# XII WEED CONTROL TRIAL (BASF)

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

***Background:*** Control of thistles continues to be a problem for canola growers. The introduction of the various herbicide tolerant canola systems provides varying levels of thistle control depending on the product and rate used and the timing of spraying. The introduction of new herbicides like Absolute offer the potential for improved thistle control. This product was compared to other systems for their relative performance against thistles.

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

A) Clearfield canola - Absolute one application (Odyssey @ 17 g/ac + Lontrel @ 0.17 L/ac) 18-21 DAS
B) Clearfield canola (check) - Odyssey one application (17 g/ac) 18-21 DAS (days after seeding)
C) Liberty Link canola - Liberty one application (1.35 L/ac) 18-21 DAS
D) Roundup Ready canola - Roundup Transorb one application (0.5 L/ac) 10 DAS
E) Roundup Ready canola - Roundup Transorb two applications (0.5 L/ac each) 10 DAS & 20 DAS

***Western Canadian Summary:***

| CPC Location | Naicam SK | | Rycroft AB | |
|---|---|---|---|---|
| | NYD | CMD | NYD | CMD |
| ***WEED CONTROL TRIAL*** | | | | |
| Absolute (46A76) | 30.5 | 78 | 31.1 | 89 |
| Odyssey (46A76) - check | 28.6 | 60 | 32.6 | 104 |
| Liberty (InVigor 2663) | 34.6 | 113 | 39.6 | 148 |
| Transorb (DKL34-55) - one application | 32.9 | 93 | 31.4 | 101 |
| Transorb (DKL34-55) - two applications | 34.2 | 99 | 32.4 | 99 |

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

## *NAICAM*

***Methodology:*** This trial was seeded May 4. Open pollinated varieties (46A76 and DKL34-55) were seeded at 6.2 lb/ac. The Liberty Link hybrid (InVigor 2663) was seeded at 5.0 lb/ac. A fertilizer blend of 7-20-10-5 (actual) was seed-placed for all treatments. Treatments received the following herbicides:

InVigor 2663 - Liberty (1.35 L/ac or 10 ac/jug and 1.05 L/ac or 13.5 ac/jug) 12 days and 21 days after emergence.
DKL34-55 - Roundup Transorb (0.5 L/ac) 12 days after emergence.
- Roundup Transorb (0.5 L/ac) 12 and 21 days after emergence.

46A76 - Odyssey (17 g/ac or 40 ac/case) 12 days after emergence.
- Absolute (Odyssey @ 17 g/ac or 40 ac/case and Lontrel at 0.17 L/ac or 26 ac/jug) 12 days after emergence.

Broadleaf weeds 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***

| WEED CONTROL TRIAL (BASF) Naicam, SK | | |
|---|---|---|
| **Treatment** | **Broadleaf Weeds at spraying (#/m$^2$)** | **Broadleaf Weeds at swathing (#/m$^2$)** |
| Absolute (46A76) | 17 | 8 |
| Odyssey (46A76) - check | 17 | 21 |
| Liberty (InVigor 2663) | 18 | 7 |
| Transorb (DKL34-55) - one app. | 16 | 8 |
| Transorb (DKL34-55) - two app. | 16 | 6 |

Note: app. - application

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

| WEED CONTROL TRIAL (BASF) Naicam, SK | | | | |
|---|---|---|---|---|
| **Treatment** | **Dockage (%)** | **Yield (bu/ac)** | **Oil (%)** | **Contribution Margin ($/ac)** |
| Absolute (46A76) | 2.3 | 30.5 | 41.3 | 78.48 |
| Odyssey (46A76) - check | 3.1 | 28.6 | 42.4 | 59.92 |
| Liberty (InVigor 2663) | 2.6 | 34.6 | 42.4 | 113.03 |
| Transorb (DKL34-55) - one app. | 2.6 | 32.9 | 43.1 | 93.43 |
| Transorb (DKL34-55) - two app. | 3.0 | 34.4 | 43.6 | 98.56 |
| LSD<br>CV% | | 2.47<br>5.2 | 1.01<br>1.6 | |

Note: app. - application

***Discussion:*** Broadleaf weed (Canada thistle and sow thistle) counts were reduced in all treatments except Odyssey. A reduction in overall broadleaf weed counts can be attributed to herbicide control. Differences of 2.47 bu/ac or more are significant. Three treatments yielded significantly higher than the check (Odyssey). Oil content did vary significantly. All treatments graded #1. Contribution margins reflect differences in seed costs, yield, herbicides and associated application 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. All treatments were sprayed at 20 days after seeding except for Transorb (DKL34-55) one application and the first application of the Transorb two application treatment. These two applications were made at 10 days after seeding.

***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***

**WEED CONTROL TRIAL (BASF)**
**Rycroft, AB**

| Treatment | Broadleaf Weeds at spraying (#/$m^2$) | Broadleaf Weeds at swathing (#/$m^2$) |
|---|---|---|
| Absolute (46A76) | 4 | 4 |
| Odyssey (46A76) - check | 0 | 4 |
| Liberty (InVigor 2663) | 4 | 4 |
| Transorb (DKL34-55) - one app. | 0 | 8 |
| Transorb (DKL34-55) - two app. | 0 | 8 |

Note: app. - application

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

| WEED CONTROL TRIAL (BASF)<br>Rycroft, AB | | | | |
|---|---|---|---|---|
| **Treatment** | **Dockage (%)** | **Yield (bu/ac)** | **Oil (%)** | **Contribution Margin ($/ac)** |
| Absolute (46A76) | 2.0 | 31.1 | 44.4 | 89.13 |
| Odyssey (46A76) - check | 2.8 | 32.6 | 44.3 | 103.71 |
| Liberty (InVigor 2663) | 1.7 | 39.6 | 44.8 | 148.34 |
| Transorb (DKL34-55) - one app. | 4.3 | 31.5 | 44.6 | 101.37 |
| Transorb (DKL34-55) - two app. | 2.6 | 32.5 | 44.2 | 99.24 |
| LSD<br>CV% | | 3.98<br>9.9 | 0.81<br>1.5 | |

Note: app. - application

***Discussion:*** The only treatment that was significantly different in yield from the Odyssey check was the Liberty treatment. Not only did it have the highest yield, but the lowest dockage and highest contribution margin. None of the treatments showed any significant difference in oil content. The one application of Roundup Transorb had the highest dockage.