Michigan Wheat Field Day
Plant Pathology Farm,
East Lansing, MI
Michigan State University
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Wheat Pathology Team:
Dr. Martin Chilvers, Martin Nagelkirk, Dr. Frances Trail, Mikaela Breunig and Dr. Jan Byrne
Email: chilvers@msu.edu nagelkir@anr.msu.edu Twitter: @MartinChilvers1 @MikaelaBreunig
www.pestid.msu.edu

Fusarium head scab management recommendations

1) Select variety with highest possible resistance (no varieties are completely resistant)
2) Manage residue and avoid planting into corn residue
3) Monitor conditions and use fungicide as needed. Spray timing should be approximately 2 to 5 days after early flowering. Pictured is a head just as it has fully emerged, 4-6 days after that is usually flowering and optimal time for application.
4) Forecasting model www.wheatscab.psu.edu, which can give you an idea of your area's risk based on weather data
5) Fact sheet: Managing Fusarium head blight: www.fieldcrop.msu.edu/wheat/

Variety x Fertility x Fungicide – Steinke-Chilvers trial

Optimal wheat management for profitability requires attention to detail such as variety selection, nutrient levels and disease management. In conjunction with Dr. Kurt Steinke's Soil Fertility Team, we have established a demonstration trial to examine the interactions of variety, nitrogen rates and fungicide applications on the yield and profitability of wheat production.
Varieties: Ambassador, DynaGro 9242W, Pioneer 25R40, Starburst
Nitrogen rates: 80, 120 and 160 lbs/A
Fungicides: none, T2 (flag leaf of StrategoYLD at 4fl oz/A) + T3 (flowering of Prosaro at 6.5 fl oz/A), T3 (flowering of Prosaro at 6.5 fl oz/A)

New fungicide registered in 2019 for head scab management

Syngenta has labeled Miravis Ace for the 2019 growing season. Miravis Ace is a premix of propiconazole (i.e. Tilt) and Adepidyn. The Adepidyn (pydiflumetofen) component is an SDHI mode of action, which is different to the current triazole (DMI) mode of action that we have in Caramba, Proline and Prosaro. This should be good news for resistance management, giving us an alternate option to the current triazole mode of action.

Microbiome studies of wheat yield promising strains for bioprotection against scab

The wheat microbiome (bacteria and fungi) under four management strategies (conventional, no-till, organic, and reduced chemical inputs) was characterized at four different growth stages. Microbes living in and on roots stems and leaves were identified. Most of these studies examine roots only, but we have found that the above ground parts have more fungi and very distinct microbes from the roots. More than 2000 individual microbial isolates were collected and tested for antagonism to the scab pathogen. A handful of these have been found to protect wheat plants from head blight in limited testing. These are being studied further to determine their potential to protect plants in the field. See the full article on this work in the *Phytobiomes* journal, https://apsjournals.apsnet.org/doi/full/10.1094/PBIOMES-05-17-0023-R.

Fungicide Efficacy for Control of Wheat Diseases (NCERA-184: 2019 Final Apr 3)

Fungicide(s)				Powdery mildew	Stagonospora leaf/glume blotch	Septoria leaf blotch	Tan spot	Stripe rust	Leaf rust	Stem rust	Head scab[4]	Harvest Restriction
Class	Active ingredient	Product	Rate/A (fl. oz)									
Strobilurin	Picoxystrobin 22.5%	Aproach SC	6.0 – 12.0	G[1]	VG	VG[2]	VG	E[3]	VG	VG	NL	Feekes 10.5
	Pyraclostrobin 23.6%	Headline SC	6.0 - 9.0	G	VG	VG[2]	E	E[3]	E	G	NL	Feekes 10.5
Triazole	Metconazole 8.6%	Caramba 0.75 SL	10.0 - 17.0	VG	VG	--	VG	E	E	E	G	30 days
	Tebuconazole 38.7%	Folicur 3.6 F[5]	4.0	NL	NL	NL	NL	E	E	E	F	30 days
	Prothioconazole 41%	Proline 480 SC	5.0 - 5.7	--	VG	VG	VG	VG	VG	VG	G	30 days
	Prothioconazole19% Tebuconazole 19%	Prosaro 421 SC	6.5 - 8.2	G	VG	VG	VG	E	E	E	G	30 days
	Propiconazole 41.8%	Tilt 3.6 EC[5]	4.0	VG	VG	VG	VG	VG	VG	VG	P	Feekes 10.5.4
Mixed modes of action[6]	Tebuconazole 22.6% Trifloxystrobin 22.6%	Absolute Maxx SC	5.0	G	VG	VG	VG	VG	E	VG	NL	35 days
	Cyproconazole 7.17% Picoxystrobin 17.94%	Aproach Prima SC	3.4 - 6.8	VG	VG	VG	VG	E	VG	--	NR	45 days
	Prothioconazole 16.0% Trifloxystrobin 13.7%	Delaro 325 SC	8.0	G	VG	VG	VG	VG	VG	VG	NL	Feekes 10.5
	Pydiflumetofen 13.7% Propiconazole 11.4%	Miravis Ace SE	13.7	VG	VG	VG	VG	VG	VG	VG	G[7]	Feekes 10.5.4
	Fluxapyroxad 2.8% Pyraclostrobin 18.7% Propiconazole 11.7%	Nexicor EC	7.0 - 13.0	G	VG	VG	E	E	E	VG	NL	Feekes 10.5
	Fluoxastrobin 14.8% Flutriafol 19.3%	Preemptor SC	4.0 - 6.0	--	--	VG	VG	E	VG	--	NL	Feekes 10.5 and
	Fluxapyroxad 14.3% Pyraclostrobin 28.6%	Priaxor	4.0 - 8.0	G	VG	VG	E	VG	VG	G	NL	Feekes 10.5
	Propiconazole 11.7% Azoxystrobin 13.5%	Quilt Xcel 2.2 SE[5]	10.5 - 14.0	VG	VG	VG	VG	E	E	VG	NL	Feekes 10.5.4
	Prothioconazole 10.8% Trifloxystrobin 32.3%	Stratego YLD	4.0	G	VG	VG	VG	VG	VG	VG	NL	Feekes 10.5
	Benzovindiflupyr 2.9% Propiconazole 11.9% Azoxystrobin 10.5%	Trivapro SE	9.4 - 13.7	VG	VG	VG	VG	E	E	VG	NL	Feekes 10.5.4 14 days

[1] *Efficacy categories: NL=Not Labeled; NR=Not Recommended; P=Poor; F=Fair; G=Good; VG=Very Good; E=Excellent; -- = Insufficient data to make statement about efficacy of this product.*

[2] *Product efficacy may be reduced in areas with fungal populations that are resistant to strobilurin fungicides.*

[3] *Efficacy may be significantly reduced if solo strobilurin products are applied after stripe rust infection has occurred.*

[4] *Application of products containing strobilurin fungicides may result in elevated levels of the mycotoxin Deoxynivalenol (DON) in grain damaged by head scab.*

[5] *Multiple generic products containing the same active ingredients also may be labeled in some states.*

[6] *Products with mixed modes of action generally combine triazole and strobilurin active ingredients. Nexicor, Priaxor and Trivapro include carboxamide active ingredients.*

[7] *Based on application timing at the beginning of anthesis (Feekes 10.5.1)*

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