

## Dry Bean Research

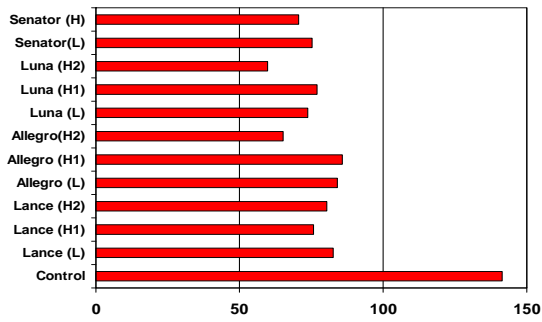


Huron Research Station, 2011

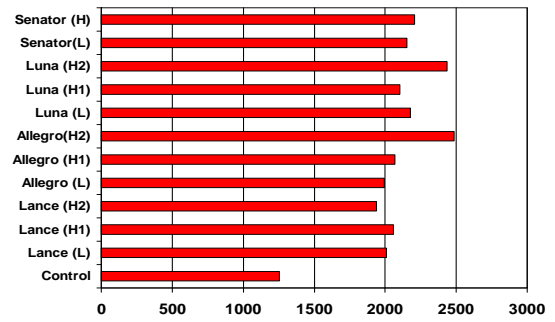
## White Mold Fungicides



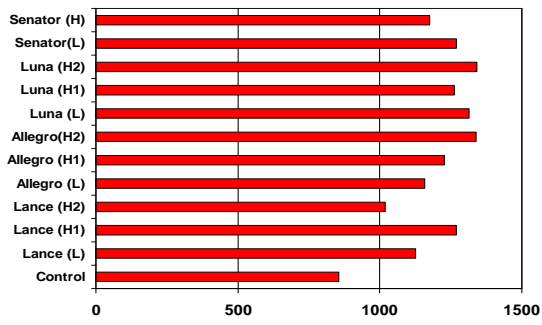
## White Mold Fungicide - AUDPC



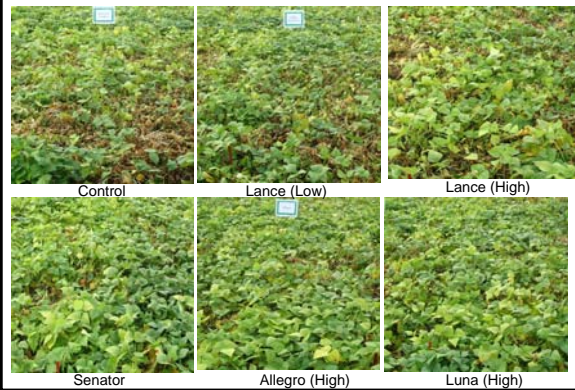
## White Mold Fungicide - Yield



## White Mold Fungicide - \$ Returns



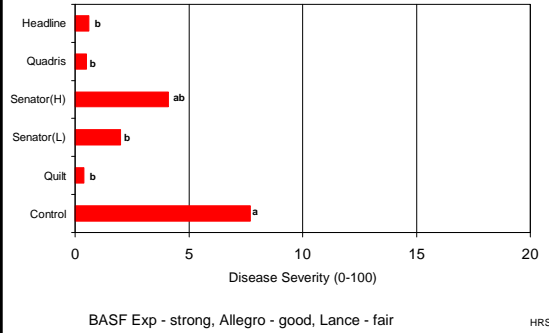
## White Mold



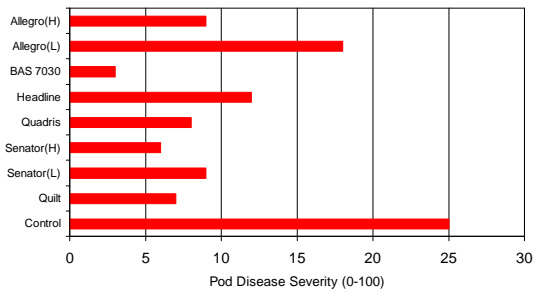
## Anthracnose



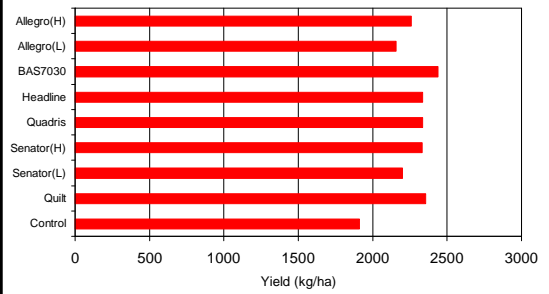
## Anthracnose Foliar Head-to-Head Study



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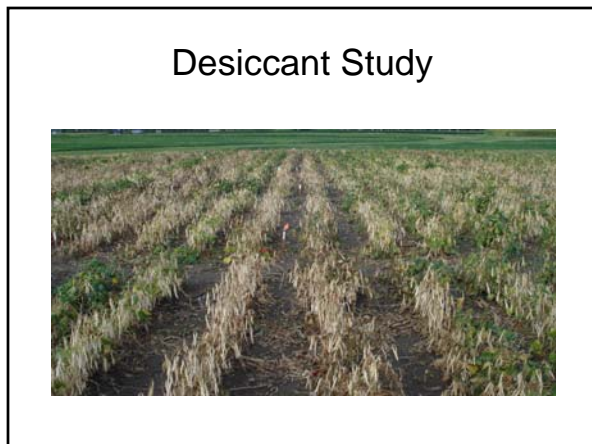
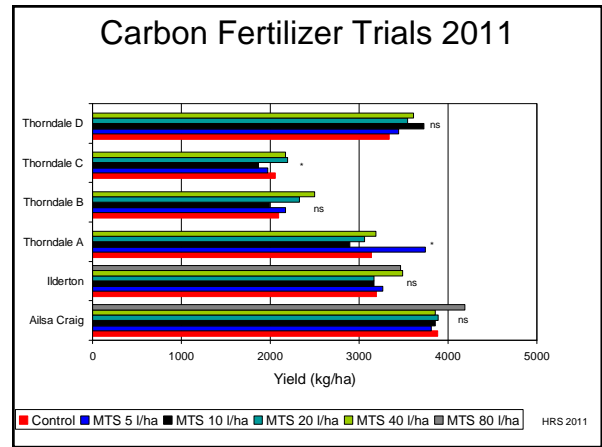
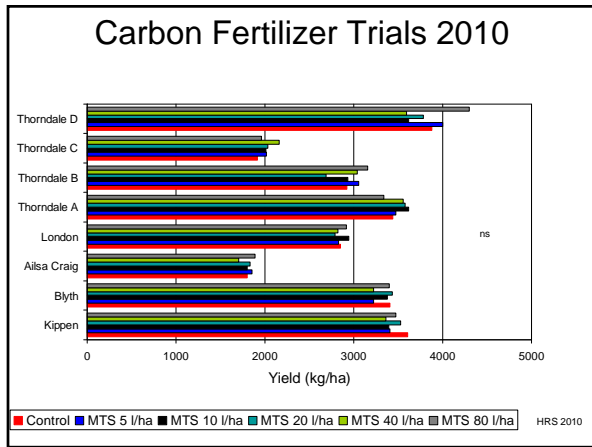
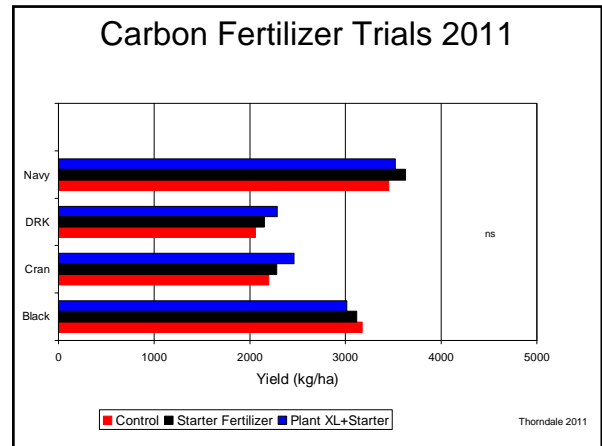
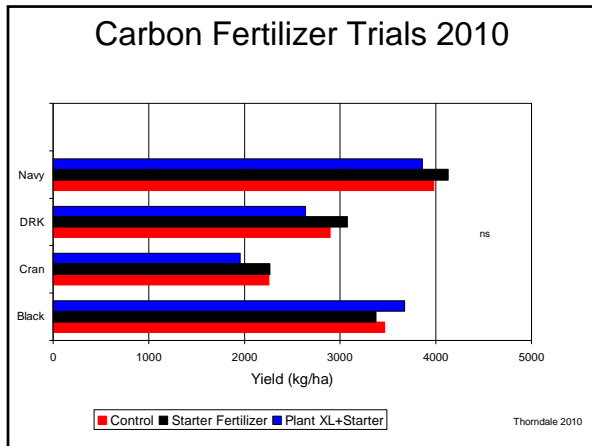
## Anthracnose Foliar Head-to-Head Study



## Carbon Fertilizers



CARBON-AIDED™



### Desiccant Study

Locations:  
 Huron Research Station – Cranberry, Navy  
 University of Manitoba – Pinto  
 AAFC Lethbridge – Small red

Three Studies:  
 -Desiccant Tankmix (desiccation + yield + residues)  
 -Desiccant Timing (desiccation + yield + residues)  
 -Desiccant Glyphosate Rate (desiccation + yield + weed control)

### Step #1 – Do You Need a Desiccant?

- Registered Tools -Glyphosate, Reglone, Ignite, Aim
- Do growers use these tools in every field/every year
  - Are you using less desiccant than 4 years ago?
- Do growers consider desiccant timing more now?
  - Are growers walking fields more, to set their timing?

### History of Residue Issues

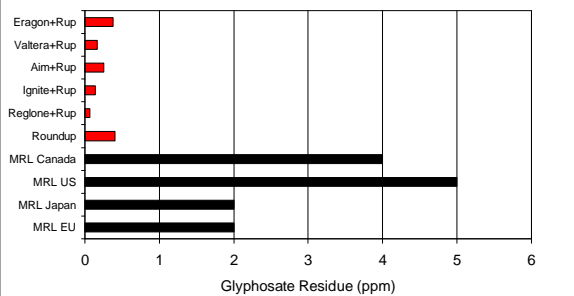
2008 - Otebo beans into Japan

2010 – Lentils into Turkey

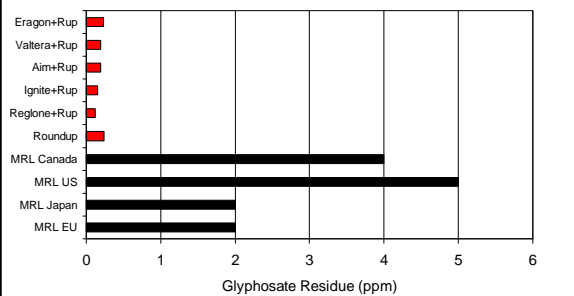
2011 – Cranberry beans into Japan

2011 – Pulses into Chekoslovakia

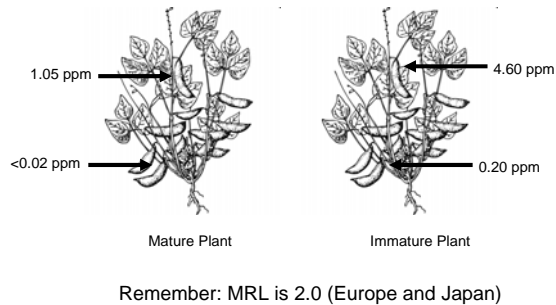
### Glyphosate Residues - 2009



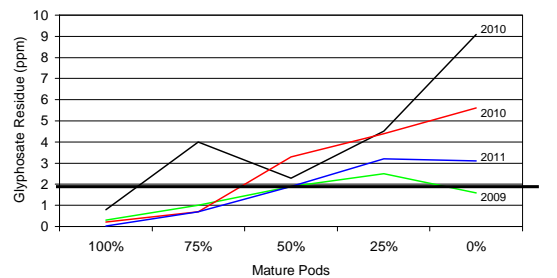
### Glyphosate Residues - 2010



### Glyphosate Residues – Mature vs Immature



### Glyphosate Residues



## Graduate Students



## Western Bean Cutworm – L. Goudis

### Insecticide Efficacy (dry and snap beans)

- Matador, Cygon, Coragen, Voleum Express

### Insecticide Timing

- 4, 11, 18, 25 days after egg hatch (+ multiple)

### Harvest Survey

- correlate harvest samples to ....

### Ovipositioning

- 6 bean market classes in lab and field
- 12 other crop species in field

### Bean Trap Network

- adding traps for adzuki fields



## Thermotherapy – A. Friesen

### Three seed-borne diseases

- Anthracnose, CBB and halo blight

### Heat treatment (microwave)

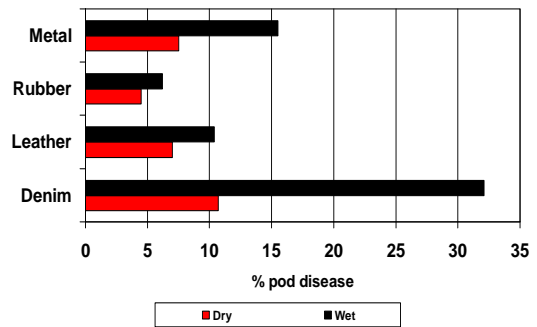
- germination
- plating for disease

### Field Studies

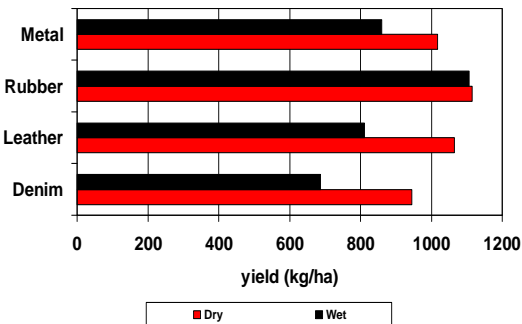
- ½ and full thermotherapy timing
- interaction with seed treatment



## Anthracnose Transmission



## Anthracnose Transmission



## Anthracnose Transmission – E. LeClair

### Field Studies

- movement on materials (metal, leather, denim, rubber)
- material (metal or rubber) interaction with fungicide
- material (rubber) interaction with disinfectants

### Lab Studies (HDC seed plant)

- transmission to equipment surfaces
- transmission to future seed lots

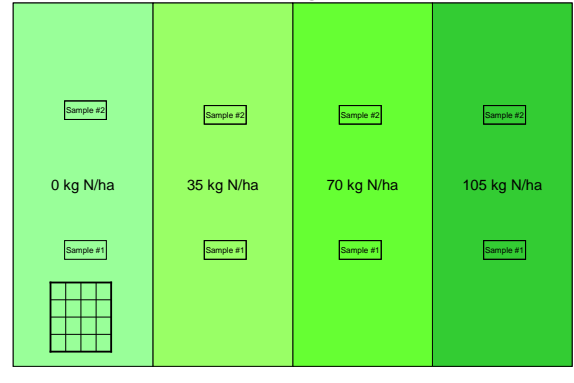


## Intensive Management Study

Determine the soil health parameters that influence dry bean development and yield  
 – OM, macro/micronutrients, nitrogen analysis, aggregate stability, water holding capacity, compaction

Determine N fertilizer's role in overcoming poor soil health

## Intensive Management Study



## Acknowledgements

**Research Partners:** Peter Sikkema/Jocelyn Smith, U of Guelph Ridgetown  
 Ali Navabi/Peter Pauls, U of Guelph  
 Rob Gulden, U of Manitoba  
 Bob Blackshaw, AAFC Lethbridge  
 Tracey Baute/Albert Tenuta, OMAFRA  
 Chris DiFonzo/Fred Springborne, MSU

**Funding Partners:**   Agriculture and Agri-Food Canada

