

VI SITE INFORMATION

THIS IS GENERAL SITE INFORMATION THAT MAY CHANGE FOR SPECIFIC TRIALS.

Location: Selkirk, MB

Co-operator: Brian Kazuk

Previous crop: Wheat

Soil Test Results: (Enviro-Test Labs)

Organic matter content: 3.9%

Macronutrient Levels: (0-6", 6-12")

Nitrogen - 24, 28 lb/ac
Phosphorus - 14 lb/ac
Potassium - >540 lb/ac
Sulphur - >43, 9 lb/ac

Micronutrient Levels: (0-6", 6-12")

Boron - 5.9 lb/ac
Copper - 1.6 lb/ac
Iron - 178 lb/ac
Zinc - 2.3 lb/ac
Chlorine - 10, 8 lb/ac
Manganese - 67.1 lb/ac

Recommended Fertilizer Applications - (lb/ac of actual nutrient):

Target Yield (bu/ac)	Probability of Precip. (%)	Precip. Required (inches)	Nitrogen	Phosphate	Potash	Sulphur
44	25	9.5	50-60	30-35	0 or 15	10-15
35	50	7.0	40-50	25-30	0 or 15	10-15
24	75	4.1	15-25	15-20	0	5-10

Target yield: 44 bu/ac

Fertilizer applied: N - 60 lb/ac P - 35 lb/ac K - 0 lb/ac S - 12 lb/ac

Soil climatic zone: Moist Black Interlake

Soil texture: Clay loam

Soil pH: 8.2

Salinity: 0.2 mS/cm (non-saline)

Tillage operations: The field was cultivated in the fall of 2001. A blend of granular fertilizer was broadcast and incorporated using a field cultivator with mounted harrows in the spring of 2002 prior to seeding.

Seeding method: All trials were seeded with a Morris MH-3100 hoe press drill with 7½-inch spacings. All seed was single treated, and 25 lb/ac of phosphate was seed-placed.

Date: May 22 to 29
Depth: ¾"
Rate: Open pollinated *B. napus* varieties - 6.1 lb/ac
Hybrid *B. napus* varieties - 5.0 lb/ac
Soil Temp: 9°C (in afternoon on May 24)

Herbicides applied: All chemical weed control was applied in-crop as per trial protocols.

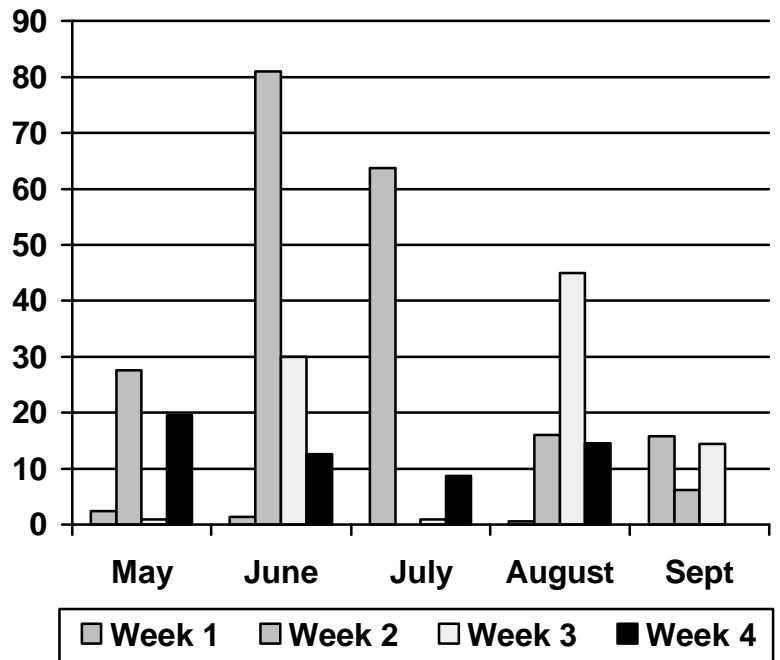
Fungicides applied: Ronilan EG (0.3 kg/ac)

Swathing: Started: August 20 Finished: August 26

Combining: Started: September 15 Finished: September 17

Comments: Cool soil temperatures and wet conditions delayed the start of seeding until May 22. As a result of the cool conditions, emergence of the trials took between a week and 10 days. Flea beetle numbers were high enough to be a concern, but seed treatments were effective, and frequent rainfall appeared to limit their activity as well. Heavy rains early in the season caused some crop stress, particularly in low-lying areas, and delayed herbicide applications until the 4 to 5-leaf stage of the canola. Predominant weeds were wild mustard, smartweed, and wild oats, with some wild buckwheat, dandelion, volunteer wheat and hempnettle also present. There was very little rain throughout July and early August, resulting in low sclerotinia pressure. High temperatures during early July did appear to cause some flower abortion in spite of high humidity levels. At early podding, lygus bug numbers peaked close to the threshold of two per sweep, and then declined without need for chemical control. At swathing the crop was generally shorter than expected, most likely due to the stress of being too wet early in the season and then too dry later on. Rains following swathing allowed for proper curing to take place, and green seed levels were generally low.

Rainfall



Total accumulated moisture = 361.8 mm (14.2 inches)

Location: Dauphin, MB

Co-operator: Jim Kaleta

Previous crop: Wheat

Soil Test Results: (Enviro-Test Labs)
 (Spring soil test following fall application of 90 lb/ac of N as anhydrous ammonia)

Organic matter content: 4.4%

Macronutrient Levels: (0-6", 6-12")

Nitrogen - >72, >68 lb/ac
 Phosphorus - 40 lb/ac
 Potassium - >540 lb/ac
 Sulphur - 11, 10 lb/ac

Micronutrient Levels: (0-6", 6-12")

Boron - 5.6 lb/ac
 Copper - 2.1 lb/ac
 Iron - 282 lb/ac
 Zinc - 17.2 lb/ac
 Chlorine - 14, 12 lb/ac
 Manganese - 176 lb/ac

Recommended Fertilizer Applications - (lb/ac of actual nutrient):

Target Yield (bu/ac)	Probability of Precip. (%)	Precip. Required (inches)	Nitrogen	Phosphate	Potash	Sulphur
41	25	9.7	0	20-25	0 or 15	20-25
34	50	7.7	0	15-20	0 or 15	15-20
25	75	4.7	0	5-10	0	10-15

Target yield: 45 bu/ac

Fertilizer applied: Fall: N - 90 lb/ac P - 0 lb/ac K - 0 lb/ac S - 0 lb/ac
Spring: N - 25 lb/ac P - 22 lb/ac K - 0 lb/ac S - 22 lb/ac

Soil climatic zone: Moist Black Northwest

Soil texture: Clay loam

Soil pH: 7.8

Salinity: 0.4 mS/cm (non-saline)

Tillage operations: In the fall of 2001, anhydrous ammonia was banded at a rate of 90 lb/ac of N, followed by harrowing with heavy harrows. All additional fertilizer was seed-placed in spring of 2002.

Seeding method: All trials were seeded with a 13.3' Bourgault air seeder (Valmar boxes mounted on Bourgault tillage unit). This air seeder was equipped with 2" spoons on 10" row spacings.

Date: May 14 to 16, May 28

Depth: ¾ to 1"

Rate: Open pollinated *B. napus* varieties - 6.6 lb/ac
Hybrid *B. napus* varieties - 4.9 lb/ac

Soil Temp: Ranged from 0 to 10°C (19°C on May 28)

Herbicides applied: All chemical weed control was applied in-crop as per trial protocols.

Fungicides applied: Rovral flo (0.8 L/ac)

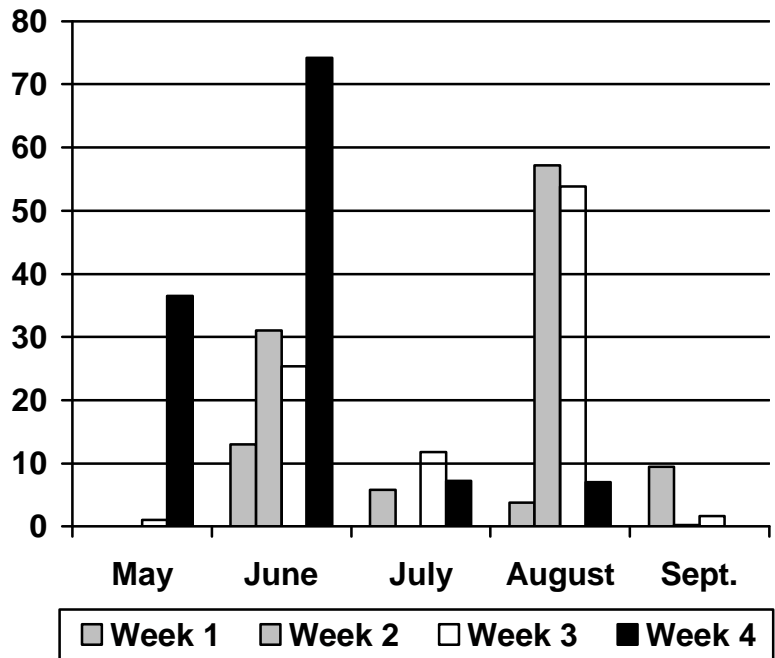
Swathing: Started: August 12 Finished: August 29

Combining: Started: September 12 Finished: September 13

Comments:

Seeding began on May 14, but soil conditions were still quite cold. These cold conditions continued for several days, with some snow at the site about a week after seeding. As a result, emergence of the trials took close to two weeks. The canola emerged over several days, resulting in variability of growth stages within the treatments. Plant densities eventually reached adequate populations. Flea beetles were abundant, with some damage observed in most treatments at the site. However, seed for all plots was treated with insecticide and this limited damage to below threshold levels in all but one trial. Herbicide applications took place at the 2 to 3-leaf stage. Weed pressure was generally low to moderate, resulting mainly from volunteer wheat, wild oats, wild buckwheat, wild mustard, and quack grass. Conditions were good throughout the rest of the growing season, but the crop height was relatively short due to the early season stress. Rains following swathing ensured proper curing and green seed levels were low. Flea beetle numbers were high at harvest, indicating potential for problems in the area in 2003.

Rainfall



Total accumulated moisture = 338.9 mm (13.2 inches)

Location: Yorkton, SK

Co-operator: Dale Rhinas

Previous crop: Wheat

Soil Test Results: (Enviro-Test Labs)

Organic matter content: 5.0% (0-6")

Macronutrient Levels: (0-12")

Nitrogen - 39 lb/ac
Phosphorus - 20 lb/ac
Potassium - 440 lb/ac
Sulphur - 91 lb/ac

Micronutrient Levels: (0-12")

Boron - 12 lb/ac
Copper - 1.8 lb/ac
Iron - 35 lb/ac
Zinc - 2.5 lb/ac
Manganese - 21.4 lb/ac
Chlorine - 64 lb/ac

Recommended Fertilizer Applications - (lb/ac of actual nutrient):

Target Yield (bu/ac)	Probability of Precip. (%)	Precip. Required (inches)	Nitrogen	Phosphate	Potash	Sulphur
43	25	9.5	80-90	30-35	0-15	10-15
40	25-50	8.7	75-85	25-30	0-15	5-10
34	50	7.0	70-80	25-30	0-15	5-10

Target yield: 40 bu/ac

Fertilizer applied (actual): N - 87 lb/ac P - 30 lb/ac K - 10 lb/ac S - 20 lb/ac

Soil association/zone: Oxbow/Black

Soil texture: Loam to Clay Loam

Soil pH: 7.9 to a depth of 6"

Salinity: Non-saline (conductivity 1.8 mS/cm)

Tillage operations: None

Seeding method: Seeded with a JD 9450 hoe press drill with 7" spacings

Date: May 9 to 11

Depth: ¾ to 1"

Rate: 6.2 lb/ac for open pollinated varieties

5.0 lb/ac for hybrid and synthetic varieties

Soil Temp: 3 to 6 °C at a depth of 2"

Pesticides applied:

No pre-emergent burn-off was necessary. All in-crop herbicides were applied as per trial protocols. Matador was applied 2 times (0.05 L/ac) to suppress and control flea beetles.

Swathing:

Started: August 11 Finished: September 4

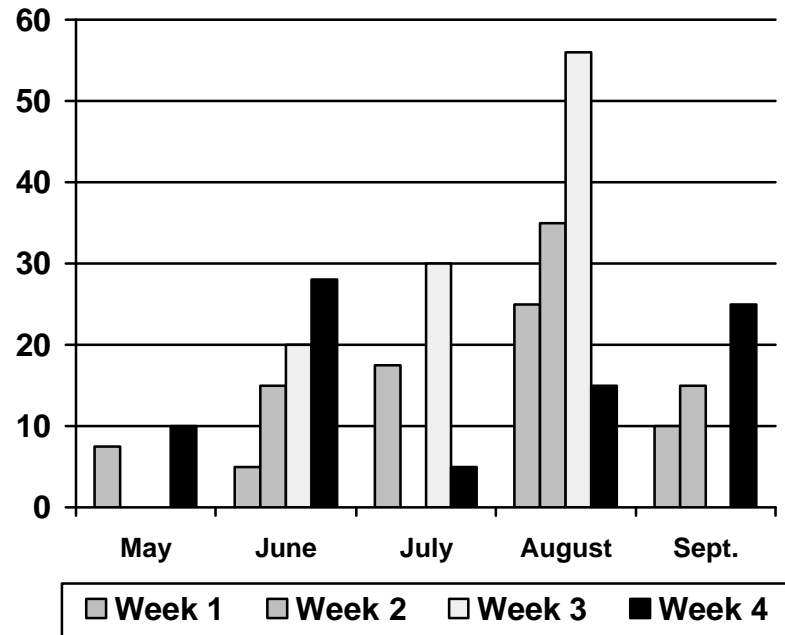
Combining:

Started: September 16 Finished: September 18

Comments:

Cool and dry conditions resulted in slow and uneven emergence. Flea beetle pressure was heavy (5 to 7 flea beetles/plant) to extreme (11 to 14 flea beetles/plant) over a four to five week period following emergence, and leaf area damage exceeded 25% in many parts of the field by June 1. This warranted an application of Matador at the one to two leaf stage of the crop. The insecticide worked well in terms of contact control on actively feeding flea beetles, but residual (vapour) control was reduced by rain the next day. Flea beetle pressure resumed resulting in a second application of Matador on June 5. Flea beetle damage resulted in up to 70% plant mortality in some areas of the field. Growing conditions improved allowing the remaining crop to grow through the flea beetle damage. Weed pressure was moderate. Volunteer wheat, stinkweed, quack grass and Canada thistle were the predominant weeds. Weed control was generally good. Assessments using the sclerotinia stem rot checklist (*Canola Growers Manual*, p. 1054) and sclerotinia petal test kit results (25 % infection) indicated no need to apply a fungicide. Diamondback moth counts were very low. Large numbers of adult flea beetles were present during swathing (early to late August). This indicates the potential for high adult populations in the spring.

Rainfall



Total accumulated moisture = 319 mm (12.6 inches)

Location: Nipawin, SK

Co-operators: Kent Baxter and Eric Thomson

Previous crop: Barley

Soil Test Results: (Enviro-Test Labs)

Organic matter content: 4.1% (0-6")

Macronutrient Levels: (0-12")

Nitrogen - 40 lb/ac
 Phosphorus - 27 lb/ac
 Potassium - 383 lb/ac
 Sulphur - 34 lb/ac

Micronutrient Levels: (0-12")

Boron - 2.8 lb/ac
 Copper - 1.9 lb/ac
 Iron - 169 lb/ac
 Zinc - 5.0 lb/ac
 Manganese - 18.9 lb/ac
 Chlorine - 32 lb/ac

Recommended Fertilizer Applications - (lb/ac of actual nutrient):

Target Yield (bu/ac)	Probability of Precip. (%)	Precip. Required (inches)	Nitrogen	Phosphate	Potash	Sulphur
50	<25	12.9	120-130	30-35	10-15	25-30
38	25	9.7	65-75	25-30	0-15	15-20
30	50	7.4	55-65	20-25	0-15	10-15

Target yield: 40 bu/ac

Fertilizer applied (actual): N - 85 lb/ac P - 25 lb/ac K - 10 lb/ac S - 20 lb/ac

Soil association/zone: Gray

Soil texture: Clay Loam

Soil pH: 7.5 to a depth of 6"

Salinity: Non-saline (conductivity 0.2 mS/cm)

Tillage operations: None

Seeding method: Seeded with a JD 9450 hoe press drill with 7" spacings equipped with liquid fertilizer openers

Date: May 16 to 17

Depth: ½ to ¾"

Rate: 6.2 lb/ac for open pollinated varieties

5.0 lb/ac for hybrid and synthetic varieties

Soil Temp: 6 to 9°C at a depth of 2"

Herbicides applied: No pre-emergent burn-off was necessary. All in-crop herbicides were applied as per trial protocols.

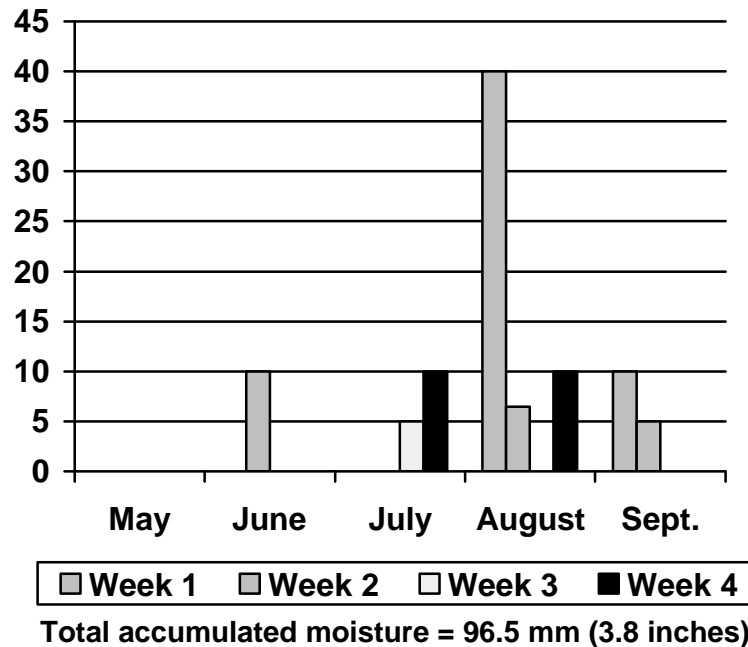
Swathing: Started: August 3 Finished: September 3

Combining: Started: September 27 Finished: September 28

Comments:

Although seedbed moisture was good, cool conditions combined with heavy trash resulted in slow and uneven emergence. Weed pressure was moderate to heavy. Volunteer barley, stinkweed and wild buckwheat were predominant weeds. Canada thistle was also present. Rain on June 2 resulted in a second flush of volunteer barley ten days after spraying. Select (0.05 L/ac or 60 ac/case) was applied to all trials at this time. Flea beetle damage was minimal during early plant development. Crop development was surprisingly good, in spite of the lack of rainfall. July heat during flowering caused flower blast in many areas of the field. Lygus bug pressure neared threshold levels (1.5 to 2.0 lygus / sweep) by mid July. Frost in late July and early August raised concerns with potential green seed problems and uneven crop maturity at harvest. Badly frozen plants compensated by producing secondary stems that flowered for a longer period of time. Variable growing conditions over the summer resulted in three different stages of growth at harvest (visible flowers, early seed development and mature plants). Due to the unevenness in maturity, all the treatments were swathed at an average of 40 to 50% seed colour change.

Rainfall



Location: North Battleford, SK

Co-operator: Bob Bartkewich

Previous crop: Spring wheat

Soil Test Results: (Enviro-Test Labs)
(Spring soil test following fall application of 60 lb/ac of N)

Organic matter content: 4.1% (0-6")

Macronutrient Levels: (0-12")

Nitrogen - 17 lb/ac

Phosphorus - 36 lb/ac

Potassium - >540 lb/ac

Sulphur - 16 lb/ac

Micronutrient Levels: (0-12")

Copper - 1.9 lb/ac

Iron - 140 lb/ac

Zinc - 5.3 lb/ac

Manganese - 42.2 lb/ac

Chloride - 20 lb/ac

Recommended Fertilizer Applications - (lb/ac of actual nutrient):

Target Yield (bu/ac)	Probability of Precip. (%)	Precip. Required (inches)	Nitrogen	Phosphate	Potash	Sulphur
35	<25	9.9	75-85	20-25	0 or 15	15-20
32	25	9.0	65-75	20-25	0 or 15	15-20
25	50	6.8	55-65	15-20	0 or 15	10-15
15	75	3.7	30-40	5-10	0	5-10

Target yield: 35 bu/ac

Fertilizer applied: Spring: N - 80 lb/ac P - 25 lb/ac K - 0 lb/ac S - 20 lb/ac

Soil zone: Black

Soil texture: Clay Loam

Salinity: Non-saline

Tillage operations: Spring application of anhydrous ammonia with a knife opener followed by harrow packing.

Seeding method: Seeded with JD 9450 hoe press drill with 7" spacings.

Date: May 13, 14 and 18

Depth: 1"

Rate: 5.5 lb/ac open pollinated; 5 lb/ac hybrid

Soil Temp: N/A

Pesticides applied:

Conventional - Select (40 ac/case) + Lontrel (0.23 L/ac)
on June 25
Clearfield - Odyssey (17 g/ac) on June 21
Liberty Link - Liberty (1.35 L/ac) on June 21
Roundup Ready - Roundup Transorb (0.5 L/ac) on June 21

Swathing:

Started: August 29 Finished: September 11

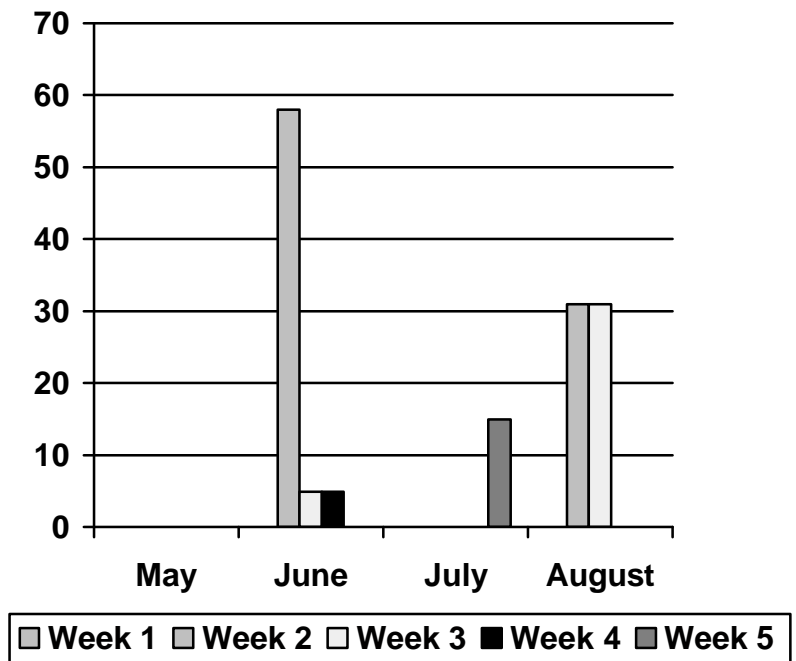
Combining:

Started: N/A Finished: N/A

Comments:

This site was seeded into cool, dry soil during a period of very windy conditions. Topsoil moisture deteriorated rapidly and emergence was slow and uneven. Rain in early June improved soil moisture and allowed more canola to germinate. Canola at the site began to grow vigorously but plant growth slowed quickly with intense heat in July. Flower blasting occurred on all treatments throughout July. Rain in early August caused second growth and extensive re-flowering in all treatments. Swathing took place in late August and early September. However, cool wet conditions throughout October and early November were not conducive to harvesting plots and no yield data was collected at the site.

Rainfall



Total accumulated moisture = 152.6 mm (6 inches)

Location: Vegreville, AB

Co-operator: Willco Farms, Will and Cindy Yakimetz

Previous crop: Barley

Soil Test Results: (Enviro-Test Labs)
(Spring soil test following fall application of 75 lb/ac of N)

Organic matter content: 4.5% (0-6")

Macronutrient Levels: (0-12")

Nitrogen - 70 lb/ac
Phosphorus - 45 lb/ac
Potassium - 358 lb/ac
Sulphur - 35 lb/ac

Micronutrient Levels: (0-12")

Copper - 1.2 lb/ac
Iron - 273 lb/ac
Zinc - 8.1 lb/ac
Manganese - 52.1 lb/ac
Boron - 2.1 lb/ac
Chloride - 36 lb/ac

Recommended Fertilizer Applications - (lb/ac of actual nutrient):

Target Yield (bu/ac)	Probability of Precip. (%)	Precip. Required (inches)	Nitrogen	Phosphate	Potash	Sulphur
40	<25	11.4	0	20-25	0 or 15	10-15
34	25	9.5	0	20-25	0 or 15	10-15
27	50	7.5	0	15-20	0 or 15	10-15
19	75	4.8	0	5-10	0	5-10

Target yield: 40 bu/ac

Fertilizer applied: Fall; N - 75 lb/ac P - 20 lb/ac K - 20 lb/ac S - 0 lb/ac
Spring; N - 18 lb/ac P - 25 lb/ac K - 0 lb/ac S - 15 lb/ac

Soil climatic zone: Black North East

Soil texture: Clay Loam

Salinity: Non-saline

Tillage operations: Fall cultivation and fertilizer application.

Seeding method: Seeded with JD 9450 hoe press drill with 7" spacings.

Date: May 9, 16 and 17

Depth: 1"

Rate: 5.5 lb/ac open pollinated; 5 lb/ac hybrid

Soil Temp: 15°C

Pesticides applied:

Conventional - Lontrel (0.23 L/ac) on June 20
Clearfield - Odyssey (17 g/ac) on June 20
Liberty Link - Liberty (1.35 L/ac) on June 21
Roundup Ready - Roundup Transorb (0.75 L/ac) on June 21

Swathing:

Started: N/A Finished: N/A

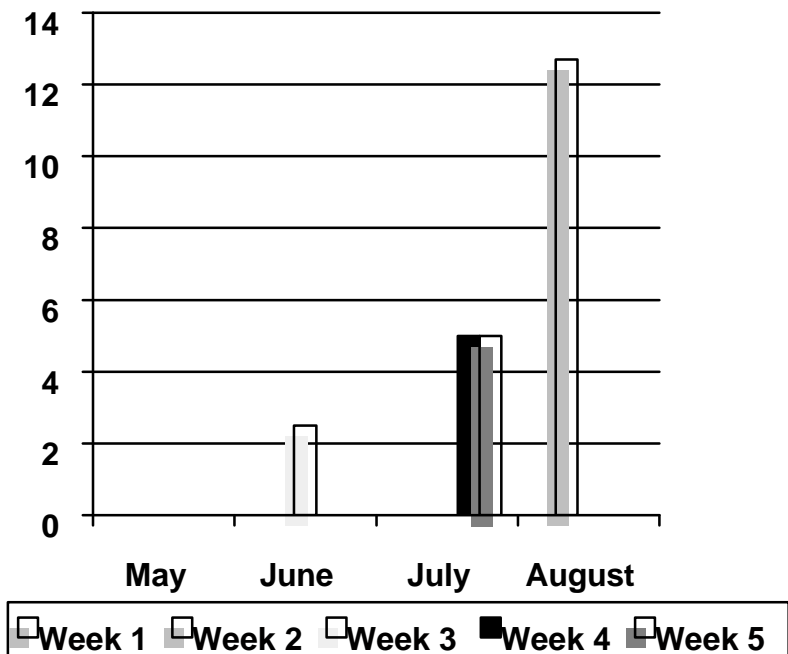
Combining:

Started: N/A Finished: N/A

Comments:

This site was seeded into cool, dry soil. Emergence was slow and uneven throughout all treatments. There was only approximately one inch of rain at the site from seeding until early August. Canola plants at the site were extremely drought stressed. Yield at the site was estimated at less than one bushel per acre and the site was not harvested.

Rainfall



Total accumulated moisture = 25.2 mm (1.1 inches)

Location: Beiseker, AB

Co-operator: JHB Farms

Previous crop: Wheat

Soil Test Results: (Enviro-Test Labs)
(Spring soil test following fall application of 60 lb/ac of N)

Organic matter content: 6.2% (0-6")

Macronutrient Levels: (0-12")

Nitrogen - 48 lb/ac

Phosphorus - 26 lb/ac

Potassium - 510 lb/ac

Sulphur - 48 lb/ac

Micronutrient Levels: (0-12")

Boron - 2.1 lb/ac

Copper - 1.0 lb/ac

Iron - 143 lb/ac

Zinc - 6.5 lb/ac

Manganese - 35.7 lb/ac

Recommended Fertilizer Applications - (lb/ac of actual nutrient):

Target Yield (bu/ac)	Probability of Precip. (%)	Precip. Required (inches)	Nitrogen	Phosphate	Potash	Sulphur
16	75%	4.3	5-15	10-15	0-0	5-10
24	50%	7.1	25-35	20-25	0-15	5-10
35	25%	10.7	55-65	25-30	0-15	5-10

Target yield: 35 bu/ac

Fertilizer applied: N - 66 lb/ac P - 22 lb/ac K - 10 lb/ac S - 10 lb/ac

Soil zone: Thin Black

Soil texture: Sandy Loam

Salinity: 0.2 (mS/cm)

Tillage operations: Fall applied 60 lb/ac anhydrous with knife. Harrow packed in the spring. Seed-placed blend of 8-28-14-14 at a rate of 75lb/ac.

Seeding method: Seeded with JD 9450 hoe press drill with 7" spacings.

Date: May 24 to 25

Depth: 1"

Rate: 5 lb/ac

Soil Temp: 15°C

Herbicides applied:

Pre-seed burn off May 10 using Vantage Plus (0.75 L/ac). An in-crop application of Roundup Transorb (0.5 L/ac) was sprayed in the fill area of the Canola Production Centre. Conventional varieties were sprayed with Poast Ultra (192 mL/ac), Muster (12 g/ac) and Lontrel (200 mL/ac). Liberty Link varieties were sprayed with Liberty (1.35 L/ac), Select (25 mL/ac). Roundup Ready varieties were sprayed with Roundup Transorb (0.5 L/ac).

Swathing:

Started: August 28 Finished: September 9

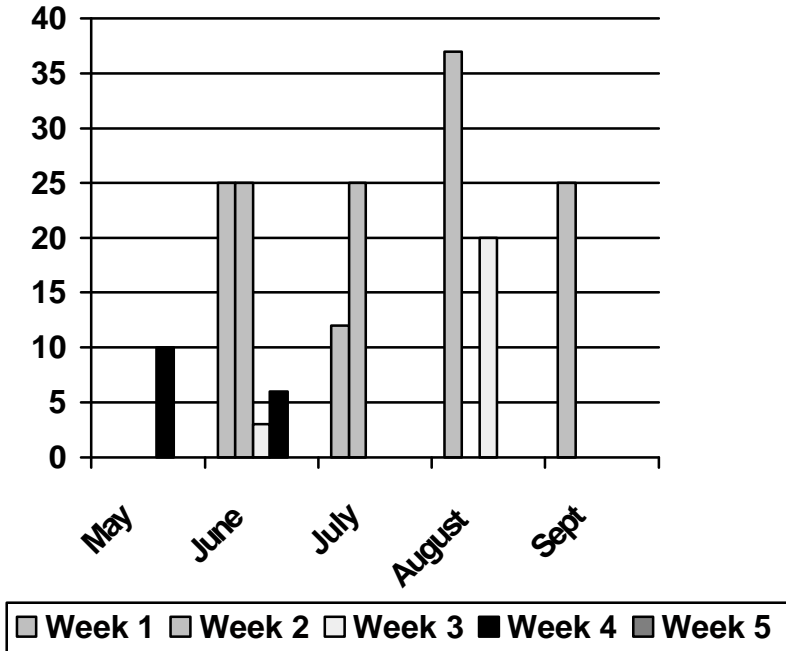
Combining:

Started: October 18 Finished: October 19

Comments:

Surface and sub-surface soil moisture at the site prior to seeding were poor. Vantage Plus was sprayed to control weeds prior to seeding. After seeding was completed, the site received 10 mm of rain, which promoted even germination. Cool growing conditions in May and early June slowed growth. Plant development remained slow until a June rain. Hot, windy weather in late June and throughout July restricted plant growth and stressed plants. Rains in August and cool weather helped in crop development but also brought on second growth. Varieties that were beginning to mature started to re-flower. Assessing the proper stage to swath proved difficult. The decision to swath was based on the potential risk of frost and over all seed color change of the plant.

Rainfall



Total accumulated moisture = 188 mm (7.4 inches)

Location: Lethbridge, AB (Irrigation)

Co-operators: Tom & Joe Shigehiro

Previous crop: Wheat

Soil Test Results: (Enviro-Test Labs)

Organic matter content: 2.1% (0-6")

Macronutrient Levels: (0-12")

Nitrogen - 54 lb/ac
 Phosphorus - 9 lb/ac
 Potassium - 510 lb/ac
 Sulphur - 60 lb/ac

Micronutrient Levels: (0-12")

Copper - 2.3 lb/ac
 Iron - 17 lb/ac
 Zinc - 0.7 lb/ac
 Manganese - 7.6 lb/ac
 Boron - 2.1 lb/ac

Recommended Fertilizer Applications - (lb/ac of actual nutrient):

Target Yield (bu/ac)	Probability of Precip. (%)	Precip. Required (inches)	Nitrogen	Phosphate	Potash	Sulphur
43	N/A	16	50-60	40-45	0-15	0-10
48	N/A	18	65-75	40-45	0-15	0-10
60	N/A	22	100-110	40-45	0-15	0-10

Target yield: 60 bu/ac

Fertilizer applied: N - 110 lb/ac P - 48 lb/ac K - 12 lb/ac S - 12 lb/ac

Soil association/zone: 60% Lacustrine, 40% Ready-made till, Dark Brown

Soil texture: Sandy loam

Salinity: 0.6 (mS/cm)

Tillage operations: Fall cultivation and harrow. Spring broadcast 46-0-0 (90 lb/ac actual N) then harrow packed. Seed-placed blend of 14-40-9-9 at a rate of 120 lb/ac.

Seeding method: Seeded with JD 9450 hoe press drill with 9" spacings

Date: May 15, 20, and 21

Depth: 1"

Rate: 4 lb/ac

Soil Temp: 3°C, 8°C

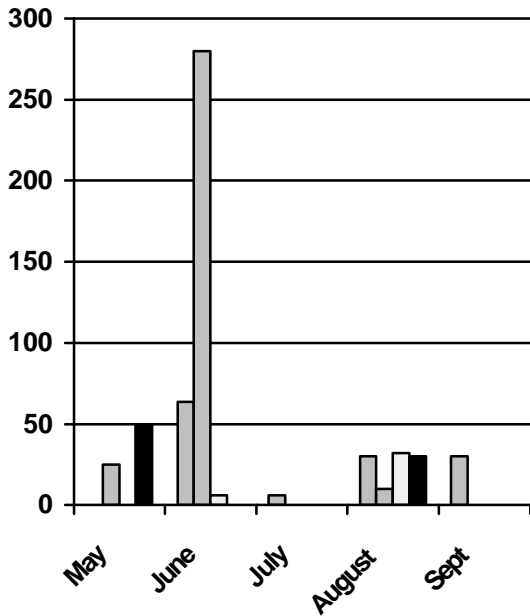
Herbicides applied: Pre-seed burnoff was applied May 10 using Roundup Transorb (0.75 L/ac). Conventional varieties were sprayed with Poast Ultra (192 mL/ac), Muster (12 g/ac) and Lontrel (200 mL/ac). Liberty Link varieties and fill area were sprayed with Liberty (1.35 L/ac) and Select (25 mL/ac). Roundup Ready varieties were sprayed with Roundup Transorb (0.5 L/ac).

Swathing: Started: August 29 Finished: September 15

Combining: Started: October 15 Finished: October 17

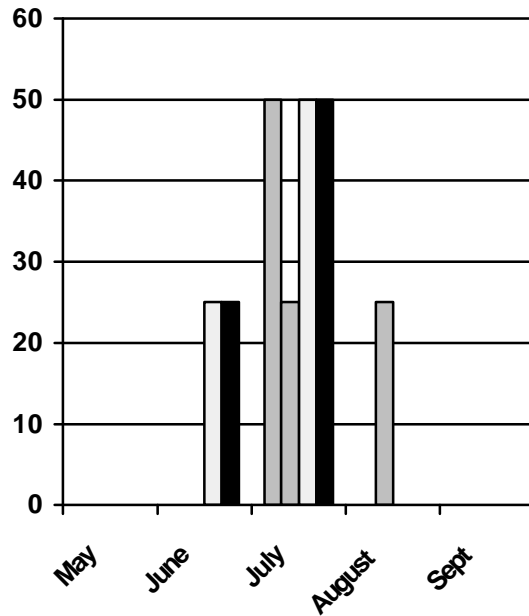
Comments: Soil moisture conditions prior to seeding were fair. At the completion of seeding, approximately eight inches of snow was received. Even germination resulted. During a weekend rainstorm in June the site received eleven inches of rain. This resulted in shallow developing roots. Flea beetles were prevalent and caused damage in some plots that were only treated with a fungicide. Cool weather in August and September delayed maturity. After swathing, cool weather slowed the curing process. Canola that was left in the swath for more than a month was not completely cured. However, with cold wet weather forecasted, the decision to combine was made.

Rainfall



■ Week 1 ■ Week 2 □ Week 3 ■ Week 4

Rainfall - Irrigation



■ Week 1 ■ Week 2 □ Week 3 ■ Week 4

Total accumulated moisture = 712.5 mm (32.0 inches)
(Rainfall – 562.5 mm, 22.2 inches) + (Irrigation – 250.0 mm, 9.8 inches)

Location: Lethbridge, AB (Dryland)

Co-operator: Rod & Ike Lanier

Previous crop: Wheat

Soil Test Results: (Enviro-Test Labs)

Organic matter content: 2.6% (0-6")

Macronutrient Levels: (0-12")

Nitrogen - 75 lb/ac
 Phosphorus - 39 lb/ac
 Potassium - 510 lb/ac
 Sulphur - 69 lb/ac

Micronutrient Levels: (0-12")

Copper - 2.0 lb/ac
 Iron - 127 lb/ac
 Zinc - 1.5 lb/ac
 Manganese - 72.9 lb/ac
 Boron - 1.3 lb/ac

Recommended Fertilizer Applications - (lb/ac of actual nutrient):

Target Yield (bu/ac)	Probability of Precip. (%)	Precip. Required (inches)	Nitrogen	Phosphate	Potash	Sulphur
15	50	6.1	0	15-20	0-15	0-10
19	25	8.2	0	20-25	0-15	0-10
25	<25	10.2	0	20-25	0-15	0-10

Target yield: 25 bu/ac

Fertilizer applied: N - 9 lb/ac P - 25 lb/ac K - 10 lb/ac S - 10 lb/ac

Soil association/zone: 85% Lethbridge Lacustrine, 15% Ready-made till/Brown

Soil texture: Loam/Clay loam

Salinity: Non-saline

Tillage operations: A blend of 9-25-10-10 was seed-placed at a rate of 100 lb/ac.

Seeding method: Direct seeded with JD 9450 hoe press drill with 9" spacings.

Date: May 16

Depth: 1"

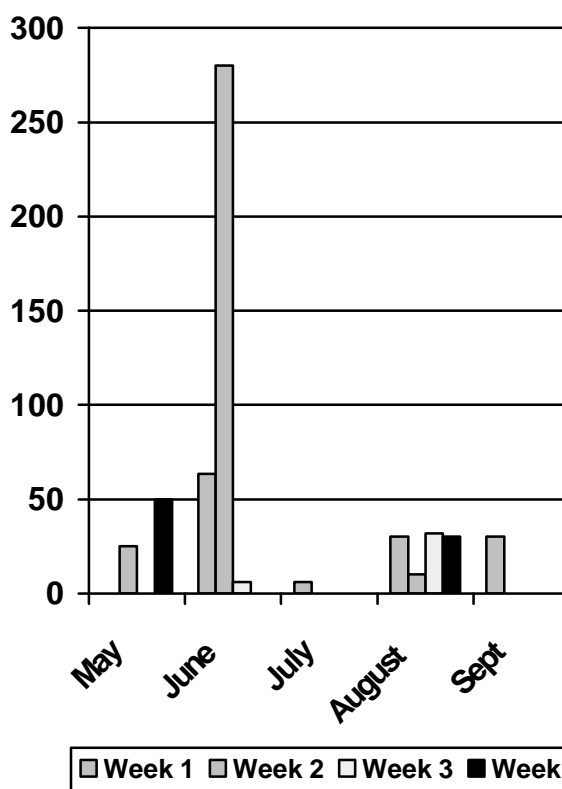
Rate: 4.5 lb/ac

Soil Temp: 5°C

Herbicides applied: A pre-seed burnoff was applied on May 6 using Roundup Transorb (0.5 L/ac). Conventional varieties were sprayed with a tank mix of Poast Ultra (192 mL/ac) and Muster (12 g/ac). Lontrel (200 mL/ac) was spot sprayed. Liberty Link varieties were sprayed with Liberty (1.35 L/ac) and Select (25 mL/ac). Roundup Ready varieties and fill area were sprayed with Roundup Transorb (0.5 L/ac).

Comments: Soil moisture prior to seeding was fair. Emergence was slow but even. A rain over a three-day period resulted in eleven inches of moisture being received at the site. This resulted in shallow developed roots, leaching of nitrogen below the root zone and possible denitrification. Plants soon developed symptoms of nitrogen deficiency. Hot weather following the rain further intensified the symptoms. Roots grew downward as the season progressed and recovered somewhat. Crop height on average was twenty-four inches. At crop maturity, as a result of the thin stand, the decision to straight cut the site was made. Second growth occurred prior to combining and plants began to reflower. This resulted in green material in the samples.

Rainfall



Total accumulated moisture = 562.5 mm (22.2 inches)

Location:	Rycroft, AB
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Co-operator: Calvin Dika

Previous crop: CPS Wheat

Soil Test Results: (Enviro-Test Labs)

Organic matter content: 4.5% (0-6")

Macronutrient Levels: (0-6", 6-12")

Nitrogen - 40 lb/ac
 Phosphorus - 25 lb/ac
 Potassium - 355 lb/ac
 Sulphur (0-24") - >41 lb/ac

Micronutrient Levels: (0-6")

Copper - 1.5 lb/ac
 Iron - 453 lb/ac
 Zinc - 15.6 lb/ac
 Manganese - 19.5 lb/ac
 Chlorine - 28 lb/ac
 Boron - 2.5 lb/ac

Recommended Fertilizer Applications - (lb/ac of actual nutrient):

Target Yield (bu/ac)	Probability of Precip. (%)	Precip. Required (Inches)	Nitrogen	Phosphate	Potash	Sulphur
35	25	9.2	60-70	25-30	0 or 15	10-15
28	50	6.9	50-60	20-25	0 or 15	10-15
19	75	4.2	30-40	10-15	0-0	5-10
50	<25	13.9	125-135	25-30	0 or 15	10-15

Target yield: 35 bu/ac

Fertilizer applied: N - 70 lb/ac P - 30 lb/ac K - 15 lb/ac S - 15 lb/ac

Soil climatic zone: Moist Dark Gray

Soil texture: Clay

Salinity: Non-saline

Soil pH: 5.9

Tillage operations: None

Seeding method: Direct seeded with a JD 9450 hoe press drill with 7" spacings

Date: May 29, 30 and June 4

Depth: ½-1"

Rate: 6.2 lb/ac open pollinated; 5 lb/ac hybrid (unless otherwise stated)

Soil Temp: 10.5°C

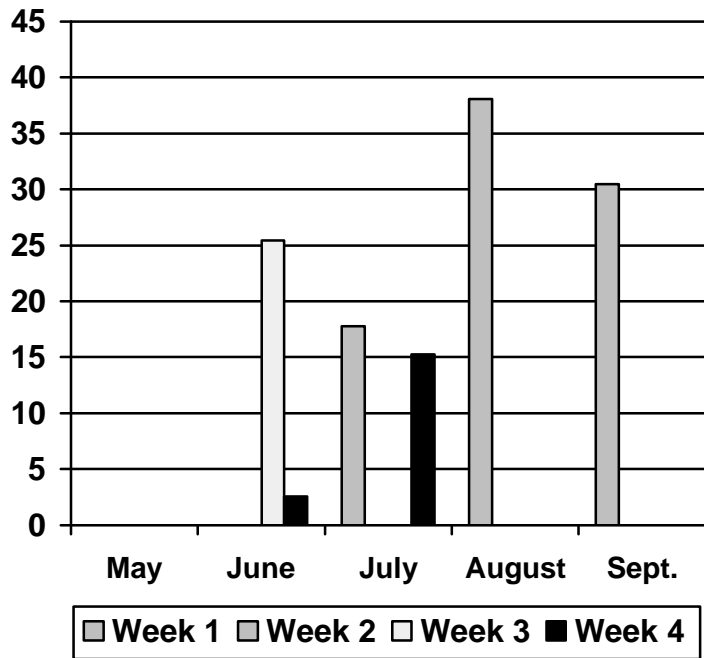
Pesticides applied: Vantage Plus, Muster Gold II, Liberty, Select, Absolute, Odyssey, Roundup Transorb

Swathing: Started: August 28 Finished: September 18

Combining: Started: November 2 Finished: November 4

Comments: A late spring snowfall that occurred mid May delayed seeding until the end of the month. Although soil temperatures were on the cool side, soil moisture levels were optimum. Good spraying conditions allowed for timely weed removal to occur mid to late June. Diamondback moths were spotted in the traps June 3, however populations did not reach threshold levels for spraying. Flea beetle damage occurred on the fungicide only seed treatments and were managed according to protocols. Red Turnip beetles were also spotted throughout the season and became very heavily populated in the fall. Due to the combination of a heavy crop, late maturity and cool, wet weather conditions, harvest was delayed until early November.

Rainfall



Total accumulated moisture = 129.5 mm (5.1 inches)

Location: Dawson Creek, BC

Co-operator: Gene Vipond

Previous crop: Barley

Soil Test Results: (Enviro-Test Labs)

Organic matter content: 5.1% (0-6")

Macronutrient Levels: (0-6", 6-12")

Nitrogen - 93 lb/ac
 Phosphorus - 36 lb/ac
 Potassium - 320 lb/ac
 Sulphur (0-24") - 40 lb/ac

Micronutrient Levels: (0-6")

Boron - 2.3 lb/ac
 Copper - 1.1 lb/ac
 Zinc - 19.6 lb/ac
 Manganese - 28.1 lb/ac
 Chlorine - 17 lb/ac
 Iron - 305 lb/ac

Recommended Fertilizer Applications - (lb/ac of actual nutrient):

Target Yield (bu/ac)	Probability of Precip. (%)	Precip. Required (inches)	Nitrogen	Phosphate	Potash	Sulphur
33	25	8.7	0-0	20-25	5-15	15-20
26	50	6.5	0-0	15-20	5-15	10-15
17	75	3.8	0-0	5-10	5-15	5-10
40	<25	11	15-25	20-25	5-15	15-20

Target yield: 40 bu/ac

Fertilizer applied: Fall: N - 90 lb/ac (anhydrous ammonia)
Spring: N - 25 lb/ac P - 25 lb/ac K - 15 lb/ac S - 20 lb/ac

Soil climatic zone: Dark Gray

Soil texture: Clay Loam - Clay

Salinity: Non-saline

Tillage operations: Fall tillage with anhydrous ammonia application.

Seeding method: Direct seeded with JD 9450 hoe press drill with 7" spacings.
Date: May 25-26 and June 3
Depth: ½-1 inch
Rate: 6 lb/ac open pollinated; 5 lb/ac hybrid (unless otherwise stated)
Soil Temp: 9°C

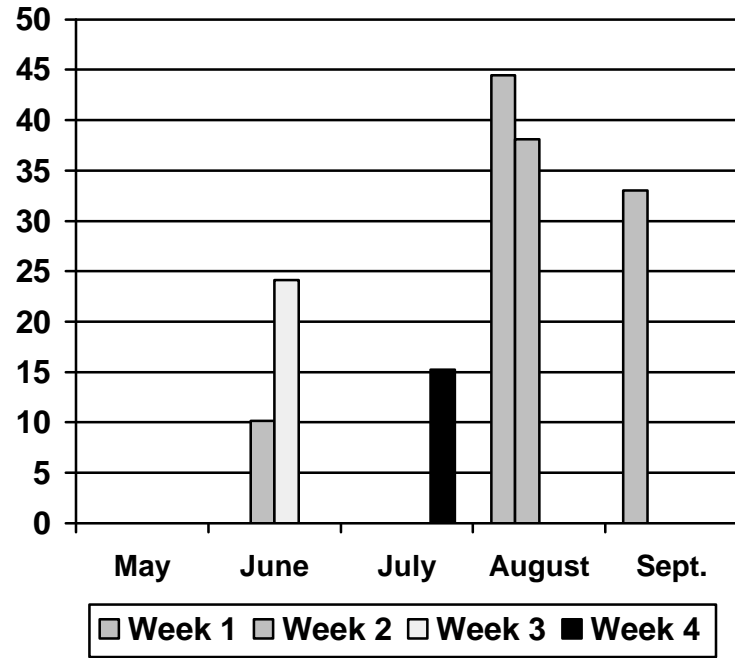
Pesticides applied: Muster Gold II, Liberty, Select, Roundup Transorb, Decis 5EC

Swathing: Started: September 14 Finished: September 20

Combining: Started: November 5 Finished: November 8

Comments: A late spring snowfall that occurred mid May delayed seeding until the end of the month. Although soil temperatures were on the cool side, soil moisture levels were optimum. Good spraying conditions allowed for timely weed removal to occur mid to late June. Diamondback moths were spotted in the traps June 3, however populations did not reach threshold levels for spraying. Flea beetle damage occurred on the fungicide only seed treatments and were managed according to protocols. Red Turnip beetles were also spotted throughout the season and became very heavily populated in the fall. Due to the combination of a heavy crop, late maturity and cool, wet weather conditions, harvest was delayed until early November.

Rainfall



Total accumulated moisture = 165.1 mm (6.5 inches)