix. The flax muffin recipe was recently featured at the Dietitians of Canada conference held this past June in Winnipeg.

The Flax Council of Canada provided the opportunity to sample the #2TbspFlax muffin at a breakfast as part of our HealthyFlax sponsorship. The muffin was a big hit and we had a lot of very positive feedback from delegate dietitians! We distributed a recipe card at our display booth and also featured it on social media. Our Health Canada health claim states that 40 grams of milled flaxseed per day has been shown to reduce/lower cholesterol. This is a significant amount of flaxseed to consume at one sitting so we have found that promoting consumption on the basis of at least

2 tablespoons per serving a better approach and thus created the #2TbspFlax hashtag as a promotional tool. Eating 2Tbsp still has considerable health benefits and provides the opportunity to fit flax in to other meals to increase the daily intake.

This recipe is also available in a quantity (300 muffin) version. We are exploring partnering with large scale operations such as the Winnipeg Regional Health Authority to serve the muffin through their foodservice program. Based on the results of a partnership of this nature we plan to encourage other health regions to utilize the #2TbspFlax muffin recipe. Please contact us at Info@HealthyFlax.org to order recipe cards or for the quantity recipe. It would be a great snack or breakfast item for your next company retreat or if your company plan to sponsor an event or conference!



## #2TbspFlax Muffin

#### Ingredients:

- 1 2/3 cup (400 mL) ground flaxseed
- 3/4 cup (175 mL) bread flour
- 3/4 cup (175 mL) granulated sugar
- 1 Tbsp (15 mL) wheat gluten
- 3 Tbsp (45 mL) skim milk powder
- 1 tsp (5 mL) baking soda
- 3/4 tsp (4 mL) baking powder
- 1/2 tsp (2 mL) salt
- 2 tsp (10 mL) cinnamon
- 1 1/2 tsp (7 mL) vanilla extract
- 1 1/2 cup (375 mL) water

#### **Instructions:**

- 1. Pre-heat oven to 320°F (160°C); line muffin pans with liners.
- 2. In a large bowl, add all dry ingredients. Stir to combine.
- 3. Add vanilla and water to dry ingredients. Mix until dry ingredients are moistened; let sit for 5 minutes.
- 4. Portion batter into muffin liners filling approximately 3/4 full.
- 5. Bake 25 minutes at 320°F (160°C) or until a toothpick comes out clean.
- 6. Remove muffins from pans; cool completely on a rack.

Yield: 12 muffins. Serving Size: 1 muffin. Each serving contains 2 Tbsp of ground flaxseed.

#### Cook's Notes:

- Dried fruit, nuts, grated carrot, fruit, can be added to muffins but to obtain the recommended serving of ground flax per muffin – you still need to make just 12 muffins.
- If bread flour is unavailable, use all-purpose flour and increase the level of wheat gluten by a 1/2 tsp (2 mL). Wheat gluten is available in the bulk section of most grocery stores.

In 2014, Health Canada approved a health claim linking ground whole flaxseed to blood cholesterol lowering, a major risk factor for heart disease. The "daily amount" referred to in the claim is 5 Tbsp (75 mL) or 40 g of ground (milled) whole flaxseed consumed over three intakes. For example, "16 g (2 tablespoons/30 mL) of ground flaxseed supplies 40% of the daily amount shown to help lower cholesterol".

Nutritional Analysis per Muffin:

Calories 140

Total Fat 6 g

Saturated Fat 0 g

Cholesterol 0 mg

Carbohydrates 21 g

Fibre 5 g

Sugar 10 g

Protein 5 g

Sodium 240 mg

Potassium 31 mg

### Flax Council of Canada 2016/2017 Elections

#### Annual General Meeting - June 14th, 2016

#### Welcome Flax Council's Newest Directors

#### Mr. Cam Laxdal

Producer & CEO Edgewood Farm

Representing: Manitoba Flax Growers

Association

#### Dr. Rex Newkirk

Associate Professor and Research Chair, Feed Processing Technology University of Saskatchewan Representing: NA Flax Industry FCC Board of Directors 2016/2017

#### Mr. Brian Johnson

CEO

S.S. Johnson Seeds Ltd. Chair of the Board Director at Large

#### Mr. Chad Molesky

Merchandising Manager Viterra Vice Chair of the Board & Market Development Chair Director at Large

#### Mr. Eric Fridfinnson

Producer & Partner Fridfinnson Enterprises Ltd. Research Chair Representing: Manitoba Flax Growers Association

#### Mr. Erwin Hanley

Producer & CEO
Hanley Farms Ltd.
Communications Chair
Representing: Saskatchewan Flax
Development Commission

#### Mr. Terry James

Vice President, Export Marketing Richardson International Ltd. Finance Chair Director at Large

#### Dr. Helen Booker

Assistant Professor, Flax Breeder University of Saskatchewan Crop Development Centre Director at Large

#### Mr. Shane Campbell

Sector Specialist - Canola & Flax Agriculture and Agri-Food Canada Observer

#### Ms. Jane Goodridge

Animal Nutritionist Landmark Feeds Representing: NA Flax Industry

#### Mr. Merijn Haeck

Commercial Manager Linagro NV Representing: EU Crushing Industry

#### Mr. Michael Kuhlman

Risk and Product Line Manager Cargill Inc. Representing: NA Crushing Industry

#### Ms. Anastasia Kubinec

Oilseeds Crop Specialist Manitoba Agriculture, Food and Rural Development (MAFRD) Representing: Provincial Departments of Agriculture (3)

#### Mr. John O'Donnell

Commercial Manager ADM Oilseed Processing Representing: NA Crushing Industry

#### Mr. Shane Stokke

Producer & CEO Stokke Seeds Representing: Saskatchewan Flax Development Commission

#### Ms. Barbara Ziesman

Provincial Specialist, Plant Disease Government of Saskatchewan Representing: Provincial Departments of Agriculture (3)



### FLAX COUNCIL OF CANADA FUNDS DAIRY RESEARCH

The Flax Council of Canada have agreed to collaborate with the Saskatchewan Flax development Commission and the University of Saskatchewan to help fund a research project entitled "Evaluation of Extruded Flax Product on lactation Performance by Dairy Cows and Digestibility of Nutrients". O&T Farms will also share equally in the funding arrangement concluded with the University.

Although there have been many observed benefits of extruded flaxseed products in relation to dairy, no precise comparisons have been made between flaxseed ingredients and other commonly used fat supplements such as palmitic acid. This study is intended to compare

results in a control diet with no added fat source and three treatment diets including either flax or palmitic acid.

The trial will be conducted at the University of Saskatchewan's Rayner Dairy Research and Teaching Facility using 8 lactating dairy cattle over a 21 day period.

The trial will be part of a fourth year undergraduate thesis project at the University and the data will be subsequently compiled and published in conjunction with a detailed communication plan.

Leveraging flasseed as an important animal feed ingredient is a challenge due to the lack of this sort of information comparing flas to other fat supplements. It is expected that the proposed trial will provide better understanding of the benefits of flasseed ingredients and thus improve the marketing opportunities for our industry.







## 2017 CropConnect Conference February 15 & 16, 2017

Registration Opens October 25, 2016

Visit cropconnectconference.ca for more information.

CropConnect will run for two days offering a wide range of speakers, access to crop specific information, a tradeshow, and a banquet. The event will also include the seven participating organization's Annual General Meetings.