

Changing Perspectives in Soybean Seed Treatment

Heartland Coop & Syngenta

**Historically, Use of Soybean
Seed Treatment Has Been Low
Relative to Other Crops**

**The Primary Use of Seed Treatments Has
Been to Provide an Inexpensive Insurance
Against Seed Rots and Damping Off Caused
by Soil Fungi**

Current issues in soybeans vs. 1990

- ◆ *No-till or minimum-till acres increasing – cooler soil conditions, more residue for diseases*
- ◆ *Earlier planting – cooler conditions, seedling in soil for longer periods of time, putting seedling to the test for emergence*
- ◆ *Technology Fees – higher seed cost per acre, higher costs to replant*
- ◆ *New races of *Phytophthora* – genetics don't offer resistance for all races*



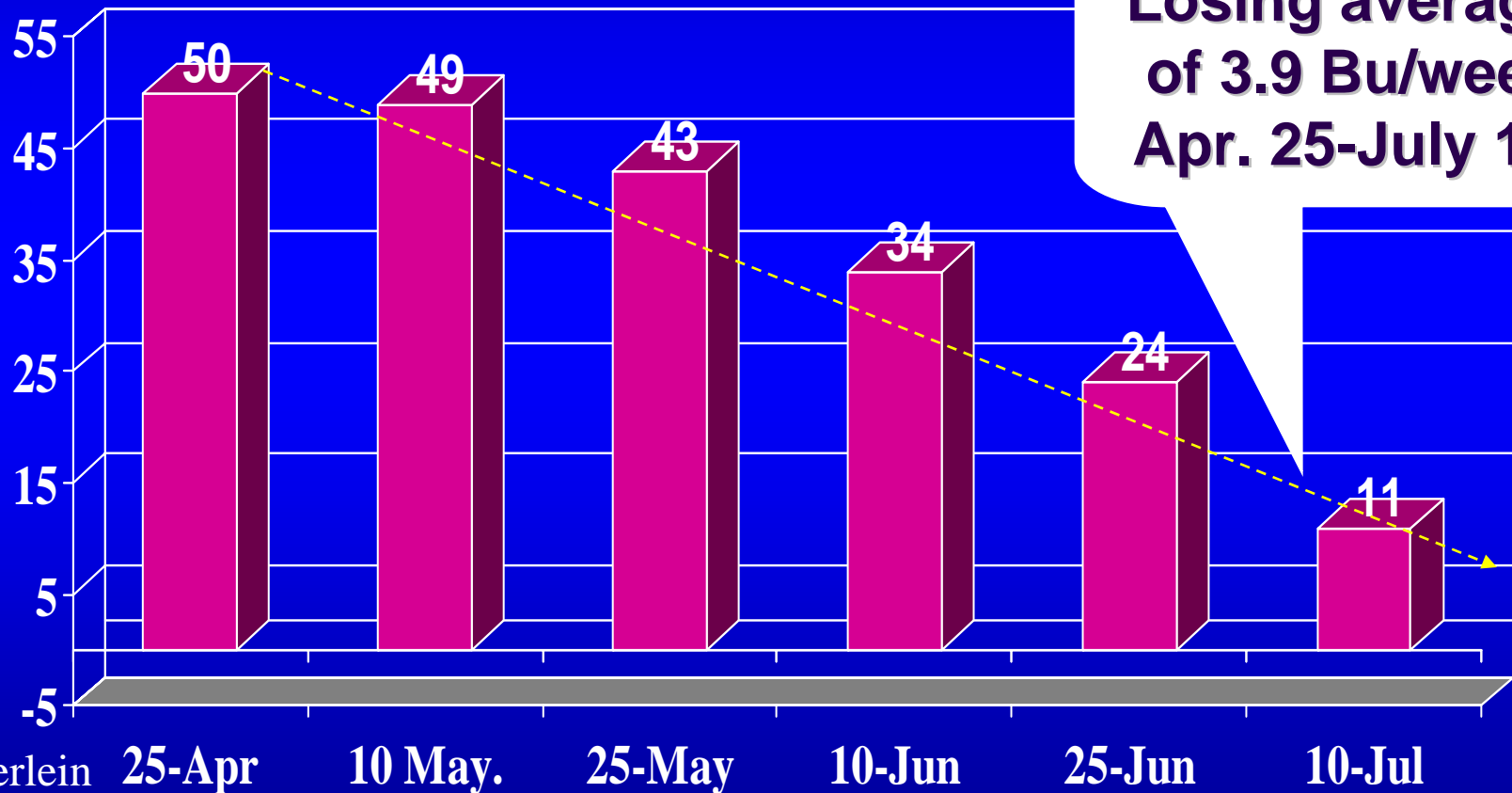
Have you ever planted seed corn WITHOUT a fungicide seed treatment?

Have you ever planted soybeans WITH a fungicide seed treatment?

Why Growers want Treated Soybeans

- ◆ *Yield Protection*
- ◆ *Allow for earlier planting*
- ◆ *Disease protection*
- ◆ *Conservation tillage*
- ◆ *Improve germination*
- ◆ *Improve early season vigor*
- ◆ *Earlier canopy – better weed control*
- ◆ *Protect high value seed*
- ◆ *Avoid replanting costs*
- ◆ *Excellent return on investment*
- ◆ *Protect against adverse weather & growing conditions*

Soybean Planting Date vs. Yield Study



Dr. Jim Beuerlein

Ohio State U.

Which Diseases Are Controlled By Seed Treatment?

Damping Off

- ◆ *Pythium*
- ◆ *Phytophthora* (Early Season)
- ◆ *Rhizoctonia*
- ◆ *Fusarium*
- ◆ *Phomopsis* (seedborne)
- ◆ *Sclerotinia* (seedborne)

Primary Seedling Soybean Diseases in Iowa

Fungi accounting main seedling diseases:

- ◆ *Pythium* and *Phytophthora* 55-65%
- ◆ *Rhizoctonia* 23-27%
- ◆ *Fusarium* 10-13%

Source: X.B. Yang, Iowa State University

Optimum Soil Temperature for Disease Development

- ◆ *Pythium* 50-60 degrees F - early planting, no-till, cool weather conditions after planting
- ◆ *Phytophthora* 72-80 F – warmer soil and heavier soil conditions with poor drainage
- ◆ *Rhizoctonia* 70-80 F – warmer soil, wet or dry
- ◆ *Fusarium* 60 F – cooler soil
- ◆ What is the probability that you will plant soybeans in soil temperatures between 50 and 80 degrees F?
- ◆ Do you know what the soil conditions will be between the time you plant and when the soybean seedling emerges?

Which Diseases Are Not Controlled By Seed Treatment?

Brown Stem Rot

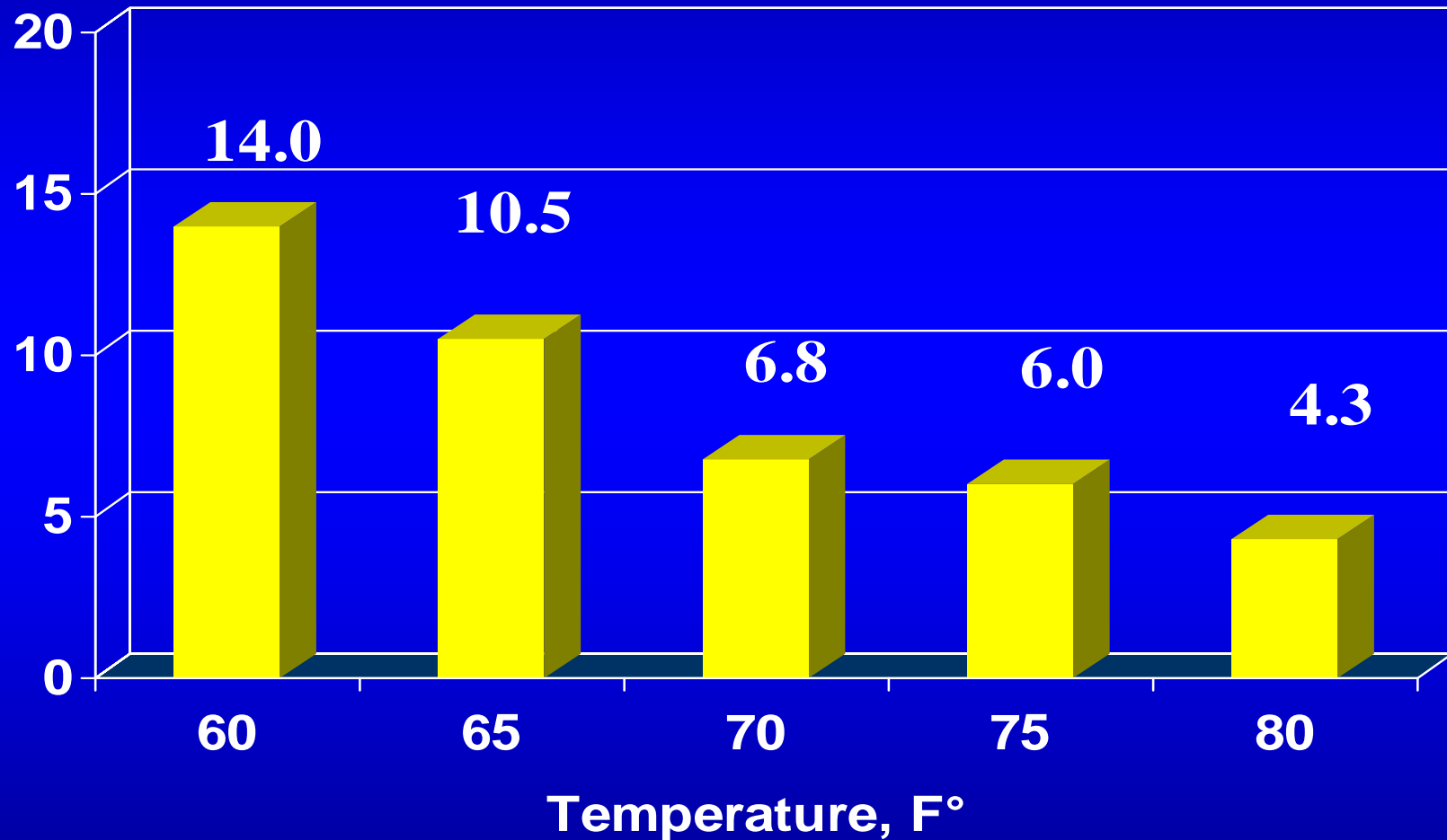
Charcoal Rot

Leaf Spots

Sclerotinia Stem Rot

Sudden Death Syndrome

Estimated Days to 50% Emergence in Soybeans



The longer the seed stays in soil, there is a higher probability of interacting with a seed-borne or soil-borne disease.

Soybean Seed Treatments “An Untapped Market”

Every Seed, Every Acre, Everywhere!

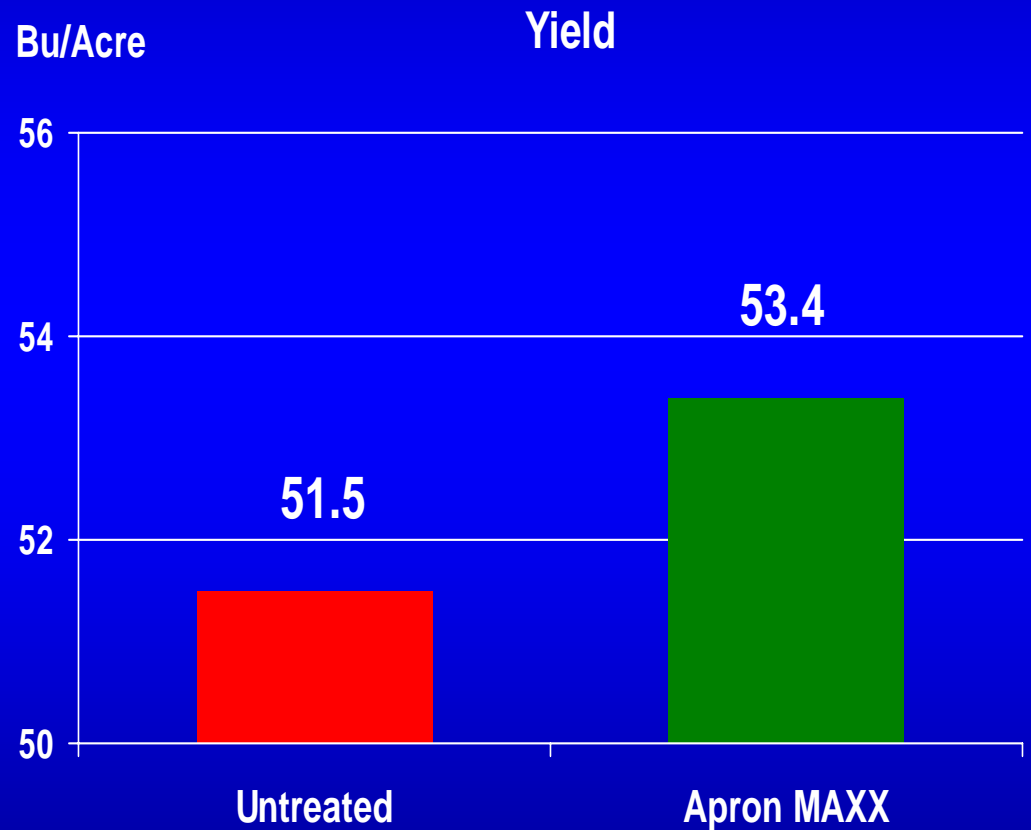
Potential Replanting Cost

Potential Yield Loss*			
	7 bushels @ \$5.00/bushel =		\$ 35.00
Equipment wear & tear, misc.**			
	\$6.00/acre =		\$ 6.00
Replant seed cost			
	\$10.00/bag		\$10.00
* Source: Ohio State University			\$ 51.00
**Source: John Deere Co.			
1st planting in late April, replanting in late-May			

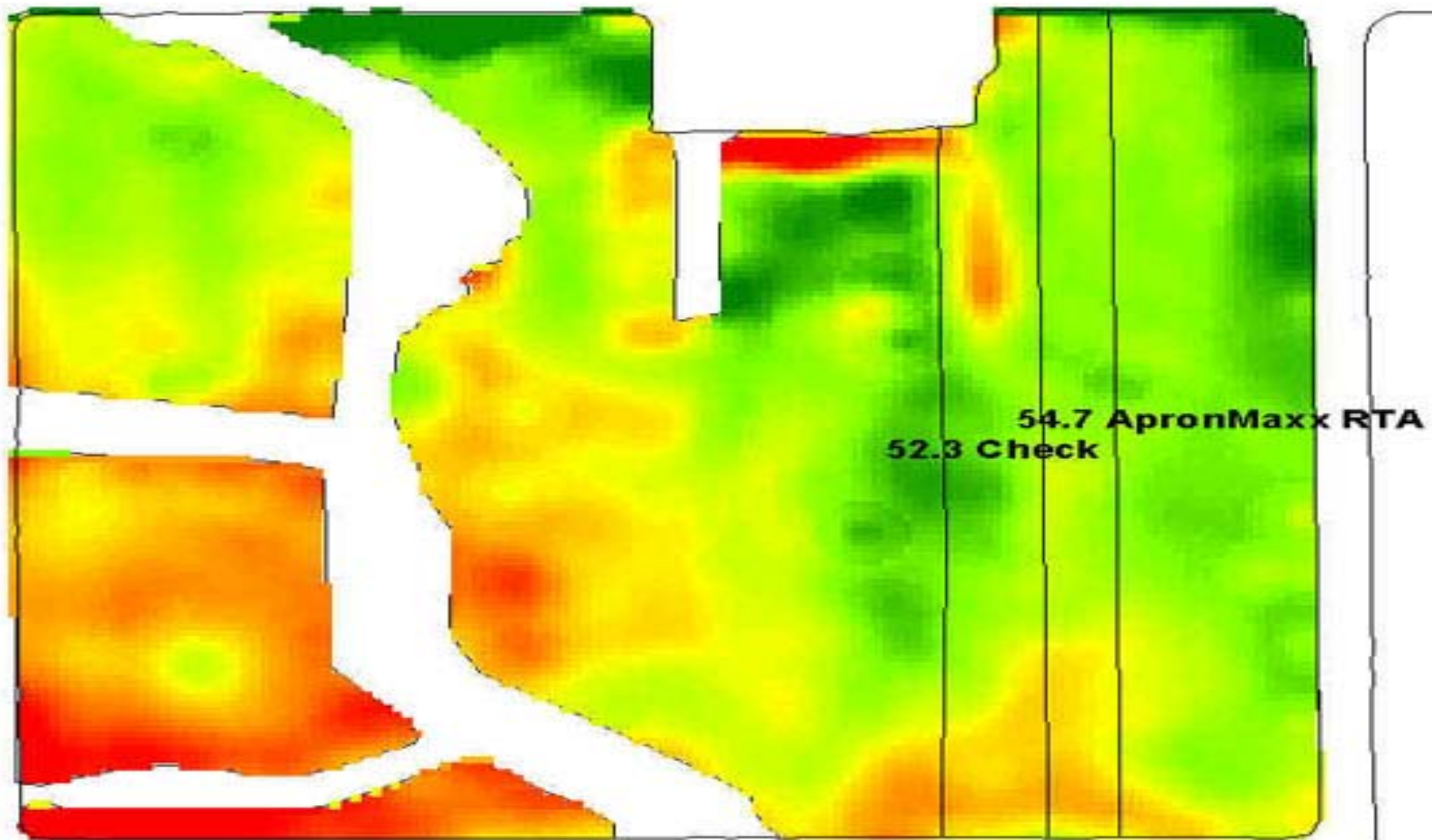
**Saving one Replanting
could cover the cost of
ApronMaxx for at least 20 years!**

Seven Year Yield Summary

	<u>Yield Bu/Acre</u>		# of Trials
	<u>Untreated</u>	<u>Apron MAXX</u>	
'96-'97	52.6		15
1998	53.4	56.0	15
1999	48.1	51.1	33
2000	45.8	48.0	24
2001	51.5	53.3	72
2002	54.4	55.7	75
Average	51.5	53.4	234



Would this grower have known that he had a 2.4 bushel advantage with ApronMaxx if he didn't do a yield check?





WHY WAIT?

**Order your treated soybeans from
Heartland Coop today!**