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# Flax Canada 2015 - Flax Growers Survey 2006 and 2007

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Canada

# Goals and Objective

- Classify respondents into groups of top, middle and bottom producers
- To gain an understanding of production practices that both limit and enhance flaxseed production
- To determine which factors have the greatest impact on productivity
- To create a profile of top producers
- To compare opinions about flax production to canola production
- To determine producers' overall opinions about flax production (straw management, agronomics, etc)
- To track data over time and identify any trends that may exist

# Scope of the Work

- To achieve these objectives, FC 2015 contracted Insightrix Research Services to conduct telephone survey of Western Canadian flax farmers. The survey process included the following stages:
  - Survey Design
  - Survey Programming and Testing
  - Quantitative Data Collection
  - Survey Monitoring
  - Survey Analysis and Reporting
- Data was collected in December 2006 and January 2007.
  - 2006 -Of a total contact list of 3975, generated from various sources, 1525 were successfully contacted and deemed qualified to complete the survey. Of those, 472 completed the survey, for a response rate of 44.8%.
  - 2007 - Of a total contact list of 5,909, generated from various sources, 1,072 were successfully contacted. Of these potential respondents, 500 completed the survey, for a cooperation rate of 46.6%.

# Who is the Flax Farmer?

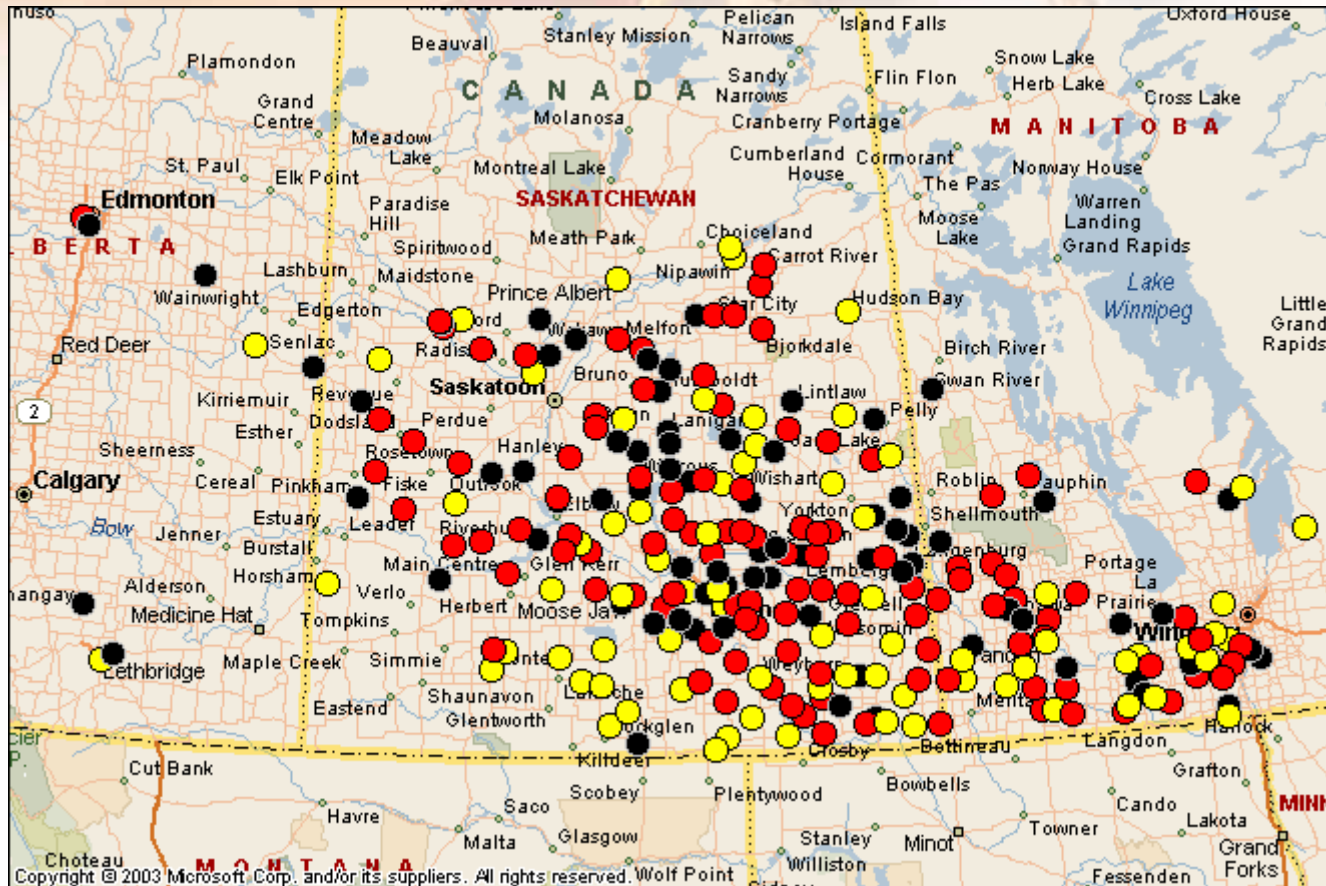
Tillage System	Year	%	Acres	Yield	Grade #1CW %	Dockage
Conventional System	2006	86.9	263	23.0	96.2	5.1
	2007	87.4	243	22.2	98.0	5.5
Pesticide Free System	2006	5.1	212	17.7	91.7	5.3
	2007	2.4	186	22.8	94.5	8.2
Organic System	2006	5.1	156	14.5	87.5	12.5
	2007	6.8	148	12.4	95.9	15.1 <sub>4</sub>

# Classifying Top, Middle and Bottom Producers

<b>2006 Results</b>	<b>Top Growers (N=135)</b>	<b>Middle Growers (N=214)</b>	<b>Bottom Growers (N=123)</b>
<b>Most recent yield (bushels/acre)</b>	31.4	22.8	11.8
<b>Long-term average yield (bushels/acre)</b>	25.2	21.6	18.6
<b>Most recent grade of flax crops (% #1 CW)</b>	97.9	96.7	86.2
<b>Most recent grade of flax crops (% #2 CW)</b>	1.1	2.8	7.3
<b>Most recent grade of flax crops (% #3 CW)</b>	1.0	0.5	6.5
<b>Long-term grade of flax crops (% #1 CW)</b>	97.4	93.5	86.5
<b>Long-term grade of flax crops (% #2 CW)</b>	1.4	1.7	4.3
<b>Long-term grade of flax crops (% #3 CW)</b>	0.5	1.0	3.5

<b>2007 Results</b>	<b>Top Growers (N=73)</b>	<b>Middle Growers (N=164)</b>	<b>Bottom Growers (N=167)</b>
<b>Most recent yield (bushels/acre)</b>	31.8	23.9	16.1
<b>Long-term average yield (bushels/acre)</b>	27.3	23.3	18.6
<b>Most recent grade of flax crops (% #1 CW)</b>	99.2	99.2	97.3
<b>Most recent grade of flax crops (% #2 CW)</b>	0.7	0.5	2.1
<b>Most recent grade of flax crops (% #3 CW)</b>	0.1	0.3	0.6
<b>Long-term grade of flax crops (% #1 CW)</b>	100.0	97.0	94.2
<b>Long-term grade of flax crops (% #2 CW)</b>	0.0	2.4	3.0
<b>Long-term grade of flax crops (% #3 CW)</b>	0.0	0.6	2.8

# Flax Growers Survey in 2006

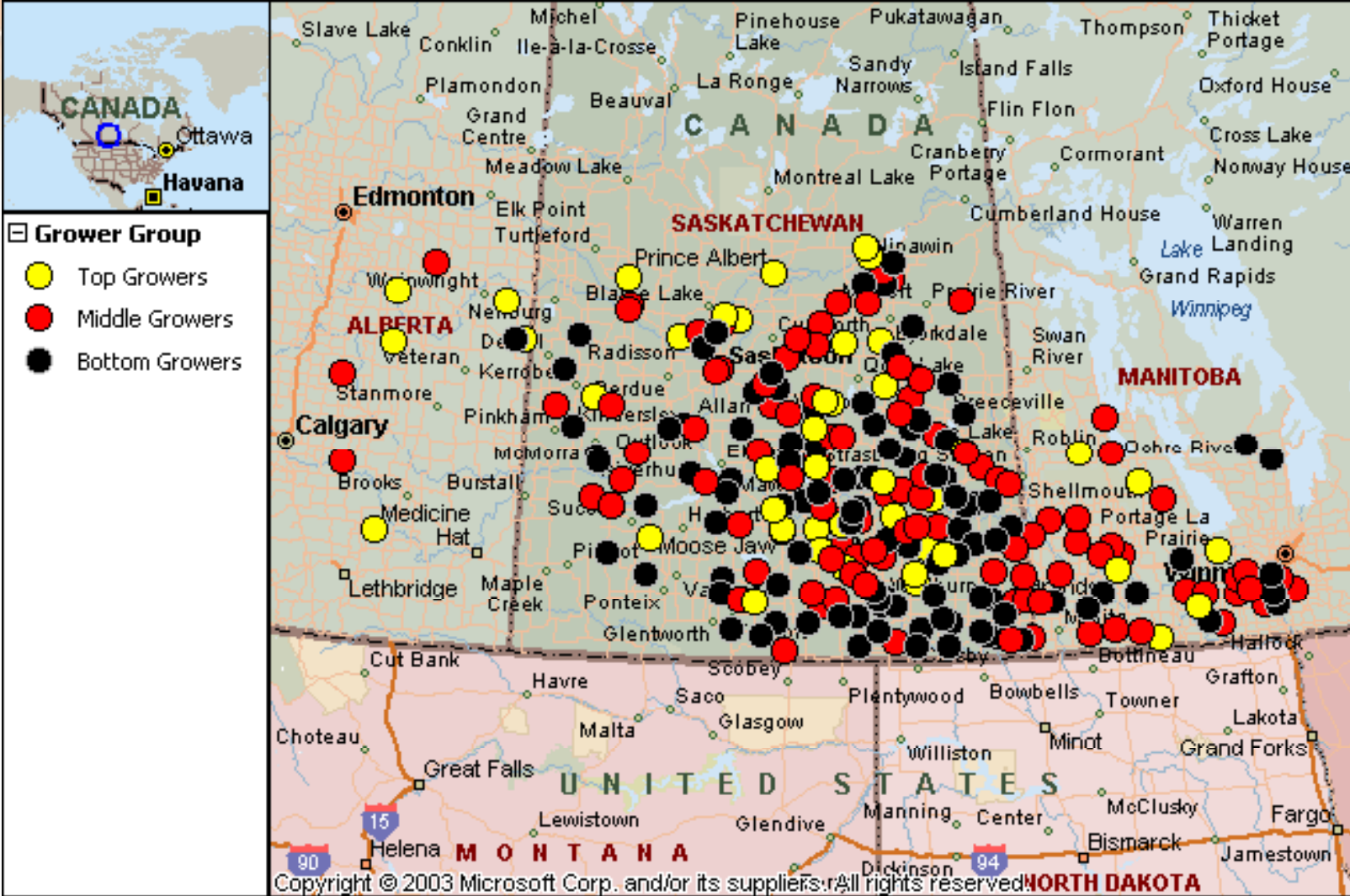


Black Dots =  
Top Growers

Red Dots =  
Middle  
Growers

Yellow Dots =  
Bottom  
Growers

# Flax Growers Survey in 2007



# Crop Rotation / Diversity

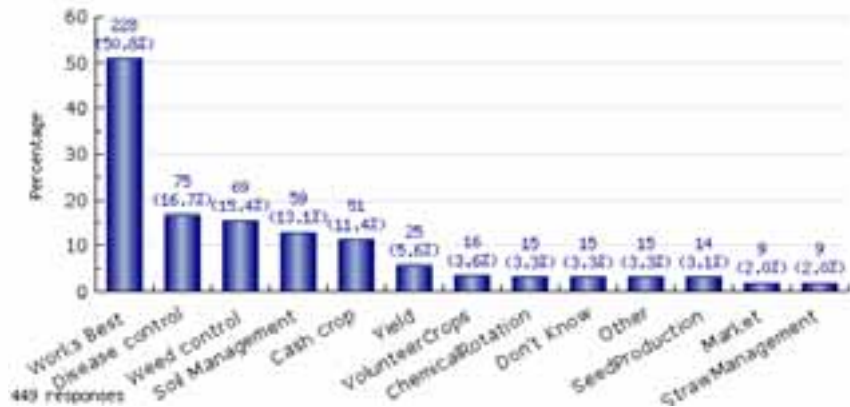
Crop Rotation	2006		2007	
	Total #	% of Responses	Total #	% of Responses
2 years	26	5.5	32	6.4
3 years	116	24.6	137	27.4
4 years	215	45.6	219	43.8
5 years	43	9.1	37	7.4
6 years	18	3.8	19	3.8
7 years	8	1.7	5	1.0
Don't know	26	5.5	27	5.4
Only one season	19	4.0	24	4.8
<b>Total</b>	<b>471</b>	<b>100</b>	<b>500</b>	<b>100</b>

## 3 Year Rotation With Flax

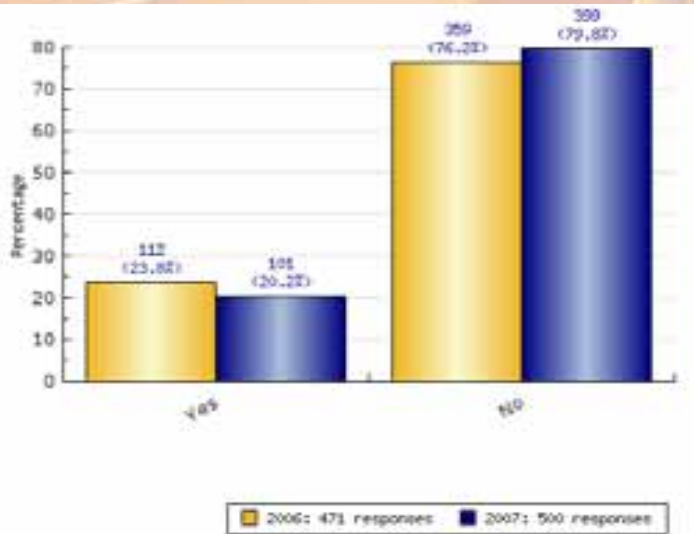
- wheat is the most common crop grown in the second year (41.6%), followed by canola at 16.8%.
- Wheat (21%) and Canola (20%) were the most common crops grown in the third year (the year just before flax), followed closely by barley.

## 4 Year Rotation With Flax

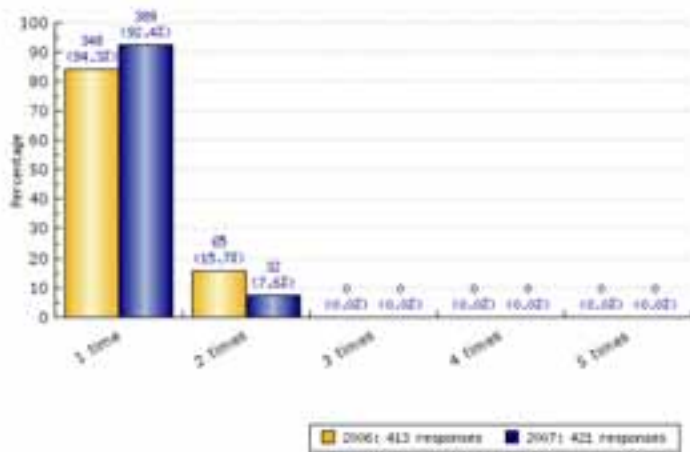
- Just under half grow wheat in the second year (the year right after flax).
- Canola is the most common crop grown in the third year and cereals in the fourth year.



# Nutrient Management



Overall, 20.2% of respondents conducted soil testing, which is slightly, but not significantly, less than 2006 (23.7%). Bottom growers are less likely than top and middle growers to have conducted soil testing (13.8% and 28.8% respectively).



-Each of the factors related to fertility regime (number of applications, application method, fertilizer rate and use of micronutrients) were analyzed to determine which are most related to productivity. The most important factor was to fertilize.

-Fertilize = 22.6 bu/ac

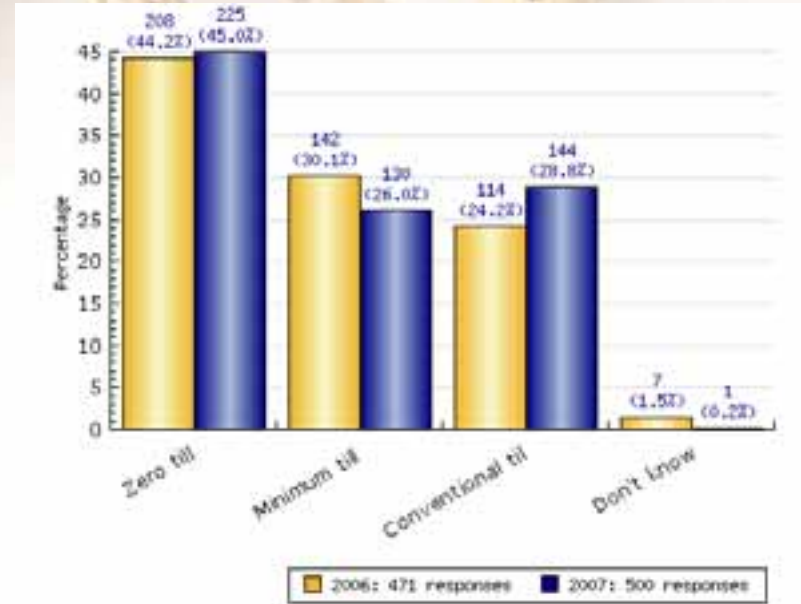
-Do Not Fertilize = 18.2 bu/ac

# Tillage Management

Overall, 45% of respondents used a zero till regime, while 28.8% used minimum till and 26% used conventional till.

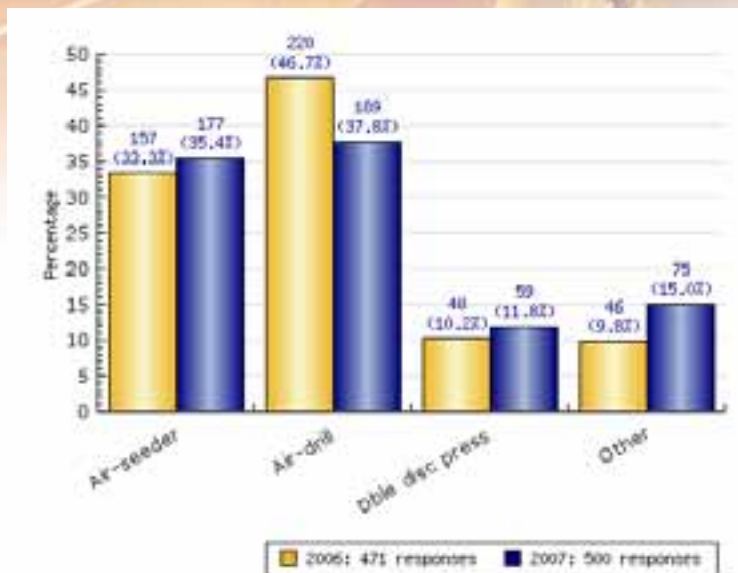
There is a significant difference in tillage regimes of top growers as compared to bottom growers, with 31.5% of top growers using minimum till, compared to 19.8% of those in the bottom group.

Also, 31.7% of those in the bottom group used conventional till, compared to only 16.4% of those in the top group.



What tillage regime did you follow?		Grower Group			Total
		Top Growers	Middle Growers	Bottom Growers	
Zero till	Count	38	77	81	196
	%	52.1%	47.0%	48.5%	48.5%
Minimum till	Count	23	52	33	108
	%	31.5%	31.7%	19.8%	26.7%
Conventional till	Count	12	35	53	100
	%	16.4%	21.3%	31.7%	24.8%
Total	Count	73	164	167	404
	%	100.0%	100.0%	100.0%	100.0%

# Seeding Management



Equipment  
 Row Spacing  
 Type of Opener  
 Packing Method  
 Post Seeding

	Rate	Depth	Temp
Top Growers	45.0	.94	11.5
Middle Growers	43.6	1.03	11.0
Bottom Growers	44.0	1.07	11.9

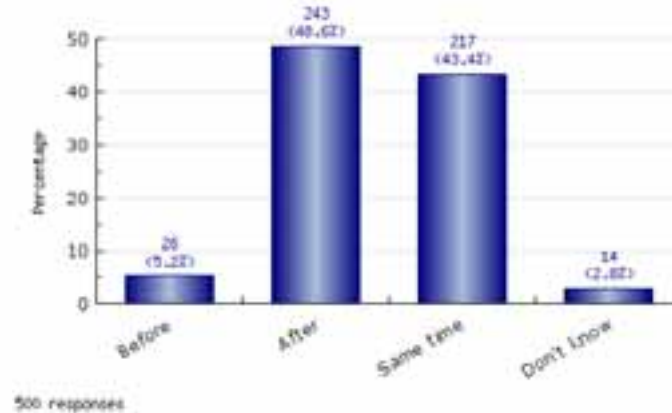
Seeding Date  
 Seeding Rate  
 Seeding Depth  
 Soil Temperature  
 Plant Stand

# Integrated Pest Management - Weeds

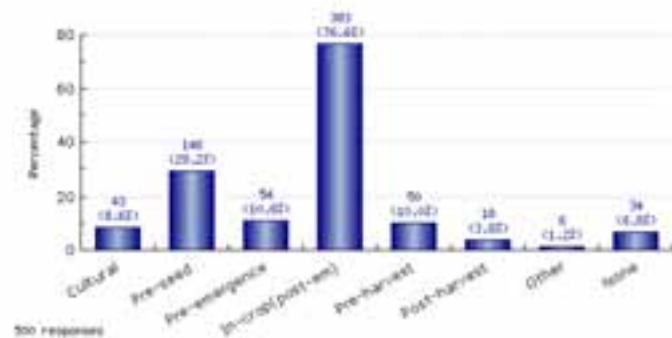
Weed	% Respondents
Wild Oats	56.2
Thistle	28.6
Buckwheat	28.4
Kochia	29.6
Volunteer	15.6
Millet	12.0
Mustard	11.4
Pigweed	6.8
Cleavers	8.6

Top Growers will apply herbicides compared to bottom growers

- Apply Herbicides = 22.6 bu/ac
- No Herbicide = 16.6 bu/ac



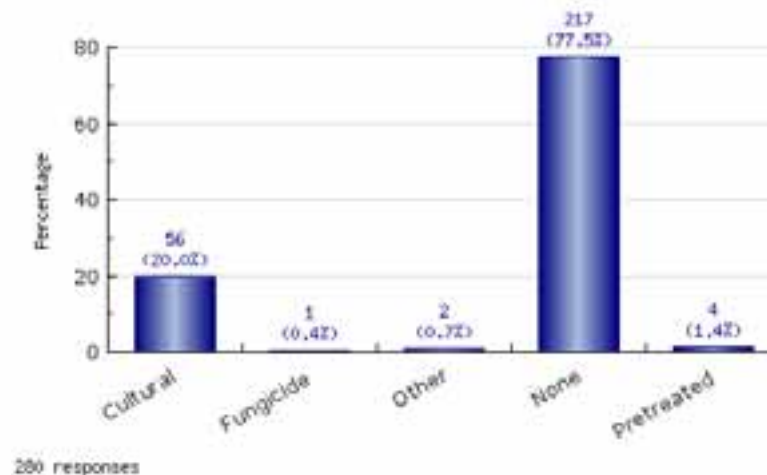
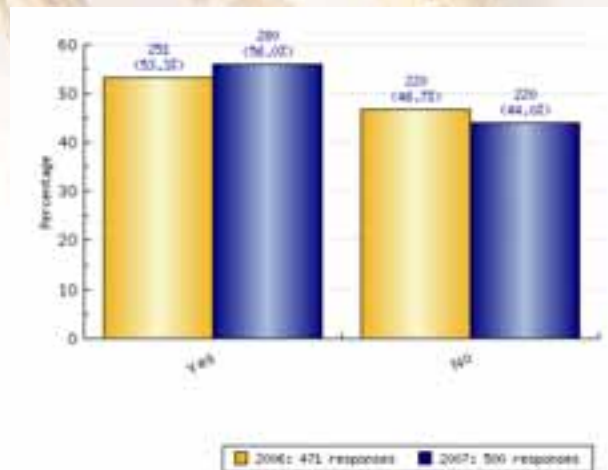
500 responses



500 responses

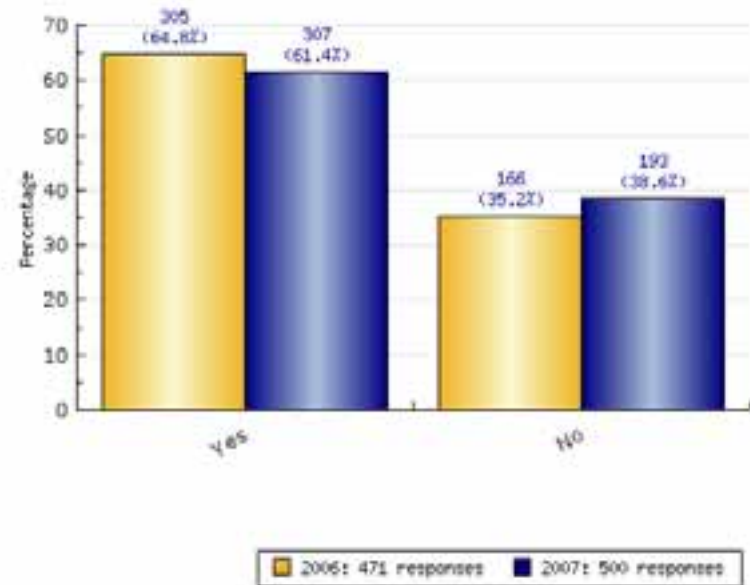
# Integrated Pest Management - Diseases

- Most respondents who inspected for disease did not have any problems. Only fourteen respondents mentioned diseases that caused problems (4.8%).
- Of the respondents who inspected their crops for disease, 77.5% did not use any disease control methods. Another 20% used cultural methods, while one respondent used a fungicide, and four respondents used seed that was pre-treated with fungicide.
- Overall, 95.2 of respondents did not have any yield loss due to disease. Only five respondents lost more than 5%. There are no major differences in disease loss for the different groups of farmers.

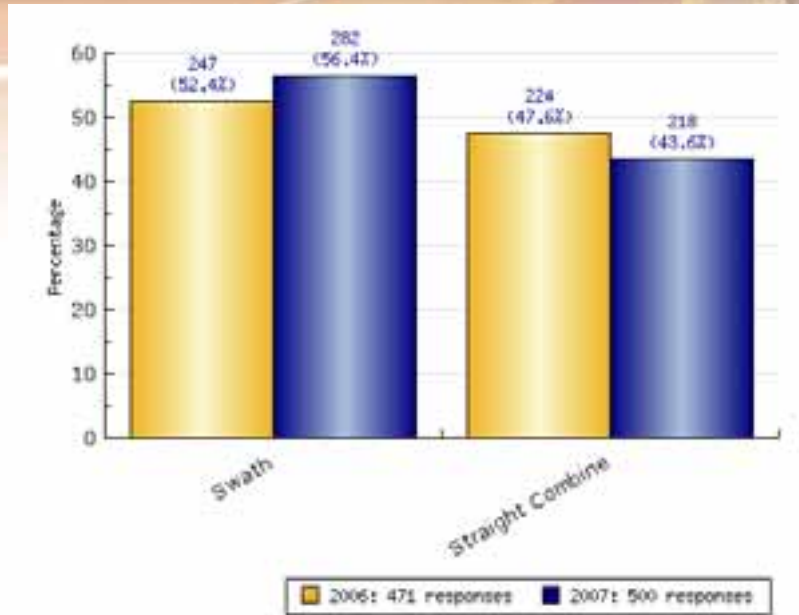


# Integrated Pest Management - Insects

- 61% percent of all respondents inspected their fields for insects. 71.2% of top growers inspected their fields for insects, compared to 54.5% of growers in the bottom group.
- 249 respondents who inspected their fields (81.3%) indicated that they did not have insect problems. The remaining 58 indicated specific insects, the most common of which were aphids and grasshoppers.
- Overall, 90.8% of growers indicated that they did not lose any yield due to insects.



# Harvest Management



Did you swath or straight combine?		Grower Group			Total
		Top Growers	Middle Growers	Bottom Growers	
Swath	Count	35	88	96	219
	%	47.9%	53.7%	57.5%	54.2%
Straight Combine	Count	38	76	71	185
	%	52.1%	46.3%	42.5%	45.8%
Total	Count	73	164	167	404
	%	100.0%	100.0%	100.0%	100.0%

- In all, 21% of respondents used a desiccant. 70% of those who applied desiccants said that they did so at a maturity stage of 8 or higher out of 10.

# Straw Management

- When asked if they would be willing to change their agronomic practices to increase the value of their straw, 73.4% said that they would.
- When asked to specify what they would be willing to do – 32.4% mentioned baling/selling the straw, 31.9% said that they would do anything that would increase the value.

Straw Management	2006		2007	
	Total #	% of Responses	Total #	% of Responses
Burning	222	47.1	232	46.4
Removal for sale/Bale the Straw	157	33.3	187	37.4
Chopping	113	24.0	132	26.4
Spreading	50	10.6	87	17.4
Incorporation (working into field)	18	3.8	34	6.8
Other	12	2.5	4	0.8
None	0	0.0	13	2.6
<b>Total</b>	<b>471</b>	<b>100</b>	<b>500</b>	<b>100</b>

Straw management		Grower Group			Total
		Top Growers	Middle Growers	Bottom Growers	
Burning	Count	33	89	70	192
	%	45.2%	54.3%	41.9%	
Removal for sale/Bale the Straw	Count	36	57	50	143
	%	49.3%	34.8%	29.9%	
Chopping	Count	20	37	54	111
	%	27.4%	22.6%	32.3%	
Spreading	Count	10	25	30	65
	%	13.7%	15.2%	18.0%	
Incorporation (working into field)	Count	3	7	12	22
	%	4.1%	4.3%	7.2%	
Other	Count	2	0	1	3
	%	2.7%	.0%	.6%	
None	Count	0	2	8	10
	%	.0%	1.2%	4.8%	
<b>Total</b>	<b>Count</b>	<b>73</b>	<b>164</b>	<b>167</b>	<b>404</b>

Percentages and totals are based on respondents.

# Flax Canada 2015 Growers Survey Web Page

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**Breeding and Production**

FC2015 research in the breeding and production pillar is focused on grower information regarding best agronomic practices. Techniques for breeding flax will be improved by developing new knowledge, methods, and economic for flax production in both conventional and organic farming systems.

High-quality flax varieties that reduce risk through genetic resistance to stress will develop improved products for all of the FC2015 project pillars. Flax flax cultivars and integrated management strategies will contribute to more sustainable crop production systems, increase and stabilize flax yields, and reduce the need for agrochemical use through improved disease and pest resistance.

[Flax Top Manager grower survey](#)

[Flax Producer - flax Management Self Assessment Guide](#)

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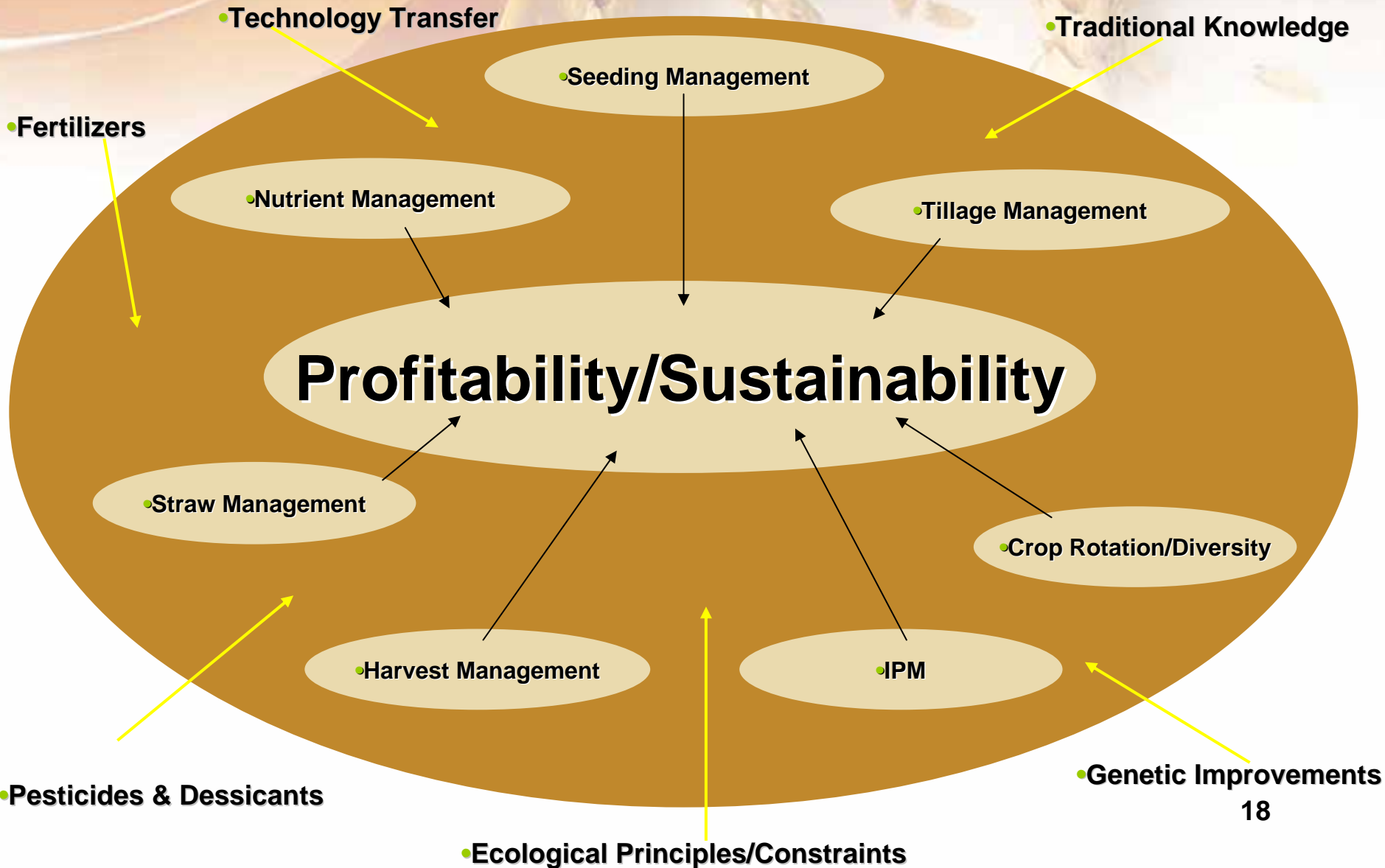
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<http://www.fc2015.ca/index.jsp?p=breeding>

# Flax Integrated Management Systems





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