Red Clover Under-seeding in Spring Wheat 2010

Purpose:

1. Determine the most effective timing to establishment of single vs double cut red clover underseeded in Spring Wheat
2. Evaluate any impact on spring wheat yield from underseeding of red clover.
3. Determine the nitrogen and rotation value in the following corn crop.
4. To evaluate the effect of the single vs double cut red clover on the spring wheat yields in a replicated study.

Methods:

where was farm located? At the on-farm site, the red clover was broadcast on immediately after planting using a 4-wheeler with clover spreader.

The following treatments were applied in small replicated plots at the Winchester Research Farm.

Treatment	Clover	Timing
1	Single Cut	At planting
2	Double Cut	At planting
3	No Clover	At planting
4	Single Cut	with Herbicide
5	Double Cut	with Herbicide
6	No Clover	with Herbicide
7	Single Cut	Flag Leaf Emerged Stage
8	Double Cut	Flag Leaf Emerged Stage
9	No Clover	Flag Leaf Emerged Stage

Results:

Figure 1: 2010 and normal Cumulative Rainfall (mm) and Crop Heat Units

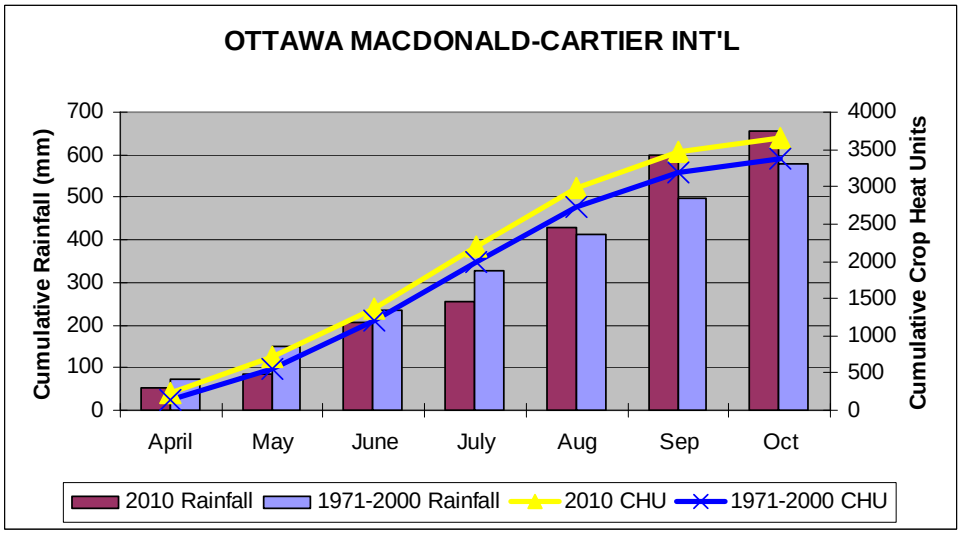

Figure 2: Red Clover Under-seeding in Spring Wheat Ian McGregor's Farm Oct. 2009 name farmer?

Double Cut Red Clover

Single Cut Red Clover

Table 1: 2010 Spring Wheat Yield under-seeded to Single and Double Cut Red Clover at Various planting times

Treatment #	Treatment Description	Protein %	Density (Kg/hl)	Yield (bu/ac)
9	Double Cut - post-harvest	15.1	70.9	52.9
7	Double Cut - flag leaf emerged stage	15.2	71.4	52.7
4	Single Cut - with herbicide	15.2	71.2	51.9
8	Single Cut - post-harvest	15.1	71.3	51.7
2	Single Cut - @ planting	15.0	71.8	51.1
3	Double Cut - @ planting	15.1	71.2	50.7
5	Double Cut - with herbicide	15.3	71.1	50.6
1	No clover	15.3	71.3	50.5
6	Single Cut - flag leaf emerged stage	15.2	71.2	49.2
* No statistical difference for Yield or Protein				

Summary:

The weather for 2010 was a moderately good establishment and growing year for red clover. There was adequate rainfall early in the growing season and above average rainfall in the later part of the growing season from August through to October 2010 (Figure 1). The growing season started earlier than normal, with overall temperatures above average throughout the growing season. This resulted in about 285 more crop heat units than normal. In 2010, there was very little difference in the spring wheat grain yield between the various planting times and the single cut as compared to double cut red clover (Table 1). Under less favourable growing conditions, differences in single versus double cut red clover may be more apparent as double cut is considered to have more aggressive growth, therefore may compete more against the spring wheat crop.

Next Steps:

Depending on funding, this project may be repeated in 2012. Corn is planned to be planted into the 2010 site to evaluate the value of the under-seeded red clover to the following year's corn yield?.

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Location of Project Final Report:

This is an interim report.