

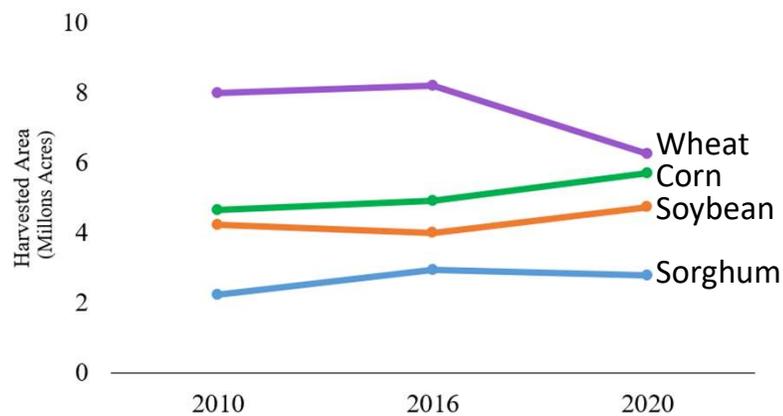
Milo Diseases and Fungicide Trials

Rodrigo Onofre
 Plant Pathology
 K-State Plant Path Department
onofre@ksu.edu

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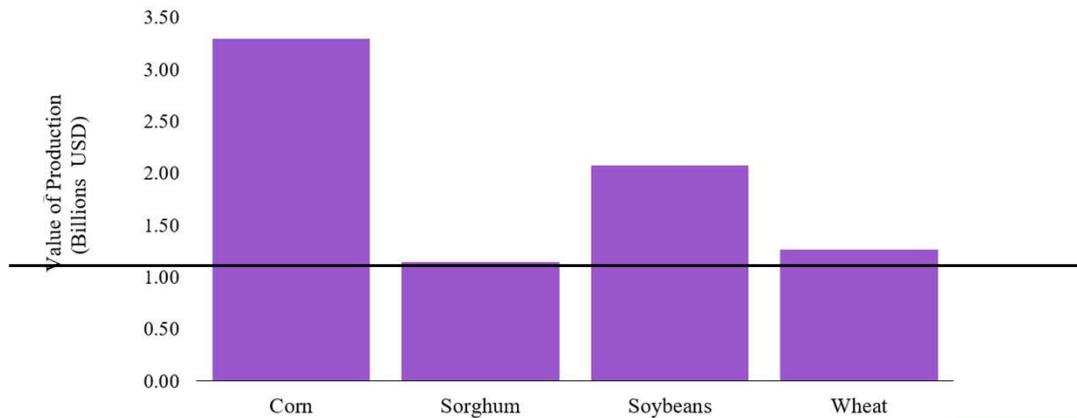
The production landscape is slowly shifting in the state



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Source: U.S. Department of Agriculture,
 National Agricultural Statistics Service

Sorghum production was valued at 1.0 billion dollars in 2020



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Source: U.S. Department of Agriculture,
National Agricultural Statistics Service

The incidence of stalk rot in individual fields may reach 90 to 100 percent with yield losses of 50 percent

- At least 5% of yield are lost yearly to stalk rot in KS
 - U\$50 million
- Plant lodging
- More important may be the yield losses that go unnoticed.
 - reduced ear and head size
 - poor filling of grain
 - early head lodging as plants mature early

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Stalk rot seed weight per panicle

Treatment	Hybrids		Lines	
	84G62	DKS37-07	BTx3042	SC599
Control	93.6 a	82.1 a	32.9	53.3 a
<i>F. andiyazi</i>	76.8 b	53.9 b	19.5 b	34.6 b
<i>F. proliferatum</i>	69.3 b	53.5 b	18.3 b	27.8 b
<i>F. thapsinum</i>	60.2 b	40.3 b	19.3 b	36.2 b
<i>M. phaseolina</i>	61.7 b	42.4 b	16.8 b	33.0 b

Charcoal Rot (*Macrophomina phaseolina*)

- Premature death
- Black microsclerotia
- Shredded interior
- Smaller head
- Wide host range
 - 500 plant species in +100 families
 - Including soybeans, corn, sorghum



Fusarium Stalk Rot

- Premature death
- Lodging
- Reddish inner stalk
- Stalk disintegration
- Head/grain reduction



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Fusarium stalk rot

- Overwinters in corn residue
- Temperatures 80-100°F
- Premature death, lodging, reddish inner stalk, stalk disintegration
- Management: avoid root damage, control insects, diseases, weeds, and timely harvest



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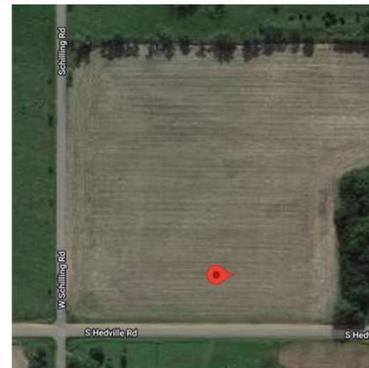
Stalk Rot Management

- **Choose good stalk strength and stay green characteristics**
- Balanced fertility
- Avoid high plant populations
- Root damages
- Control insects, diseases, weeds
- Timely harvest
- Any other moisture conservation practice.
- Check hybrid lodging ratings

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Sorghum fungicide trial

- Application time: Planting and mid-flowering
- Active ingredient: flutriafol
 - FRAC group 3: Demethylation inhibitor (DMI)
- In-furrow, dribble over the top, and dribble over the top 2 in off the furrow



Bavaria, KS

FMC
An Agricultural
Sciences Company

XYWAY
LFR
FUNGICIDE

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Sorghum season 2022. Bavaria, KS

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KSU Crop Diseases
Fungicide Efficacy Trial

Treat.: Non-treated control
Rate: -
Timing: -

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KSU Crop Diseases
Fungicide Efficacy Trial

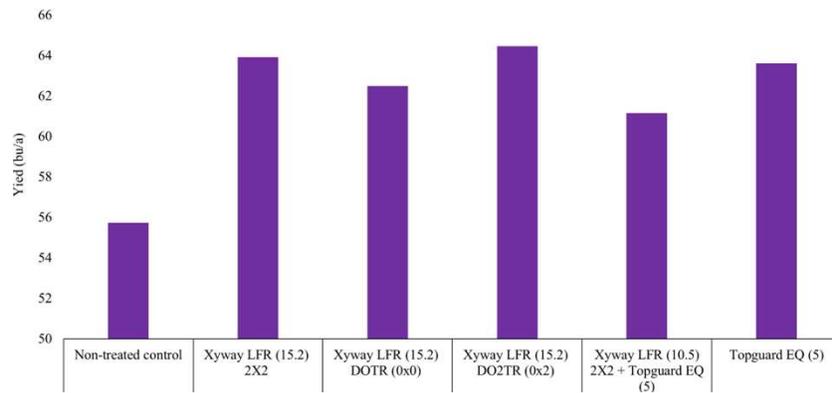
Treat.: Xyway LFR
Rate: 15.2 fl oz/A
Timing: 2x2

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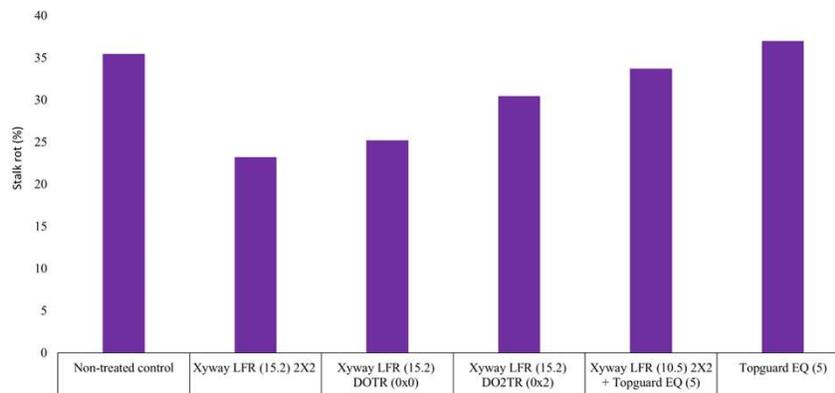




Fungicide treatments resulted in an 7.4 bu/a yield increase compared to the non-treated



At-planting treatments resulted in better stalk rot control compared to the non-treated and foliar treatments





Moldy Healthy Moldy

Grain Mold

- This tends to be a problem during fall with cool, wet weather that delays harvest
- Sorghum molds are not dangerous to livestock
- Moldy grain should not be stored

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Grain Mold



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eUpdate: Issue 476 September 26th, 2014

Grain Molds (various fungi)



- Reduced Yields
- Poor Seed quality
- **Reduced germination**
- Storage problems

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Grain Mold Management

- Plant resistant hybrids
 - Bronze and reds are more resistant due to higher tannin levels
- Timely harvest
- Do not store moldy grain for long periods
- Keep grain moisture <10% and grain temperature < 50 F

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Need Help with a Sorghum issue?

- Contact your local K-State Extension Office.
- Use this link for the sample submission form:
<https://www.plantpath.k-state.edu/extension/diagnostic-lab/documents/DiseaseLabChecksheet.pdf>

Shipping address:
 K-State Plant Disease Diagnostic Lab
 4032 Throckmorton PSC
 1712 Claflin Road
 Manhattan, KS 66506
clinic@ksu.edu
 785-532-1383



@KSUCropdiseases



KSU Crop Diseases Extension Pathology

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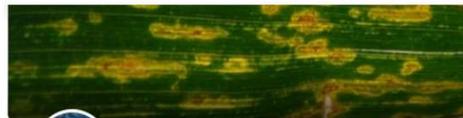
Official account of the K-State Crop Diseases Extension Pathology program. Managed by Rodrigo Onofre @rodrigoonofre

Manhattan, KS Joined November 2020

Edit profile



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Thank you!

Rodrigo Onofre
Plan Pathology
K-State Plant Path Department
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