

# **ADOPT**

## **Agricultural Demonstration of Practices and Technologies**

*Final Report – Jan 31, 2011*

ADOPT Project #20090520

### **Fertilizer Effects on Malt Barley**

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#### **Objectives:**

This project was intended to demonstrate the effects of nitrogen on new varieties of barley suited for NE Sask.

#### **Rationale:**

Some new releases show signs of maintaining low protein levels with higher rates of nitrogen applied. These results could provide producers with a new malting variety tolerant of higher levels of nitrogen, resulting in increased yields with lower levels of protein. The impact of these results would be an increased preference by producers of these new varieties.

#### **Materials and Methods:**

Four different rates of fertilizer were applied to the plots 12'x40' following soil tests. Plot A receive recommended rate of N, while Plot B got 1.5x N, Plot C 2x N and Plot D 2.5x N. These plots were duplicated.

#### **Results:**

Samples to evaluate malt quality were not collected due to our unseasonably wet season in 2010. Our plots lodged near maturity, with the heads contacting the ground sprouting within days voiding all results.



**Conclusion:**

As no samples were achieved, the CLC will conduct this trial in 2011 to determine if the added nitrogen will provide a net benefit to the producer. The lodging of the crop may have been caused by the location of these plots; they were surrounded by either forage corn or raspberries with an opening to the north. Higher rates of N, along with adequate moisture and restricted winds may have been the cause. In 2011, this trial will be more representative of field conditions.

**Tech Transfer:**

Field Days:

Conservation Learning Centre – Annual Field Day – July 13<sup>th</sup> - 82 people

Presentation by **Curtis Braaten** (Conservation Learning Centre) in March at Crop Talk 2011 in Prince Albert – 60 in attendance

Report on the project to be posted on our website  
[www.conservationlearningcentre.com](http://www.conservationlearningcentre.com)

**Supporting Information**

**Acknowledgements:**

We would like to express our gratitude to the Ministry of Agriculture for the funding support and in-kind support with this project. To recognize the ADOPT program and the Ministry we had signage at the sites.

**Abstract**

The ability to increase the producer's tonnage/acre by way of added nitrogen, while still maintaining malting qualities, may provide the producers another cropping option. Heavy rates of N increase the risk of raising the protein levels, reducing the ability to achieve malting status. 4 rates were applied from recommended to 1.5xs, 2xs, and 2.5xs. These plots were duplicated, with each plot measuring 12' x 40'. All seeding was done at the end of May.



**Finances***Budget reporting categories:*

	Expenditures	Total (\$)
<b>Salaries and Benefits</b>		
• Students/contracts	600	
• Postdoctoral / Research Associates		
• Technical / Professional Assistants	2600	2800
<b>Consultant Fees &amp; Contractual Services</b>	100	600
<b>Rental Costs</b>		
• Rentals		500
<b>Materials / Supplies</b>	750	750
<b>Project Travel</b>		
• Field Work		
• Collaborations/consultations		
<b>Other</b>		
• Field Day	600	600
• Administration	250	250
• Miscellaneous		
<b>Total</b>	<b>4900</b>	<b>5500</b>

**Description of Finance Amounts****Salaries:** all labour to conduct trial at research location calculated at**Contractual Service:** prepare final report**Technical/Professional Assistants:**

all labour to conduct trial at demo locations calculated at \$350/treatment (min 2 reps) x 8 trt = \$2800. \$400 in-kind from SMA

**Equipment Rental:** \$500 for hand threshing machine was not required as this demo could not achieve any results.**Materials and Supplies:**

seed, chemical, fertilizer, signs, bags

**Administration** - \$2500**Field Days** – field day at \$600

Note: This project did come under budget as a result of no rentals required.

