

Irrigated Crop Protection



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Rory Cranston PAg
Government of Saskatchewan
Regional Crop Specialist

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OK, Show of hands...
Who's tired of snow?

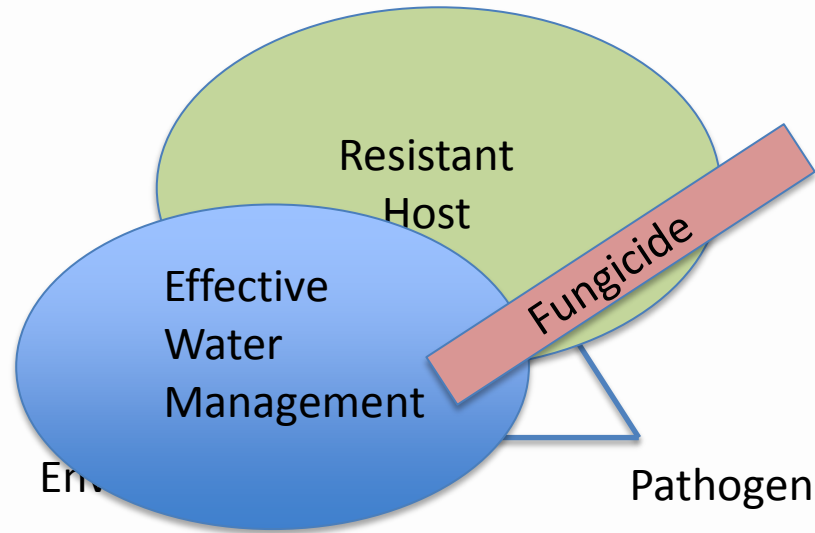


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Disease Triangle



Fungicide Demonstrations

- 2009 – 2012
- Cereals, Oilseeds, and Pulses
- 16 field sites
- 13 fungicides
- 8 applications strategies



Cereals

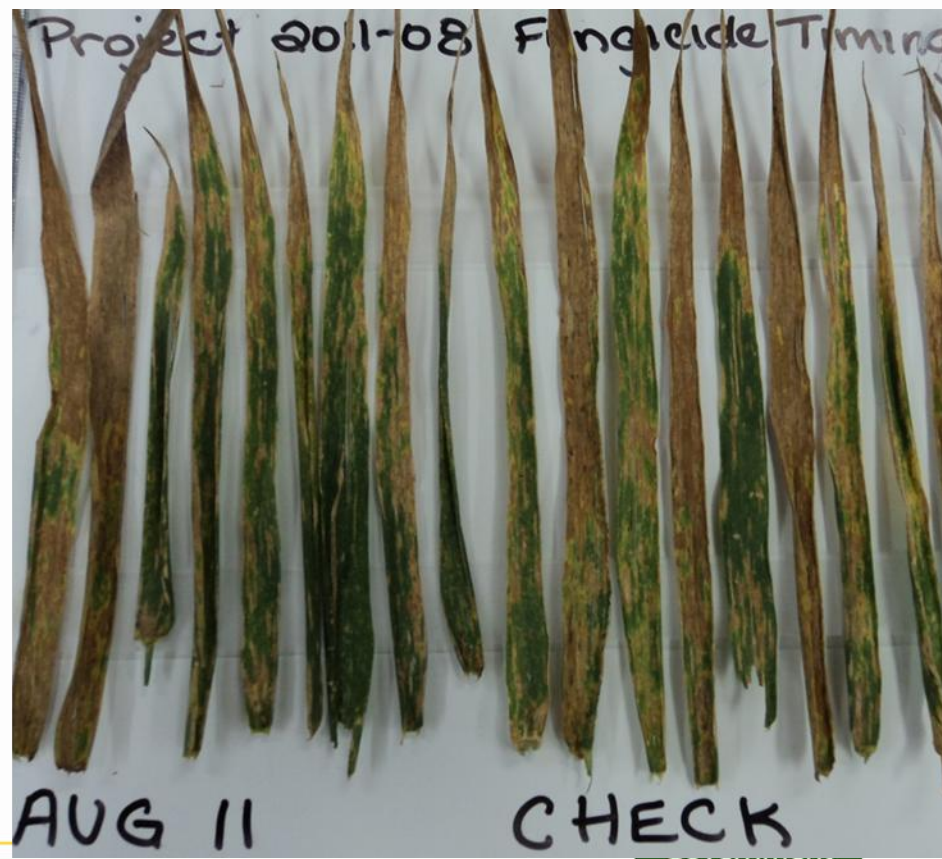
- Controlling FHB and leaf disease
 - Hard wheat, Durum, Soft wheat
 - Five fungicides
- Fungicide timing
 - Comparing spraying to control FHB at flowering, at flag leaf to control diseases in the canopy and the combination



Controlling FHB

- Hard Wheat
 - Average yield increase - 9.6 bu./ acre
 - 5 to 17 bu / acre
 - Average TKW increase – 2.9g
 - Average reduction of total fusarium – 1.5%





Controlling FHB

- Durum
 - Average yield increase - 20 bu./ acre
 - 15 to 23 bu./ acre
 - Average TKW increase – 5.93g
 - Average reduction of total *Fusarium graminearum* – 4 %





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Controlling FHB

- Soft Wheat
 - Yield increase – 13.5 bu./ acre
 - TKW increase – 5.335g
 - Reduction of total *Fusarium graminearum* – 4 %



Fungicide Timing in Wheat

- Compared an application of fungicide on wheat at flag leaf, flowering, and the combination



Fungicide Timing in Wheat 11

Treatment	Flowering timing	Flag leaf timing	Combination	Untreated
Yield (bu./acre)	72 (17)	60 (5)	59 (4)	55
<i>F.graminearum</i>	4%	7.5%	4%	2.5%
Total Fusarium	5%	10.5%	7%	3%
TKW	34.68 g	33.42g	32.20 g	32.88 g
Grade	2	2	2	2





AUG 11 PROSARO
Project 2011-08 Fungicide Timing in wheat



AUG 11 QUILT



AUG 11 QUILT & PROSARO
Project 2011-08 Fungicide Timing in wheat



AUG 11 CHECK





Department
Government
New South Wales





Oilseeds

- Canola
 - One app vs Two apps of fungicide to control sclerotinia
- Flax
 - Headline to Control pasmo



Canola

- Controlling sclerotinia in canola
- 2011 – Compared 1 and 2 applications of fungicide
- Yield and a disease survey were used to determine efficacy



Canola

Treatment	Disease severity
Check	4.3
One application of fungicide	2.2
Two applications of fungicide	1.6

Treatment	Yield(bu./acre)	Thousand kernel weight
Check	47	2.953g
One application of fungicide	52 (5)	3.193g
Two applications of fungicide	62(15)	3.165g





Flax

- Headline on irrigated flax
- 1 site in Luck Lake Irrigation District in 2012
- Demonstrate 1 and 2 application of Headline on flax
 - 2 applications was eliminated
- Yield was used to determine efficacy



Flax



Flax



Flax

- Co-operator noted that he had to go slower in the area treated with headline

	Yield	Thousand seed weight
Headline	45 bu./acre	6.34g
Untreated	35 bu./acre	5.22g



Pulses

- Drybeans
 - Product demonstration
 - Yield and disease severity were used to determine efficacy
 - Timing survey



$$\sum ((\text{severity class} \times \text{number of plants in class}) \times 100) / \text{number of plants}$$

0 = No disease

1 = Small lesions less than 5cm in the longest dimension

2 = Expanding lesions on branches or stem

3 = Up to half of branches or stem colonized

4 = More than half of the branches colonized

5 = Main stem colonized or plant dead

- 1 = Minor disease presence and severity
- 5 = Extreme disease presence and severity



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Dry Bean Products

Disease severity on Aug 28

Site	Acapela	Propulse	Lance	Allegro
Riverhurst	2.30	2.18	2.05	1.99
Outlook	2.49	2.65	2.18	1.69

Site	Acapela	Propulse	Lance	Allegro
Riverhurst	2553 lb./acre	2569 lb./acre	2591 lb./acre	2605 lb./acre



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Dry Bean Products

- Yield for the Outlook site was not reported
- Small yield difference between treatments
 - 62 lbs. from highest to lowest
- Low disease presence
- Yields were low

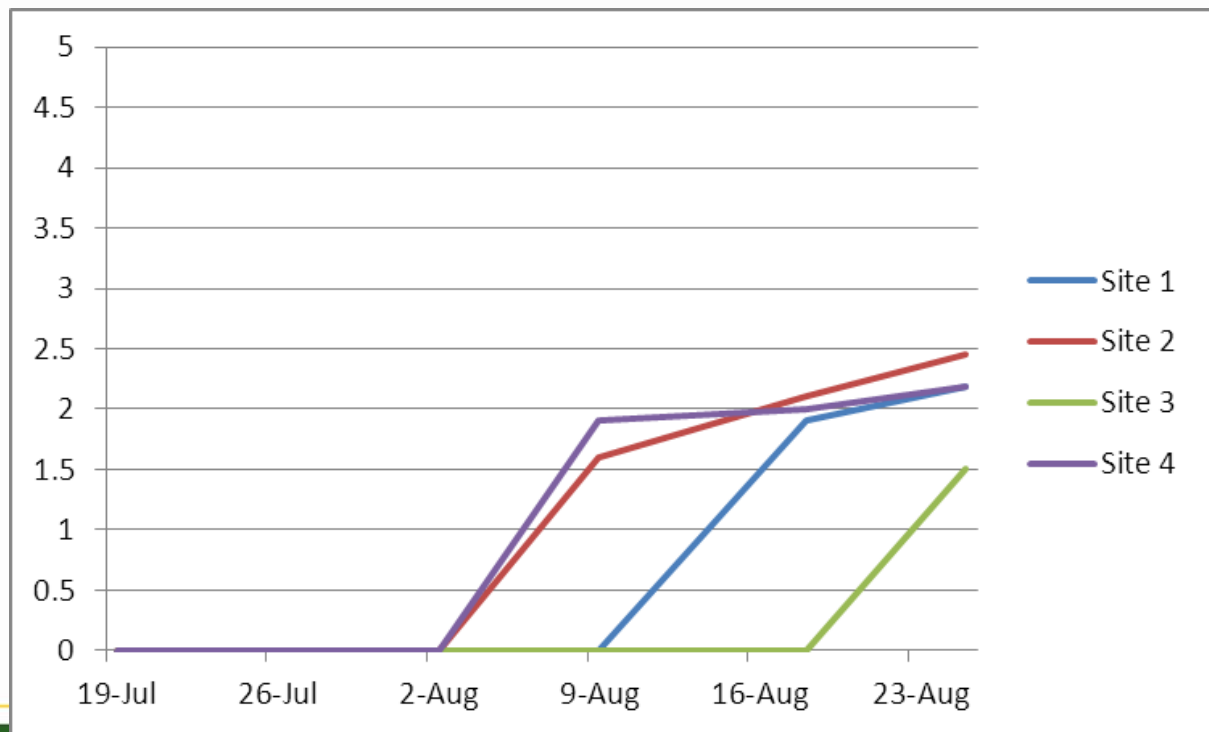


Dry bean fungicide timing survey

- 6 fields surveyed in 2011 and 4 surveyed 2012
- Surveyed each field weekly from July 1st to August 31st

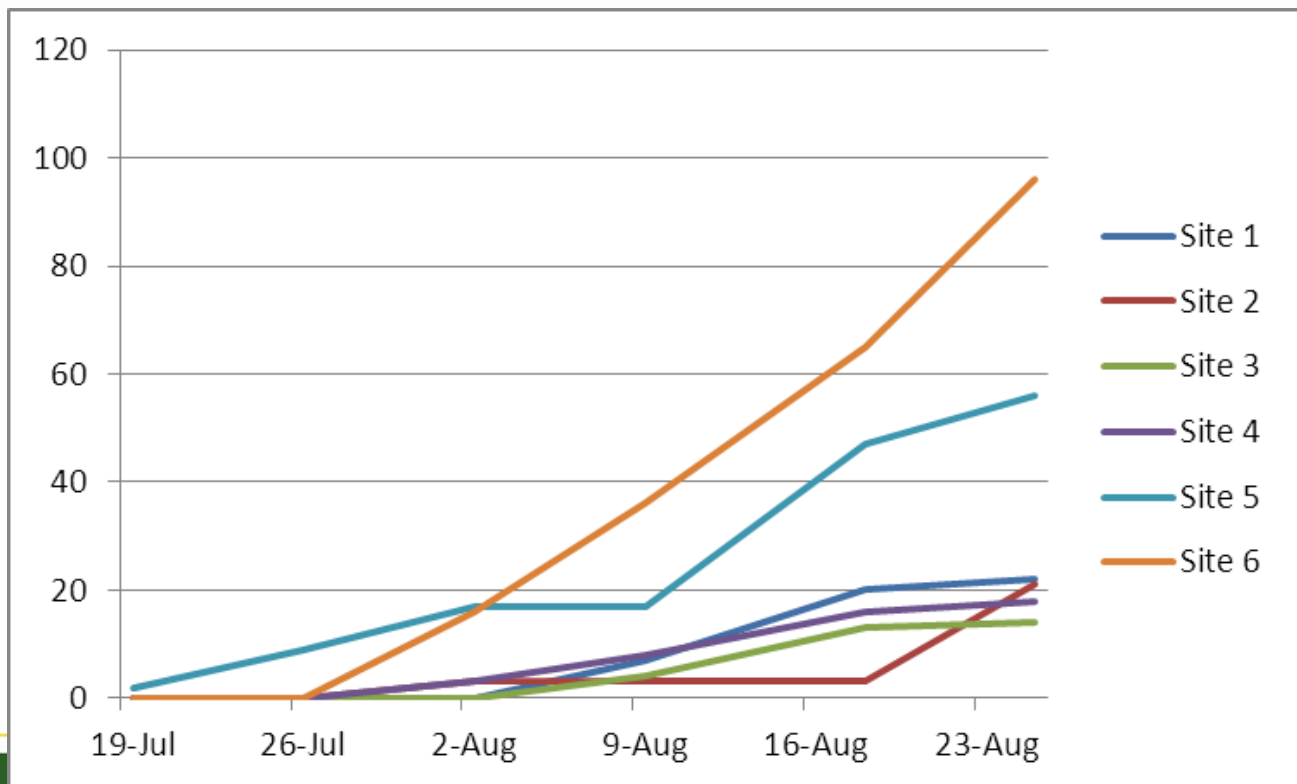


2012



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2011



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Dry bean fungicide timing survey

- Disease severity was lower in 8 of 10 fields if fungicide was applied prior to July 25
 - The other two cases were seeded earlier



Site 1



Site 2



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Dry bean fungicide timing survey

- If two application occurred there was a greater increase in disease if the window was greater than 12 days



Site 3



Site 4





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WINTER SUCKS !

IT'S GONNA
TAKE TIL
JULY TO
THAW OUT
MY NUTS !



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