Rust Update and Billet Planting

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Plant Pathology and Crop Physiology

What was the impact of brown rust during 2013?

As usual another unusual year

- VERY mild winter
- Severe rust at end of February in 540
- Freezes in March and a cool May
- Rust and crop both confused
- Rust severity variable

Fungicide strip trial results from 2014

Location	Treatment	Nontreated Tons/acre	Treated Tons/acre	Difference
St. Martin	Quilt Xcel (1)	41.9	43.9	+2.0
St. Mary	Quilt Xcel (1)	43.5	44.9	+1.4
	Quilt Xcel (2)		44.8	+1.3
Iberville	Quilt Xcel band	48.7	52.2	+3.5
(Viator)	Quilt Xcel broadcast		51.9	+3.1
	Headline broadcast		51.6	+2.9
St. James	Quilt Xcel	42.5	42.1	-0.4
(Orgeron)	Headline/Caramba 6/8		42.7	+0.2
	Headline/Caramba 9/8		42.6	+0.1
	Headline/Caramba 9/12		43.2	+0.7

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- Average difference = +1.5 tons
- Positive economic return 2/4 or 50%

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- Cool weather after treatment reduces economic return
- Rust suppression without plant growth = not much yield increase

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- Fungicide application not a sure bet – but close – **if done right**

Fungicides for 2014

- Headline
- Quadris
- Tilt
- Caramba
- Headline Amp
- Quilt Xcel
- Priaxor?

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- Headline
- Quadris
- Tilt
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- Headline Amp Mixtures
- Quilt Xcel
- Priaxor?

Will fungicides be needed in 2014?

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Almost certainly not

Planting = **STRESS**

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Billet Planting?

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Easy = Less Stress

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Higher Cost

More Risk

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- Well planted billets + no stress = comparable yield
- Well planted billets + stress = lower yield

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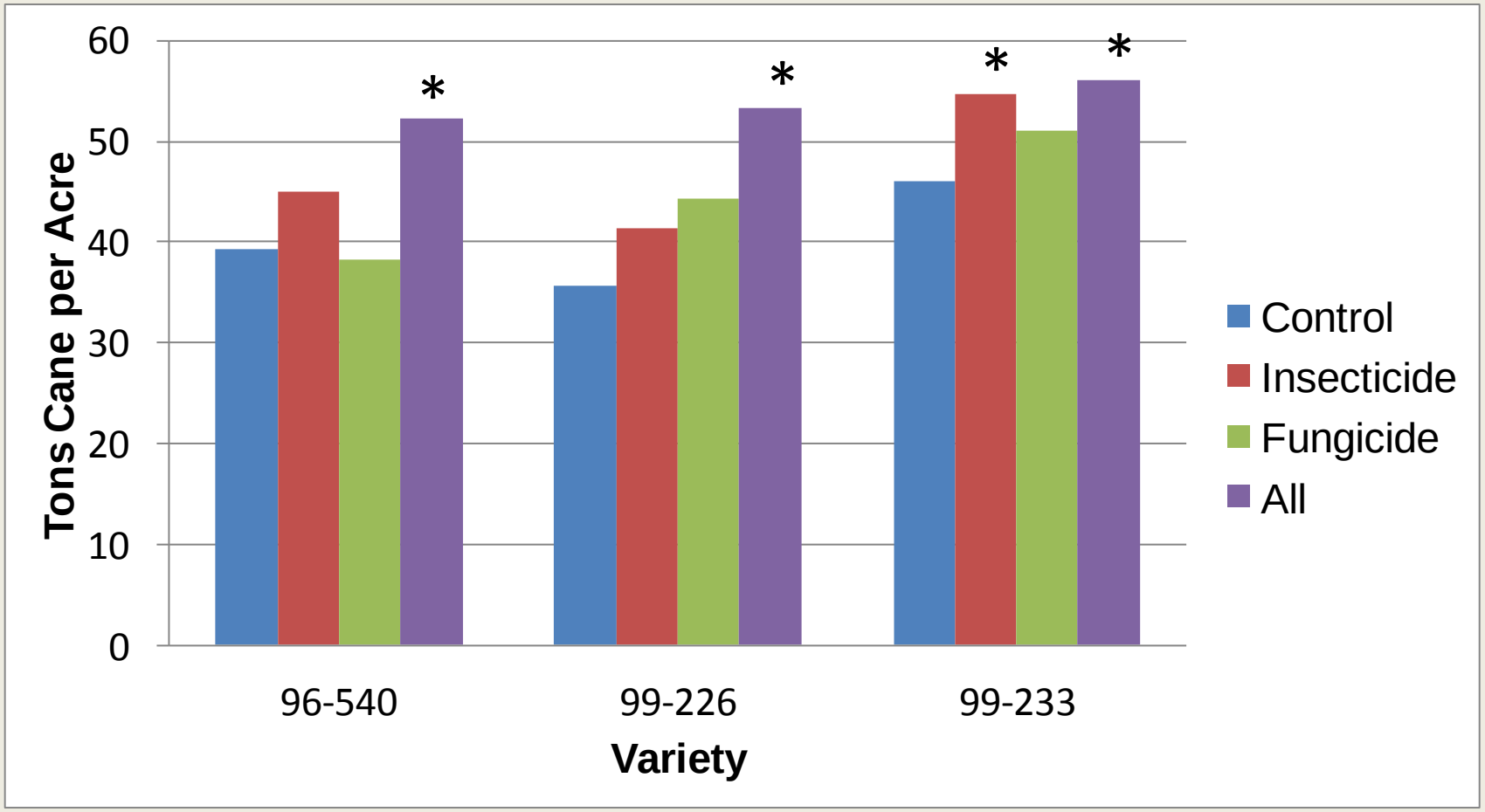
- Fungicides did not improve yield in past
- Syngenta “seed” treatment chemicals part of new Plené® planting system for Brazil
- Insecticide and three fungicides
- Trying the chemistry with our billet planting system

Effects of Syngenta® Seed Treatment Chemicals on Billet Planting Yield



Plant cane 2010

Effect of Sygenta Chemicals on Billet Planting Yield

L 99-226	Non-treated	Combination	Whole stalk
Tons cane/acre	45.0 b	49.7 a	46.8 ab

2011 plant cane
(harvester application)

Conclusions

- Promising results from multiple years with multiple varieties
- Dip application not feasible for industry?
- Results still preliminary
- NO LABELS
- Chemicals cost $$

Can harvester modifications deliver a higher quality billet (less damage)?

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Will billets with less damage improve billet planting yield/reliability?

RUBBERS OF KICKERS OF BASECUTTER AND BACK PLATE

FEED ROLLER 4 BAR

Production

CB11431272

Seed Kit

NW10079

What about the planter?

40 acres per day

(Over the top)

Billet Planting

Billet Planting

Less Risk/Same Yield

Billet Planting

Less Risk/Same Yield

Slightly Lower Cost?

Billet Planting

Probably Our Future