Ontario
Canola Growers Association
2004
Crop Production Report

Crop Production Committee
Shawn Schill – CPC Chair
Marc McKeown — Director
Jeff Kobe — Director

Index

We would like to thank the following groups in their support of the CPC site as well CPC tour held in the summer:

Inland Co-operative
Cargill AgHorizons
Holmes Agro
Pioneer
Bayer Cropscience
Sygenta
Advanta
Monsanto
Matt & Sharon Coffey

Farm History and Plot Management

Owners: Shawn and Bridget Schill
Farm area: 94.5 acres
Farm Location: Lot 2, concession 10, West Luther Twsp.
Soil Type: Clay-loam with tile drainage @ 40 foot intervals.
Previous crop: Corn
Date planted: June 2nd 2004
Last canola crop grown on farm: 4 Years prior.
Fall tillage: No fall tillage was performed
Spring tillage: Conventional tilled areas received two passes with a disc and two passes with a field cultivator.
Planting equipment: John Deere, 1860 no-till air drill.
Nitrogen program: 110 units of 28% liquid applied pre-emerge just prior to a light rain.
P and K program: a 10-40-30 starter was direct banded with seed.
Herbicide programs: Varity trial area had an application of Poast Ultra, Lontrel and Muster at label rates sprayed post-emerge. No-tilled area received a liter of roundup applied along with U.A.N as a pre-plant application.
Insect control: No foliar control for insects was used as flea beetle and cabbage seedpod weevil pressure stayed below thresholds and spraying was not needed.
Disease control: No disease control was applied, although sclerotina infection was evident at harvest.
Harvest equipment: John Deere 9650 combine with 30 foot header. Pioneer weigh wagon. The total plot was straight harvested.

Overview of 2004 OCGA plot and projects.

1. Showcase variety and yield plot.
2. Test yield differences between 7.5 inch rows versus 15 inch rows.
3. Test yield differences between conventional tillage versus no-till planting.
4. Test yield response from a canola inoculation product called Jumpstart.
5. Test yield response from different rates of starter fertilizer.
6. Test yield at different seeding rates.
7. Test yield at different nitrogen rates.
8. Assess all above trials and trial results and determine the most profitable production method

Variety trial yield data.

Overview of variety plot:

1. All varieties were planted into conventional tillage.
2. Seed rate for all varieties was 5 lbs of seed per acre.
3. Helix Xtra was insect control on all seed.
4. Ground temperature was 16 degrees at time of planting.
5. Each variety was planted into a 1.3 acre area.
6. Herbicide control was applied post emerge using Venture, Muster and Lontrel.
7. Yield data was collected by weigh wagon.

Company	Variety	Yield in	Moisture	Test weight	Harvestab-lity	Herbicide Trait	Sclortenia Rating
		lbs/acre		grams per 0.5	1= poor		1= poor
				liter cup	10=excellent		10= excellent
Advanta	357 RR	2334	9.9%	318 grams	9	Roundup Ready	9
Bayer	Invigor 2643	2292	12.3%	331 grams	7	Liberty Link	8
Bayer	Invigor 5020	2211	10.6%	324 grams	8	Liberty Link	9
Pioneer	46H02	2139	9.6%	326 grams	9	Conventional	6
Pioneer	45H21	2071	10.3%	326 grams	9	Roundup Ready	5
Advanta	Z2363	2067	8.4%	332 grams	8	Conventional	9
Advanta	225 RR	1977	9.5%	329 grams	9	Roundup Ready	7
Advanta	Z2365	1947	9.4%	332 grams	8	Conventional	8
Pioneer	45H24	1540	10.2%	333 grams	6	Roundup Ready	2

Summary of Spring Canola Coop
Elora, Grand Valley, Dundalk, Wartburg, New Liskeard, 2004

Entry No.	Variety	Rank	Yield (kg/ha)	% of Check Yld
1	Hyola 401 (C1)	8	2659	
2	Senator (C1)	12	2543	
3	Hyola 357 RR	17	2455	
4	OAC Hurricane	27	2185	
5	OAC Tornado	21	2333	
6	Canterra 1492CA	11	2587	
7	SC990158 (S2003)	14	2517	
8	45H21	6	2756	
9	46H02	5	2804	
10	5020	2	2920	
11	5030	1	3210	
12	5070	3	2916	
13	AP 7978 RR (1)	4	2879	111
14	AP 7554 RR (1)	7	2728	105
15	AP 7910 RR (1)	13	2533	97
16	AP 504 RR (1)	28	2111	81
17	AP 8244 (1)	9	2619	101
18	45H24 (1)	10	2612	100
19	SC010081 (1)	19	2389	92
20	SC010241 (1)	25	2254	87
21	SC010238 (1)	18	2400	92
22	+PR10461 (1)	24	2296	88
23	+PR10462 (1)	16	2513	97
24	Z2409 (1)	15	2514	97
25	Z2363 (1)	20	2381	92
26	Z2365 (1)	23	2321	89
27	Z2104 (1)	22	2328	90
28	D1166 (1)	26	2232	86
	No. Locations		**5**	

Public Spring Canola Coop
Elora, 2004

	Planted May 13				
Entry No.	**Variety**	**Rank**	**n**	**Yield (kg/ha)**	**% of Check Yld**
1	Hyola 401 (C1)	3	4	2785	
2	Senator (C1)	11	4	2589	
3	Hyola 357 RR	5	3	2687	
4	OAC Hurricane	27	4	2133	
5	OAC Tornado	20	4	2378	
6	Canterra 1492CA	13	4	2506	
7	SC990158 (S2003)	21	4	2351	
8	45H21	7	4	2646	
9	46H02	8	4	2606	
10	5020	1	4	3199	
11	5030	4	4	2725	
12	5070	9	4	2603	
13	AP 7978 RR (1)	2	4	2993	111
14	AP 7554 RR (1)	6	4	2668	99
15	AP 7910 RR (1)	10	4	2602	97
16	AP 504 RR (1)	25	4	2189	81
17	AP 8244 (1)	12	4	2519	94
18	45H24 (1)	19	4	2392	89
19	SC010081 (1)	26	4	2148	80
20	SC010241 (1)	23	4	2214	82
21	SC010238 (1)	14	4	2498	93
22	+PR10461 (1)	28	4	2036	76
23	+PR10462 (1)	16	4	2436	91
24	Z2409 (1)	15	4	2476	92
25	Z2363 (1)	22	4	2305	86
26	Z2365 (1)	24	4	2195	82
27	Z2104 (1)	17	4	2420	90
28	D1166 (1)	18	3	2408	90
	LSD (0.05)			352	
	C.V. (%)			10.0	

Public Spring Canola Coop
Grand Valley, 2004

	Planted May 21			
Entry No.	**Variety**	**Rank**	**Yield (kg/ha)**	**% of Check Yld**
1	Hyola 401 (C1)	9	1677	
2	Senator (C1)	26	1397	
3	Hyola 357 RR	8	1722	
4	OAC Hurricane	19	1544	
5	OAC Tornado	20	1528	
6	Canterra 1492CA	27	1347	
7	SC990158 (S2003)	10	1667	
8	45H21	2	1985	
9	46H02	15	1623	
10	5020	7	1727	
11	5030	1	2222	
12	5070	16	1601	
13	AP 7978 RR (1)	4	1816	118
14	AP 7554 RR (1)	5	1733	113
15	AP 7910 RR (1)	24	1440	94
16	AP 504 RR (1)	28	1337	87
17	AP 8244 (1)	18	1549	101
18	45H24 (1)	21	1500	98
19	SC010081 (1)	11	1654	108
20	SC010241 (1)	25	1421	92
21	SC010238 (1)	14	1627	106
22	+PR10461 (1)	12	1644	107
23	+PR10462 (1)	3	1834	119
24	Z2409 (1)	17	1578	103
25	Z2363 (1)	13	1628	106
26	Z2365 (1)	22	1493	97
27	Z2104 (1)	23	1493	97
28	D1166 (1)	6	1730	113
	LSD (0.05)		355	
	C.V. (%)		15.5	

Public Spring Canola Coop
Dundalk, 2004

	Planted May 20			
Entry No.	**Variety**	**Rank**	**Yield (kg/ha)**	**% of Check Yld**
1	Hyola 401 (C1)	11	2375	
2	Senator (C1)	8	2432	
3	Hyola 357 RR	21	2132	
4	OAC Hurricane	27	1875	
5	OAC Tornado	23	2123	
6	Canterra 1492CA	6	2459	
7	SC990158 (S2003)	17	2278	
8	45H21	5	2514	
9	46H02	2	2793	
10	5020	13	2342	
11	5030	1	3046	
12	5070	3	2704	
13	AP 7978 RR (1)	4	2702	112
14	AP 7554 RR (1)	15	2317	96
15	AP 7910 RR (1)	7	2436	101
16	AP 504 RR (1)	24	2086	87
17	AP 8244 (1)	9	2388	99
18	45H24 (1)	10	2383	99
19	SC010081 (1)	19	2195	91
20	SC010241 (1)	28	1818	76
21	SC010238 (1)	14	2328	97
22	+PR10461 (1)	20	2152	90
23	+PR10462 (1)	12	2351	98
24	Z2409 (1)	16	2297	96
25	Z2363 (1)	22	2124	88
26	Z2365 (1)	18	2265	94
27	Z2104 (1)	26	2007	83
28	D1166 (1)	25	2048	85
	LSD (0.05)		342	
	C.V. (%)		10.5	

Public Spring Canola Coop
Wartburg, 2004

	Planted April 29			
Entry No.	**Variety**	**Rank**	**Yield (kg/ha)**	**% of Check Yld**
1	Hyola 401 (C1)	12	2962	
2	Senator (C1)	22	2636	
3	Hyola 357 RR	21	2708	
4	OAC Hurricane	27	2464	
5	OAC Tornado	16	2831	
6	Canterra 1492CA	13	2919	
7	SC990158 (S2003)	5	3182	
8	45H21	11	2970	
9	46H02	7	3089	
10	5020	4	3264	
11	5030	1	3649	
12	5070	2	3305	
13	AP 7978 RR (1)	8	3046	109
14	AP 7554 RR (1)	3	3289	118
15	AP 7910 RR (1)	19	2747	98
16	AP 504 RR (1)	28	2191	78
17	AP 8244 (1)	10	2983	107
18	45H24 (1)	14	2917	104
19	SC010081 (1)	9	2994	107
20	SC010241 (1)	18	2778	99
21	SC010238 (1)	24	2569	92
22	+PR10461 (1)	25	2537	91
23	+PR10462 (1)	15	2914	104
24	Z2409 (1)	17	2802	100
25	Z2363 (1)	6	3095	111
26	Z2365 (1)	26	2481	89
27	Z2104 (1)	20	2712	97
28	D1166 (1)	23	2605	93
	LSD (0.05)		399	
	C.V. (%)		9.9	

Public Spring Canola Coop
New Liskeard, 2004

	Planted June 3			
Entry No.	**Variety**	**Rank**	**Yield (kg/ha)**	**% of Check Yld**
1	Hyola 401 (C1)	9	2796	
2	Senator (C1)	13	2627	
3	Hyola 357 RR	14	2617	
4	OAC Hurricane	17	2577	
5	OAC Tornado	26	2210	
6	Canterra 1492CA	16	2593	
7	SC990158 (S2003)	20	2495	
8	45H21	4	3135	
9	46H02	10	2739	
10	5020	2	3454	
11	5030	1	3586	
12	5070	3	3264	
13	AP 7978 RR (1)	7	2952	109
14	AP 7554 RR (1)	5	3052	113
15	AP 7910 RR (1)	21	2446	90
16	AP 504 RR (1)	28	2002	74
17	AP 8244 (1)	8	2816	104
18	45H24 (1)	6	2984	110
19	SC010081 (1)	22	2412	89
20	SC010241 (1)	12	2644	97
21	SC010238 (1)	24	2278	84
22	+PR10461 (1)	15	2605	96
23	+PR10462 (1)	18	2512	93
24	Z2409 (1)	11	2697	99
25	Z2363 (1)	25	2257	83
26	Z2365 (1)	23	2399	88
27	Z2104 (1)	19	2495	92
28	D1166 (1)	27	2049	76
	LSD (0.05)		476	
	C.V. (%)		12.7	

Row width trials / Tillage Trials and Inoculation trial

1. Check plot – Pioneer 46H02 planted at 5lbs to the acre in 7.5 inch rows. Conventional tillage passes performed.
2. Pioneer46H02 planted at 5lbs of seed to the acre in 15 inch rows. Conventional tillage passes performed.
3. Pioneer 46H02 planted at 5 lbs of seed to the acre in 7.5 inch rows. No-tilled directly into corn stubble.
4. Pioneer 46H02 planted at 5 lbs of seed to the acre in 15 inch rows. No-tilled directly into corn stubble.
5. Pioneer 46H02 planted at 5 lbs of seed to the acre in 7.5 inch rows. Treated at label rates with Jumpstart inoculants with a cost of $5.75 acre.

Trial	Variety	Yield in	Ranking
		lbs/acre	
1-Conventional 7.5 inch rows	Pioneer 46H02	2139	4
2-Conventional 15 inch rows	Pioneer 46H02	2058	5
3-No-till 7.5 inch rows	Pioneer 46H02	2393	1
4-No-till 15 inch rows	Pioneer 46H02	2315	2
5-Jumpstart inoculants	Pioneer 46H02	2238	3

15 inch no-till canola

Nitrogen Trials/Starter Trials and Seed rate trials

1. Nitrogen trial was performed using 28% U.A.N and varying the application as below. The most cost effective application rate would be between 100-150 pounds of actual nitrogen applied. This is very close to the OMAF recommendation of 110-140 pounds.

of actual applied	Cost per acre using $265/mt U.A.N	Yield in Pounds	Gross income/acre using $300/mt canola	Net Return/acre
50 units/actual	$21.46/acre	1707 lbs/acre	$232.35/acre	$210.89/acre
100 units/actual	$42.92/acre	2028 lbs/acre	$276.12/acre	$233.83/acre
150 units/actual	$64.39/acre	2271 lbs/acre	$309.17/acre	$244.78/acre
200 units/actual	$85.85/acre	2278 lbs/acre	$310.07/acre	$224.22/acre

2. Starter Trial was performed by using one blend of a 10-40-30 varied at different application rates as shown below.

Percentage of a 10-40-30 starter	Cost per acre using $310/mt starter blend	Yield in pounds	Gross income/acre using $300/mt canola	Net return/acre
No starter applied	$0/acre	1651lbs/acre	$224.72/acre	$224.72/acre
50 pounds or 38%	$7.03/acre	2110 lbs/acre	$287.20/acre	$280.17/acre
100 pounds or 77%	$14.06/acre	2236 lbs/acre	$304.35/acre	$290.29/acre
150 pounds or 115%	$21.09/acre	2210 lbs/acre	$300.81/acre	$279.72/acre
200 pounds or 154%	$28.12/acre	2114 lbs/acre	$287.74/acre	$259.62/acre

3. Seed rate trials were performed varying pounds applied seed as shown below. Pioneer 46H02 was used as test variety.

Seed rate in lbs/acre using Pioneer 46H02	Cost per acre using $7/pound seed costs	Yield in pounds	Gross income/acre using $300/mt canola	Net return/acre
7 lbs of seed/acre	$49/acre	2390 lbs/acre	$325.31/acre	$276.31/acre
6 lbs of seed/acre	$42/acre	2456 lbs/acre	$334.30/acre	$292.30/acre
5 lbs of seed/acre	$35/acre	2575 lbs/acre	$350.49/acre	$315.49/acre
4 lbs of seed/acre	$28/acre	2510 lbs/acre	$341.65/acre	$313.65/acre
3 lbs of seed/acre	$21/acre	2375 lbs/acre	$323.27/acre	$302.27/acre

The most cost effective seed rate was 4-5 pounds/acre.
Would recommend 5 lbs/acre on early planting-cooler soils
and move lower to 4 lbs/acre on later planting-warmer soils.

Most Profitable Acre

Scenario #1: This scenario is what is most commonly used by producers. Crop is grown as listed below.

1. Plant Hyola 357 RR @ 5 lbs an acre. Plant in 7.5 inch rows. Pay $420 a bag for the seed.
2. Do conventional tillage. One pass of fall tillage and two passes of spring tillage.
3. Pay Monsanto $15 an acre for T.U.A fees
4. Spray a 0.5 liter of transorb per spray pass. Possibly spraying twice.
5. Have to spend money on volunteer control of Roundup Ready canola in following Roundup Ready soybean or corn crops.

Scenario #2: This scenario is what would lead to the highest net returns per acre considering data taken from plot results.

1. Plant Pioneer 46h02 @ 4 lbs an acre. Plant in 15 inch rows or 7.5 inch rows. Pay $315 a bag for seed.
2. Plant the crop with the no-till method gaining a 9.3% yield advantage over conventional tillage.
3. Apply 28% liquid fertilizer and do a pre-plant burn down with roundup in the same pass. Possibly having to do conventional weed controls post emerge.
4. Do not have to pay T.U.As or worry about controlling volunteer canola in future crops.

Expenses	Scenario #1	Scenario #2
Land costs	$100.00	$100.00
Seed	$37.27	$22.91
Fall Tillage	$20.00	$0.00
Spring Tillage	$24.00	$0.00
Planting	$17.50	$20.00
Nitrogen	$47.22	$47.22
Starter	$14.06	$14.06
Nitrogen Application	$9.50	$9.50
Pre-plant Roundup	$0.00	$9.90
T.U.A	$15.00	$0.00
Herbicide Chemical	$9.90	$0
Herbicide Application	$16.00	$8.00
Combining	$30.00	$30.00
Trucking	$6	$6
Volunteer RR canola/		
control in following crops	$10.00	$0.00
Revenue below was determined using $300/mt canola FOB local elevator.		
Yield in lbs per acre	2334 lbs	2338 lbs
Gross Revenue/acre	$317.69	$318.23
Gross Expense/acre	$356.45	$268.59
Net Income/acre	**-$38.76**	**$49.64**

This cash flow is assuming all machinery expenses at custom rates. No expenses shown for potential insect or disease control. No extra expenses for weed control in scenario #2 as pre-plant roundup was adequate weed control. Land cost depends on Producer.

Cabbage Seedpod Weevil (CSW)

by Brian Hall, OMAF

The cabbage seedpod weevil was first identified in Mid-Western Ontario in 2001, but growers in southwestern Ontario report finding the pest before this. Since then, the CSW distribution has increased throughout canola growing areas. Populations of the weevil in affected areas have also continued to increase. In 2003, damage from the CSW appeared to be most serious in winter canola but spring canola was also affected. Yield losses from the weevil have not been well documented in Ontario, but in Alberta and Saskatchewan, yield reductions of up to 30 – 40% have occurred. In the future, scouting and controlling the cabbage seedpod weevil will be critical to prevent economic losses. No research on the CSW has been conducted in Ontario. Current information and economic thresholds are based on information for Western Canada.

Life Cycle

The CSW overwinters in the adult form in protected areas like fencerows and shelterbelts under leaf litter. In the spring, the adults emerge from wintering sites when soil temperatures are above 12 ^{0}C and begin to fly to feed on early flowering cruciferous plants (volunteer canola, stinkweed, wild mustard). The adult weevils move to canola fields when the crop is at the bud to early flower stage to feed on pollen and buds. In areas where both winter and spring canola are grown, the adult weevils move from the winter to spring canola as flowering progresses. Females lay their eggs inside newly developing canola pods. The larvae feed on the developing seeds within the canola pod. At maturity, the larvae chew through the pod wall and drop to the soil to pupate. Within 10 days, the larvae pupate to adults and emerge from the soil. These adults then feed on green pods by penetrating the pod wall with their snout and sucking out the seed tissue. Late flowering spring canola is prone to damage from this second generation of weevil adults.

Crop Damage

Crop damage occurs in several ways. 1. Adults feeding on buds, cause bud-blasting thus reducing yield potential. 2. Larvae feeding on seeds within developing pods cause the most serious damage. Each larvae will consume approximately 5 seeds. Pods are weakened and prone to shattering. 3. Larvae chew exit holes in the pod when ready to pupate. These holes provide an entry point for fungal infection. 4. The new generation of adults in August feed directly on canola seeds through pod walls. 5. The CSW can also reduce seed quality. Research has shown reductions of seed oil content by 2.2%, seed weight by 16.2 %, and seed germination by 40.5%.

Management

Early scouting when the crop is at the bud stage through flowering is critical for managing the CSW. Thresholds from the United States and western Canada indicate 2 to 5 weevils per sweep warrants control. Canola fields with high yield potential will warrant control at the lower end of this range. Matador is the only product currently registered for control. Application timing is when the crop is in the 10 to 20% bloom stage (2-4 days after flowering starts). The adult form of the CSW must be controlled, because Matador will not affect the larvae feeding inside the pods. Invested fields are often noticeable by the presence of flocks of birds that forage on the adult weevils.

For Further information refer to OMAF publication 812, Field Crop Protection Guide; the Canola Growers Manual CD – ROM available from the Canola Council (http://www.canola-council.org), Alberta Agriculture factsheet http://www.agric.gov.ab.ca/agdex/600/622-21.html.

Swede Midge Found In Canola In Ontario

by Tracey Baute - Field Crop Entomologist/OMAF

Suspected Swede midge injury was been reported in a few fields in Ontario. While surveying 32 fields for cabbage seedpod weevil, 6 fields were found to have evidence of Swede midge injury. The 6 fields were located in the Grand Valley area; currently an area listed as quarantined for cole crops due to Swede midge by CFIA. Two of the fields were planted with winter canola. The remaining four were spring canola fields. CFIA is currently investigating the situation.

The swede midge has been very troublesome for the cole crop industry since it was first identified in Ontario in 2000. A native insect of Europe and Asia, this gall midge is a common pest of cruciferous vegetable crops such as cauliflower and broccoli but can also infest alternative crucifer hosts like wild mustard, canola and shepherd's purse. In the cole crop industry this pest has caused serious losses in crop yield and marketability.

This insect overwinters as a pupa in the soil and emerges as an adult approximately mid May to early June. The adult midge is a very tiny fly (1.5 - 2 mm), difficult for even us entomologists to properly identify from other closely related species (Fig 1). Once mated, the female will lay her eggs on a host crop, typically in clusters of 2-50 eggs on the youngest and most actively growing portions of the plant. These eggs hatch and the small maggot larvae feed on the plant tissue, which results in stunting, distortion and/or death of the growing point (Fig 2). In cole crops, injury has been so substantial; some growers have had to plow down the crop and replant. Once mature, the larvae fall to the soil to pupate and continue the cycle. The pupa can survive in the soil for up to two years before emerging as adults. Research conducted in Ontario indicates that there are three to four overlapping generations per year.

It appears that its impact on canola may be strongly dependent on planting date (i.e. crop stage at time of infestation), crop rotation and infestation levels. If the plants are infested at a very young crop stage, the canola plants can be extremely stunted and malformed (Fig 3). This was observed at one of the Ontario locations where the field was planted very late for research purposes. The remaining five locations were planted much early (at more normal planting dates for that area). These plants were well advanced when the midge injury took place. These plants seemed to compensate for the injury by still producing all of its pods but clustering them at the midge feeding site. Infested plants developed what I would call a "bouquet" of pods (Fig 4). Preliminary observations indicate that pod number and size did not differ from plants that were not infested. However, this is dependent on how well advanced the plant is when the adult lays her eggs.

Management of this insect is a challenge. Monitoring with traps is proving difficult. Instead, growing degree day models are being tested in hopes of finding a way to predict when the adults are flying. Insecticides have been successfully used in cole crops to control the adults. However, this strategy requires proper timing and repeated sprays because of the overlapping multiple generations. In canola, spraying insecticides every week to prevent egg laying is just not practical. For canola, the best strategy at this point may be to focus on proper crop rotation and weed management. The pupa can survive for up to two years in the soil. If growers follow a good three year rotation system (i.e. do not plant a crucifer host crop for two years in that field following canola), the insect will

emerge from that field without a host plant to feed on. Removing volunteer canola and closely related weed species like wild mustard is also important. If you do find midge in your field, limiting the movement of soil from that field to another will also help to reduce its spread. Research will also focus on biocontrol agents, plant breeding for resistance/ tolerance and systemic insecticides that control the larvae.

To date, this pest has not been found elsewhere in North America. The adult itself is a very weak flyer, so as a result, the Canadian Food Inspection Agency has quarantined counties where swede midge was found in attempts to limit its spread. If it can't fly that far, the spread is more limited to the movement of plant material and soil by humans. Currently, swede midge has been found in eight counties in Ontario.

Figure 1. Swede Midge Adult (Klaus Schrameyer, ALLB, Heilbronn)

Figure 2. Swede midge injury on cabbage. Note multiple side shoots and secondary bacterial infection. (Klaus Schrameyer, ALLB, Heilbronn

Spring and Winter Canola

White Mould (Sclerotinia Stem Rot)

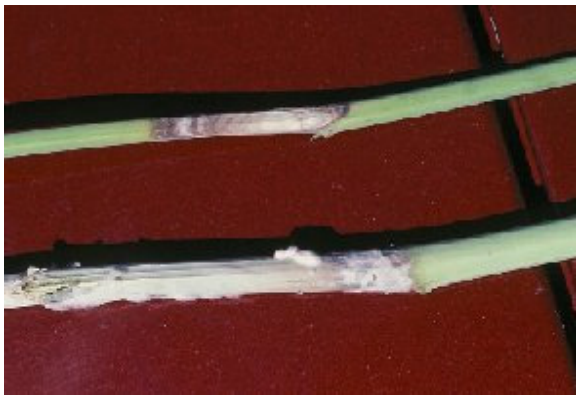
Incidence

White mould is a canola disease that is sporadic within a region and varies greatly from year to year. This makes predicting disease potential or outbreaks very difficult. The disease is very destructive during periods of prolonged, wet weather. Losses of up to 50% can occur under ideal conditions.

Appearances

White mould is characterized by bleached stem lesions and hard black bodies (sclerotia) of white mould fungus inside the stems; it causes premature ripening of the plants.

The disease is often a problem when canola follows canola, white beans, soybeans or sunflowers. Infections that start on the dead blossoms spread to adjacent tissues, resulting in dead branches or dead plants. Plants may lodge. The rotted stems usually have a bleached appearance. Sclerotinia infections can be serious on canola if cool, wet weather occurs in the last 2 weeks of June and continues into early July when blossoming occurs.



White mould (Sclerotinia stem rot) causes white (bleached) stem lesions and hard black bodies in the stems.

Management Strategies

Use clean, certified seed and rotations of at least 4 years, including unaffected crops such as corn, wheat, barley or oats in fields with a history of Sclerotinia or white mould. During this rotation, it is necessary to avoid planting susceptible crops including mustard, sunflower, dry bean, soybean, field pea, lentil or garbanzo bean. At present, no resistant varieties exist. Keep fields clean of broad-leaved weeds since many are alternate hosts for this disease. Foliar fungicide treatments are effective but require scouting and precise timing.