



Importance of Fungicide Seed Treatments for Soybeans

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Types of Seed Treatments

- Fungicides
- Biological Control Agents
- Insecticides
 - ◆ Registration pending

Which Pathogens Are Problems??

■ Soil

- ◆ *Pythium* sp.
- ◆ *Phytophthora sojae*
- ◆ *Rhizoctonia solani*

■ Seed and Soil

- ◆ *Phomopsis* (Pod & Stem Blight)



Photo courtesy of
www.ohioline.osu.edu

Application of Fungicides

- Applied as liquids by seed dealers
- Applied as liquids by growers
- Hopper-box treatments by growers

When Do They Pay?

- Early planting date (May 1st)
- No-till management
- Expensive seed (GMO)



Photo courtesy of www.ohioline.osu.edu

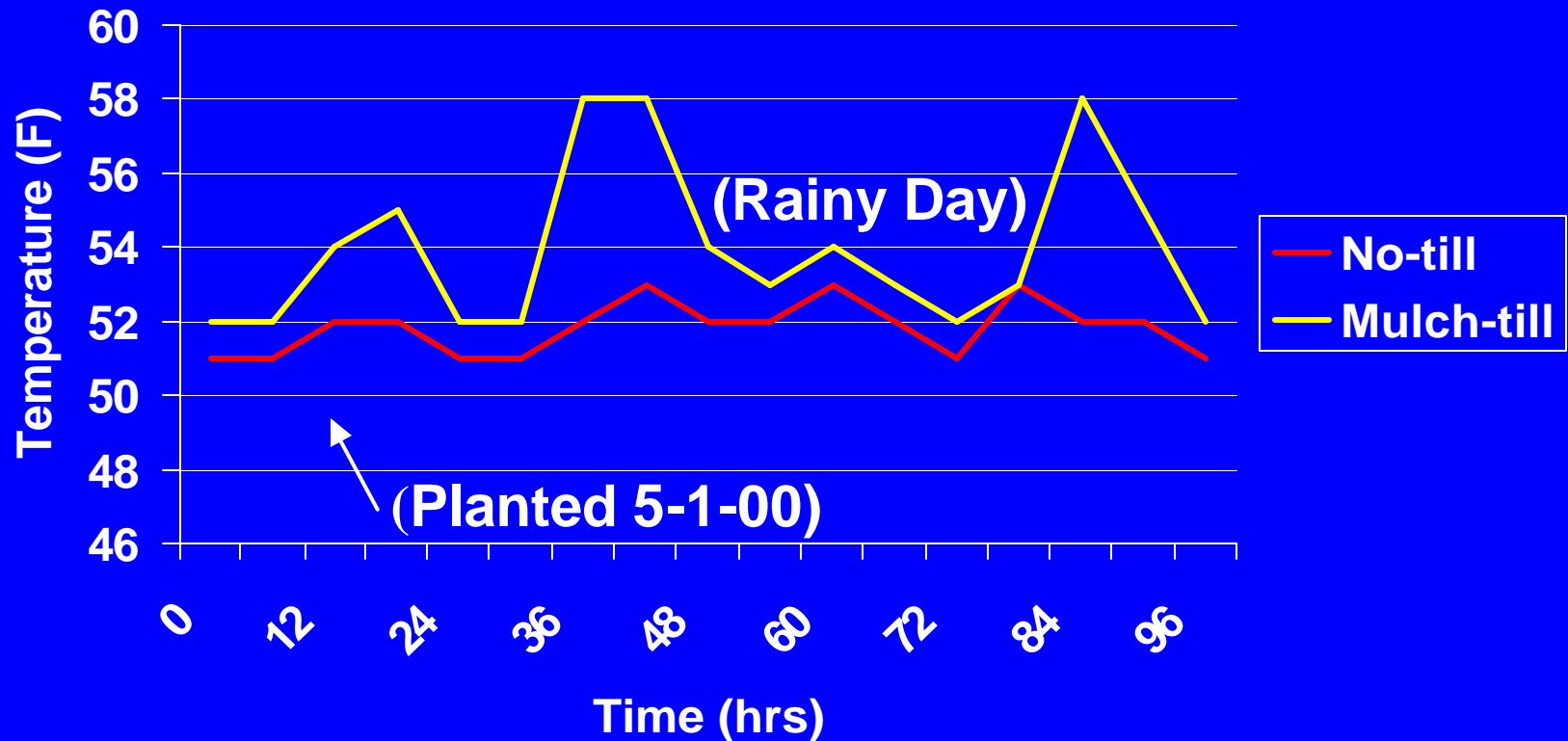
Fungicide Products

- Apron XL + Maxim
- Allegiance + Rival
- Rival
- Vitavax formulations

Fungicides and Pathogens Controlled

Active Ingredient	Activity Against		
	<i>Pythium</i>	<i>Phytophthora</i>	<i>Rhizoctonia</i>
mefenoxam	yes	yes	no
metalaxyl	yes	yes	no
fludioxynil	no	no	yes
thiabendazole	no	no	yes

Soil Temperature at 2"



Efficacy of Rival Fungicide Seed Treatment, 1996-1998

Treatment	Yield	Early plant population	Plant survival
	Bu/a	X 1000	%
Untreated	53.9	124.2	84
Rival	57.9	141.8	77

Data from six experiments conducted by E.S. Oplinger at the Arlington Research Station

On-Farm Study in 2001

Treatment	Population	Yield
Control	164,200	42.2
Maxim + Apron XL	161,520	48.2
LSD (5%)	n.s.	4.4

Asgrow 2905RR

Planted May 8th, no-till at 180,000 seeds/acre

Plots were 8-rows x 1000 feet with 4 reps

Soybean Tests in 1997-1999

Date	Treatment	Population	Yield
April 15-18 (4 trials)	Control	97,200	55.2
	Maxim + ApronXL	155,280	64.3
May 1-4 (3 trials)	Control	133,520	58.3
	Maxim + ApronXL	163,970	65.2
May 15-17 (11 trials)	Control	144,370	57.2
	Maxim + Apron XL	148,640	57.9
	LSD (5%)	14,270	4.1

All trials were no-till, but cultivars varied among trials.

Pedersen and Kirby- University of Illinois

Conclusions

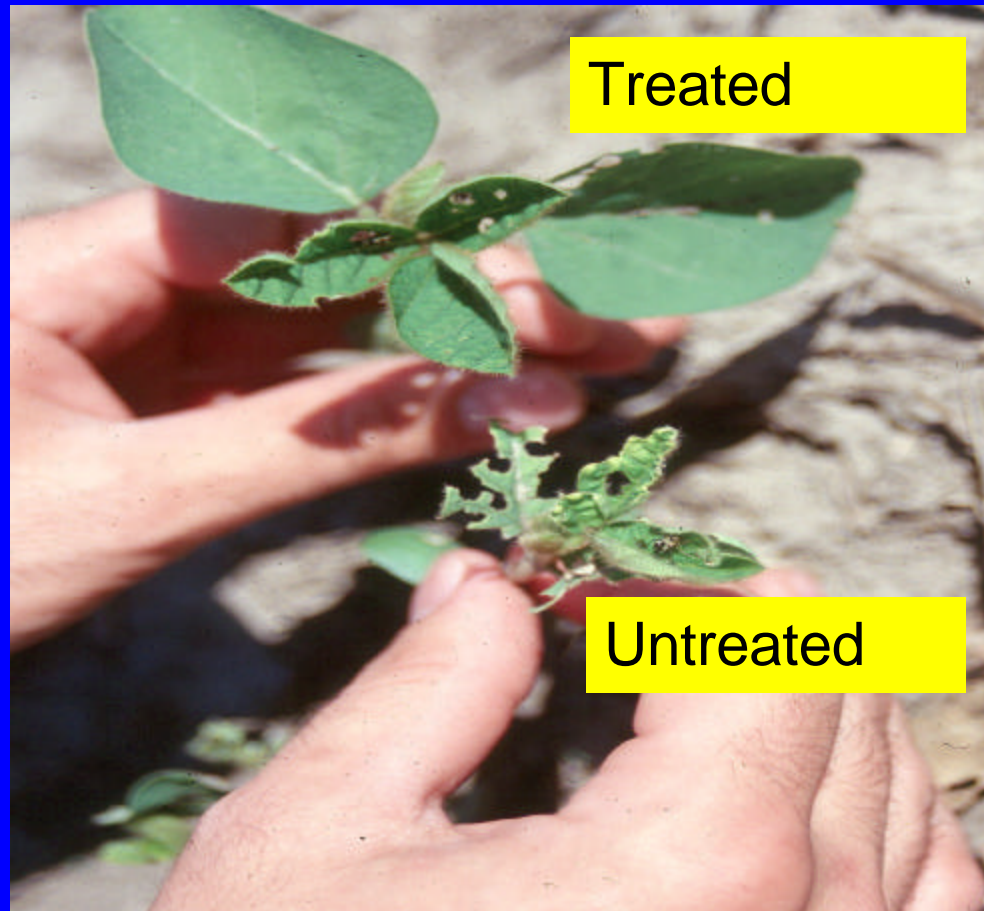
- Early planting
- No-till
- Expensive seed



Problems

- Returning treated seed
- No carryover with beans
- Application slows planting
- Uniform coverage

Bean Leaf Beetle Control Using Cruiser Treated Seed



Future of Seed Treatments

- Insecticides
 - ◆ Bean leaf beetle
 - ◆ Soybean aphid
- Insecticide and fungicides
 - ◆ Interactions
 - ◆ Efficacy?
 - ◆ Phytotoxicity?
 - ◆ Toxicity to *Rhizobium*?
 - ◆ Costs

Resources

- Pest Management in Wisconsin Field Crops 2002 (A3646)
- Soybean Plant Health Website
 - ◆ www.plantpath.wisc.edu/soyhealth