

### XIII WEED CONTROL TRIAL (DOW AGROSCIENCES)

**Objective:** To evaluate the weed control options in canola for thistle and wild buckwheat control.

**Background:** Control of problem weeds such as thistles and wild buckwheat continue to be a problem for canola growers. The introduction of the various herbicide tolerant canola systems provides varying levels of weed control depending on the product and rate used and the timing of spraying. The introduction of new herbicides like Eclipse offer the potential for improved thistle and wild buckwheat control.

**Methodology:** The weed control trial included the following treatments:

- A) Eclipse
- B) Vantage Plus

The variety used was DKL34-55, which is a Roundup Ready variety.

**Western Canadian Summary:**

CPC Location	Selkirk MB		Naicam SK		Rycroft AB	
	NYD	CMD	NYD	CMD	NYD	CMD
<b>WEED CONTROL TRIAL</b>						
Eclipse	36.5	108	34.1	90	31.1	87
Vantage Plus (check)	38.8	135	33.6	98	31.2	99

Note: NYD - Net Yield Data (bu/ac), CMD - Contribution Margin Data (\$/ac)

### **SELKIRK**

**Methodology:** The trial was seeded May 28, and both herbicide treatments were applied at the 2 to 3-leaf stage of the crop on June 12. All other agronomic practices were conducted as described in the *Site Information*.

**Observations:** Wild buckwheat was observed throughout the area of the field where this trial was seeded, prior to incorporation of the fertilizer. Emergence of the canola was very good as a result of the warm and moist conditions. However, emergence of wild buckwheat following the tillage and seeding operations was less than expected. At the time of the herbicide applications there was a scattering of wild buckwheat throughout the trial, but the pressure was not intense. Control of the buckwheat and other weeds present was excellent.

**Results: Yield and quality data**

<b>WEED CONTROL TRIAL (DOW AGROSCIENCES) Selkirk, MB</b>				
<b>Treatment</b>	<b>Dockage (%)</b>	<b>Yield (bu/ac)</b>	<b>Oil (%)</b>	<b>Contribution Margin (\$/ac)</b>
Eclipse	0.9	36.5	45.3	107.96
Vantage Plus (check)	0.9	38.8	45.0	134.93
LSD	0.38	3.44	0.74	
CV%	18.1	3.8	1.0	

**Discussion:** The low levels of dockage in both treatments supported the observations of excellent weed control by the two products. There were no differences in yield or oil content, probably due to the lower than expected pressure from wild buckwheat. Contribution margins reflect the herbicide cost and minor differences in yield. Both treatments graded #1.

**NAICAM**

**Methodology:** The trial was seeded May 4 at a rate of 6.2 lb/ac. A fertilizer blend of 7-20-10-5 (actual) was seed-placed for all treatments. Treatments received the following herbicides:

- DKL34-55 - Vantage Plus (0.5 L/ac) 12 days after emergence.
- DKL34-55 - Eclipse (Eclipse A @ 0.112L/ac and Eclipse B @ 0.5 L/ac) 12 days after emergence.

Broadleaf weed counts (Canada thistle, sow thistle, wild buckwheat and dandelions) were taken at spraying and swathing.

**Observations:** Climatic conditions (see *Site Information - Comments*) delayed emergence until May 22. Canada thistle, wild buckwheat and volunteer wheat were the predominant weeds. Weed pressure was moderate in most areas. Patches of Canada thistle were evident across the entire trial. In-crop weed control was good to excellent. Flea beetle damage became noticeable by the first week of June.

**Results: (a) Weed data**

<b>WEED CONTROL TRIAL (DOW AGROSCIENCES) Naicam, SK</b>		
<b>Treatment</b>	<b>Broadleaf Weeds at spraying (#/m<sup>2</sup>)</b>	<b>Broadleaf Weeds at swathing (#/m<sup>2</sup>)</b>
Eclipse	18	7
Vantage Plus (check)	15	8

**Results: (b) Yield and quality data**

<b>WEED CONTROL TRIAL (DOW AGROSCIENCES) Naicam, SK</b>				
<b>Treatment</b>	<b>Dockage (%)</b>	<b>Yield (bu/ac)</b>	<b>Oil (%)</b>	<b>Contribution Margin (\$/ac)</b>
Eclipse	3.4	34.1	43.6	89.81
Vantage Plus (check)	3.0	33.6	43.7	98.16
LSD		2.47	1.01	
CV%		5.2	1.6	

**Discussion:** Broadleaf weed (Canada thistle, wild buckwheat and sow thistle) counts were reduced in both treatments. A reduction in overall broadleaf weed counts can be attributed to herbicide control. There were no significant differences in yield or oil content. All treatments graded #1. Contribution margins reflect differences in yield and herbicide costs.

**RYCROFT**

**Methodology:** Seeding commenced on May 22. All treatments were seeded at 8 lb/ac. A fertilizer blend of 60-20-20-15 lb/ac (actual) had been broadcast prior to seeding and incorporated with harrows.

**Observations:** Soil moisture was adequate at the time of seeding and rainfall began shortly after, allowing for quick emergence and an even plant stand. At the time of spraying, the predominant weeds were Canada thistle and wild buckwheat. A few dandelions emerged prior to harvest. Moist conditions created a favourable environment for both the crop and the weed populations.

**Results: (a) Weed data**

<b>WEED CONTROL TRIAL (DOW AGROSCIENCES) Rycroft, AB</b>		
<b>Treatment</b>	<b>Broadleaf Weeds at spraying (#/m<sup>2</sup>)</b>	<b>Broadleaf Weeds at swathing (#/m<sup>2</sup>)</b>
Eclipse	0	0
Vantage Plus (check)	0	16

**Results: (b) Yield and quality data**

<b>WEED CONTROL TRIAL (DOW AGROSCIENCES) Rycroft, AB</b>				
<b>Treatment</b>	<b>Dockage (%)</b>	<b>Yield (bu/ac)</b>	<b>Oil (%)</b>	<b>Contribution Margin (\$/ac)</b>
Eclipse	2.2	31.1	45.0	87.23
Vantage Plus (check)	5.4	31.2	43.5	99.34
LSD		3.98	0.81	
CV%		9.9	1.5	

**Discussion:**

There was no difference in yield between the two treatments. This may have been due to the low target weed population present at the time of spraying. The difference in contribution margin is primarily attributed to the additional cost of Eclipse. The oil content in the Eclipse treatment was significantly higher than the Vantage Plus treatment.