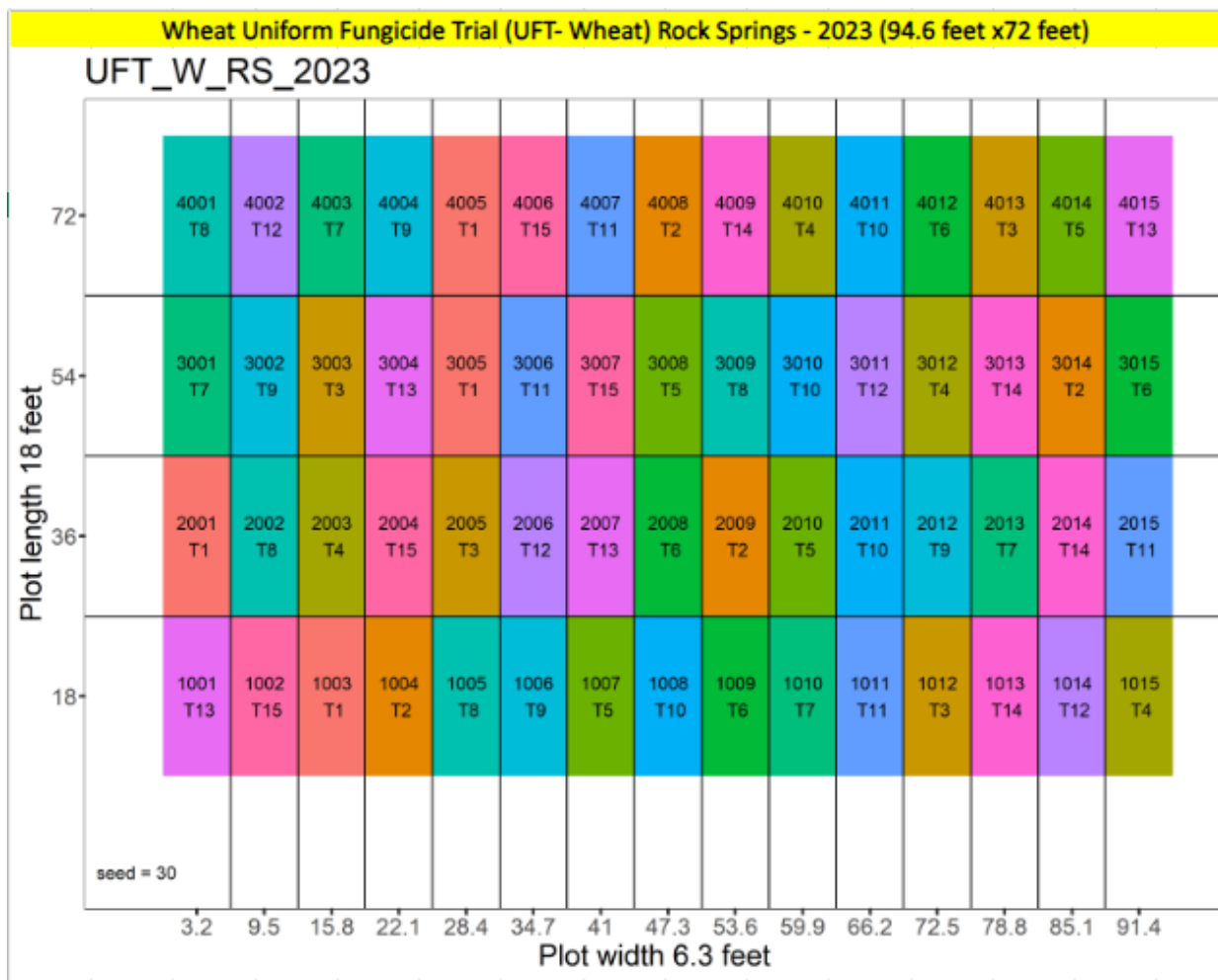


Uniform Fungicide Trial- Wheat  
UFT\_W\_RS\_2023



<b>Year</b>	2023
<b>Location</b>	Russel E. Larson Agricultural Research Center at Rock Springs
<b>Field</b>	13
<b>GPS coordinates</b>	40.713885, -77.937593
<b>Soil type</b>	Silt loam
<b>Crop</b>	wheat
<b>Previous crop</b>	oats
<b>Variety</b>	MAS #139
<b>Seeding rate</b>	1.6 million
<b>Row space (in)</b>	7.5
<b>Reps</b>	4
<b>Tillage/Residue</b>	tilled
<b>Trial type</b>	RCBD
<b>Plot dimensions</b>	6.3'x14'
<b>Herbicide</b>	Harmony on 4/20/2023
<b>Foliar insecticide</b>	n
<b>Foliar fungicide</b>	n
<b>Fertilizer</b>	Split-applied
<b>Irrigation</b>	n
<b>Planting date</b>	10/07/22
<b>Artificial inoculations (y/n)</b>	y
<b>Inoculum type/density</b>	Spray, 1*10 <sup>5</sup> spores/mL
<b>Inoculation date</b>	5/30/23
<b>Rating 1 date</b>	6/14/23
<b>Rating 2 date</b>	N/A
<b>Rating 3 date</b>	N/A
<b>Harvest date</b>	7/24/23

Map:



Protocol:

Treat ment	Product	Rate (oz/a)	Application timing	Spray date 1	Spray date2
1	UTC			...	
2	Untreated uninoculated				
3	Miravis Ace	13.7	FGS 10.5.2	5/29/2023	
4	Miravis Ace fb Tebuconazole	13.7, 4	FGS 10.3, FGS 10.5.4 (4-6 days after anthesis)	5/24/2023	6/2/2023
5	Curezin Low concentration (25 GPA)	17	FGS 10.5.1 (early anthesis)	5/29/2023	

<b>6</b>	Curezlin High concentration (25 GPA)	34	FGS 10.5.1 (early anthesis)	5/29/2023	
<b>7</b>	Prosaro	8.2	FGS 10.5.1 (early anthesis)	5/29/2023	
<b>8</b>	Prosaro Pro	10.3	FGS 10.5.1 (early anthesis)	5/29/2023	
<b>9</b>	Prosaro	6.5	FGS 10.5.1 (early anthesis)	5/29/2023	
<b>10</b>	Sphaerex	7.3	FGS 10.5.1 (early anthesis)	5/29/2023	
<b>11</b>	Priaxor or Nexicor fb Sphaerex	2 or 5 fb 7.3	FGS 8-9 (FGS 4-5) or FGS 10.3 (50% Heading) fb FGS 10.5.1 (early anthesis)	5/11/2023	5/29/2023
<b>12</b>	Miravis Ace	13.7	FGS 10.3	5/24/2023	
<b>13</b>	Caramba	13.5	FGS 10.5.1 (early anthesis)	5/29/2023	
<b>14</b>	Miravis Ace fb Prosaro Pro	13.7 fb 10.3	FGS 10.5.1 (early anthesis)/4-6 days after heading	5/29/2023	
<b>15</b>	Miravis Ace fb Sphaerex	13.7 fb 4	FGS 10.5.1 (early anthesis)/4-6 days after heading	5/29/2023	

Data by plot:

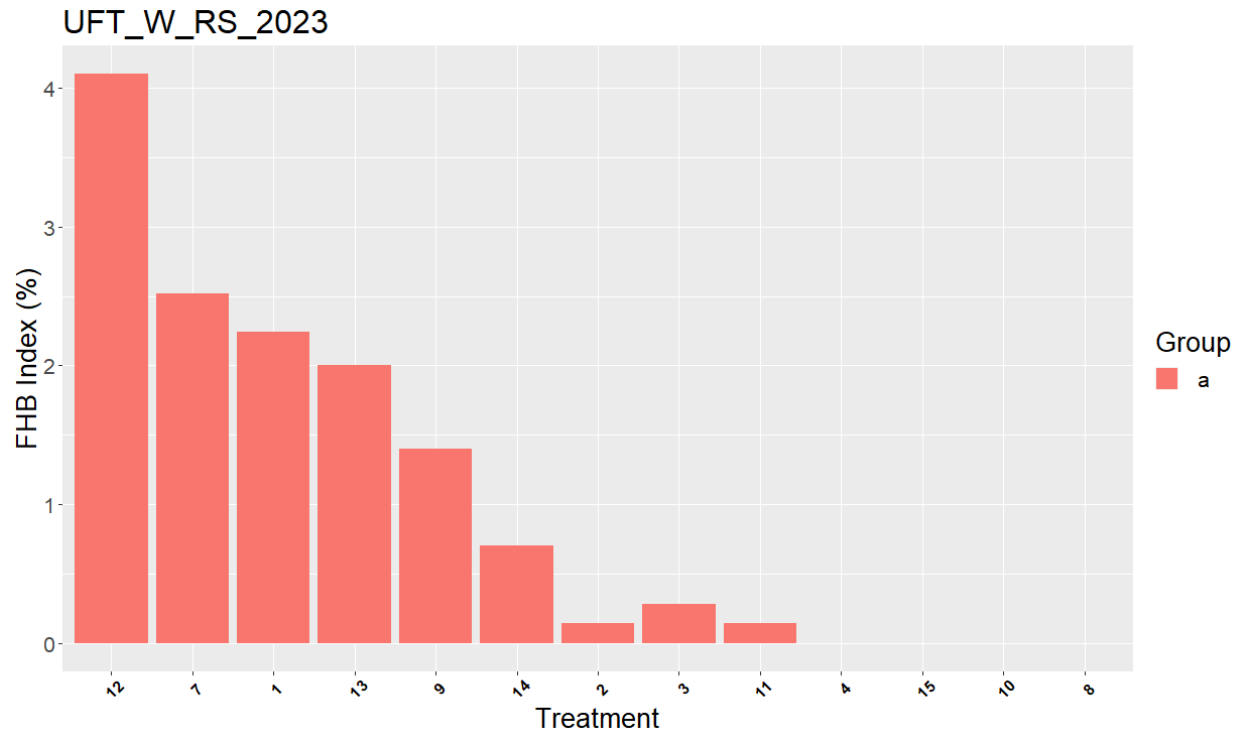
Treat	Rep	FHB			DON ppm	FDK %	Yield Bu/Ac	Test wt Lb/Bu	100 Kernel wt (g)	Foliar Disease
		Incidence	Severity	Index						total foliar disease (%)
1	1	4	56	2.24	0.28	7.67	90.81	56.4	3.20	25
	2	0	0	0	0.09	4.67	83.22	56.3	3.40	40
	3	0	0	0	0.2	5.33	87.56	56.3	3.40	36.25
	4	0	0	0	0	5.33	88.28	57.1	3.57	30
2	1	2	7	0.14	0.06	6.33	92.26	56.5	3.17	28.75
	2	0	0	0	0	5.00	70.14	55.6	3.10	52.5
	3	0	0	0	0	4.00	89.85	56.7	3.43	41.25
	4	0	0	0	0	5.67	93.82	57.2	3.50	33.75
3	1	0	0	0	0.11	6.00	85.79	57.1	3.20	38.75
	2	4	7	0.28	0	3.33	81.07	57.2	3.60	28.75
	3	0	0	0	0	3.67	92.60	57.5	3.37	33.75
	4	0	0	0	0.06	5.33	88.93	56.1	3.20	28.75
4	1	0	0	0	0.05	6.67	74.70	57.2	3.37	41.25
	2	0	0	0	0.13	5.33	82.05	56.8	3.43	41.25
	3	0	0	0	0.06	5.00	88.20	57.2	3.47	43.75
	4	0	0	0	0	4.67	75.63	56.1	3.47	40
5	1	4	7	0.28	0.23	6.00	86.55	56.1	3.23	27.5
	2	4	21	0.84	0.21	6.67	83.63	55.8	3.43	43.75
	3	0	0	0	0.11	7.33	99.73	56.6	3.27	21.25
	4	0	0	0	0.08	5.67	83.09	56.3	3.63	23.75
6	1	4	28	1.12	0.18	4.33	72.84	56.4	3.40	45
	2	2	14	0.28	0.16	8.67	79.07	55.9	3.13	33.75
	3	0	0	0	0.15	6.33	81.66	56.2	3.23	33.75
	4	0	0	0	0	7.00	87.10	55.8	3.37	35
7	1	2	63	1.26	0.13	4.67	95.92	56.5	3.33	28.75
	2	2	63	1.26	0.15	5.67	84.87	56.5	3.27	33.75
	3	0	0	0	0.12	6.00	91.06	56.4	3.40	37.5
	4	0	0	0	0	5.67	99.24	56.2	3.33	33
8	1	0	0	0	0.17	5.67	85.14	56.7	3.23	23.75
	2	0	0	0	0.05	7.33	81.44	56.4	3.10	52.5
	3	0	0	0	0.12	5.00	91.98	56.5	3.40	31.25
	4	0	0	0	0.12	6.00	81.67	56.3	3.57	35
9	1	2	70	1.4	0.19	8.33	81.82	56.6	3.23	26.25
	2	0	0	0	0	4.67	81.91	56.6	3.37	51.25
	3	0	0	0	0.05	4.00	83.60	56.2	3.17	38.75
	4	0	0	0	0	6.00	94.94	56.3	3.23	28.75
10	1	0	0	0	0.08	4.67	80.51	56.1	3.23	36.25
	2	0	0	0	0.09	6.33	78.28	55.2	3.07	51.25
	3	0	0	0	0	4.33	93.21	56.3	3.33	31.25
	4	0	0	0	0.08	6.33	86.05	55.5	3.60	41.25
11	1	0	0	0	0	4.67	76.90	56	3.07	32.5
	2	2	7	0.14	0.26	4.67	84.49	56.1	3.40	27.5
	3	0	0	0	0.08	5.00	94.67	56.7	3.40	30
	4	0	0	0	0	6.33	91.37	56.8	3.50	23.75
12	1	6	59	3.54	0.37	5.33	86.74	56.2	3.50	28.75
	2	2	21	0.42	0	3.67	81.79	57.3	3.47	35
	3	0	0	0	0	6.67	93.91	56.8	3.30	35
	4	2	7	0.14	0.05	8.67	84.68	56.4	3.37	40
13	1	2	100	2	0.05	4.67	98.39	56.2	3.47	35
	2	0	0	0	0	6.33	77.16	55.3	3.23	35
	3	0	0	0	0	3.67	86.04	56.3	3.27	45
	4	0	0	0	0.12	4.67	84.23	56.2	3.50	31.25
14	1	4	7	0.28	0.22	4.67	84.99	57.3	3.30	37.5
	2	0	0	0	0.19	5.33	93.46	57.6	3.37	28.75
	3	2	21	0.42	0	4.00	88.40	57.3	3.37	38.75
	4	0	0	0	0	7.33	83.98	56.9	3.33	35
15	1	0	0	0	0	3.00	97.87	57	3.43	28.75
	2	0	0	0	0	5.67	78.21	56.4	3.13	57.5
	3	0	0	0	0	6.00	90.81	56.9	3.23	30
	4	0	0	0	0.06	4.67	93.88	57.9	3.73	31.25

## Summary by treatment:

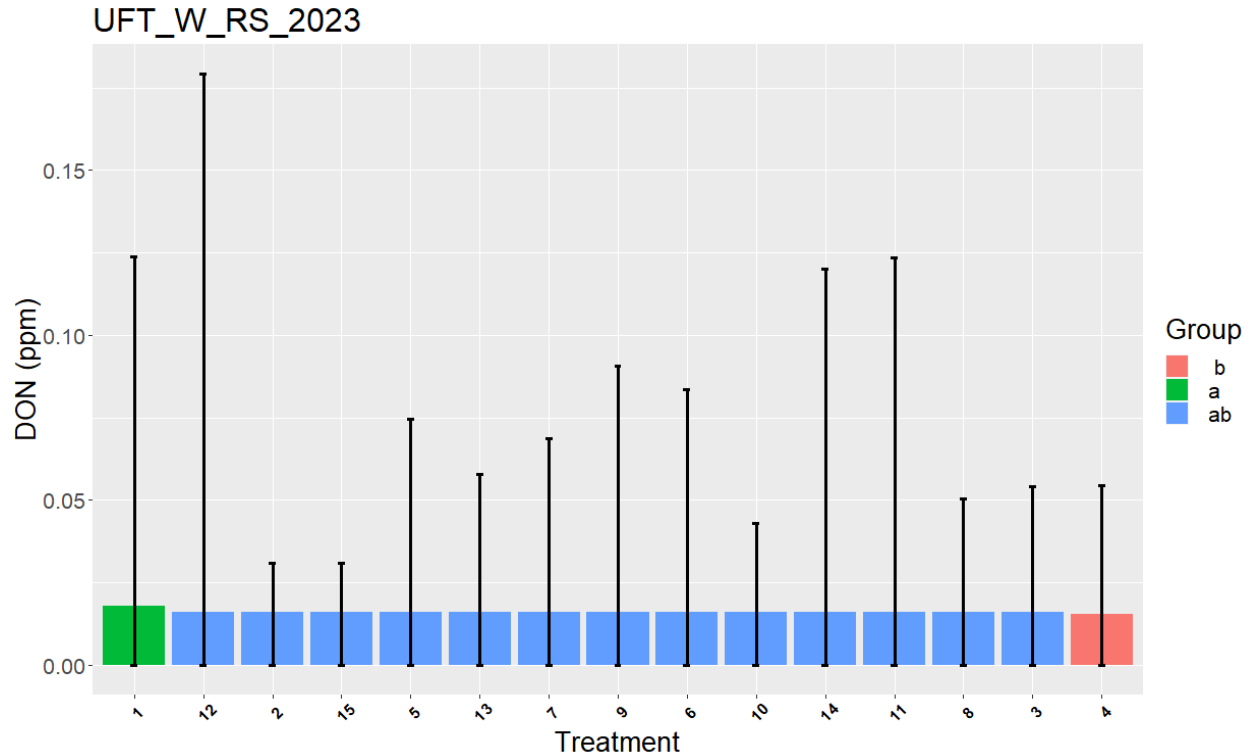
trt	severity	incidence	fhb_index	foliar_avg	don	yield_bu_a	tw	fdk_percent	seedwt_avg	ndvi_6.15
1	14.00	1.00	0.56	32.81	0.14	87.47	56.53	5.75	3.39	0.60
2	1.75	0.50	0.04	39.06	0.02	86.52	56.50	5.25	3.30	0.55
3	1.75	1.00	0.07	32.50	0.04	87.10	56.98	4.58	3.34	0.58
4	0.00	0.00	0.00	41.56	0.06	80.15	56.83	5.42	3.43	0.56
5	7.00	2.00	0.28	29.06	0.16	88.25	56.20	6.42	3.39	0.56
6	10.50	1.50	0.35	36.88	0.12	80.17	56.08	6.58	3.28	0.56
7	31.50	1.00	0.63	33.25	0.10	92.77	56.40	5.50	3.33	0.56
8	0.00	0.00	0.00	35.63	0.12	85.06	56.48	6.00	3.33	0.55
9	17.50	0.50	0.35	36.25	0.06	85.57	56.43	5.75	3.25	0.57
10	0.00	0.00	0.00	40.00	0.06	84.51	55.78	5.42	3.31	0.55
11	1.75	0.50	0.04	28.44	0.09	86.86	56.40	5.17	3.34	0.56
12	21.75	2.50	1.03	34.69	0.11	86.78	56.68	6.08	3.41	0.57
13	25.00	0.50	0.50	36.56	0.04	86.46	56.00	4.83	3.37	0.59
14	7.00	1.50	0.18	35.00	0.10	87.71	57.28	5.33	3.34	0.53
15	0.00	0.00	0.00	36.88	0.02	90.19	57.05	4.83	3.38	0.58

## Discussion/Results:

This trial had very dry conditions in May but ended up with some good yields. Due to the drought, there were very low levels of FHB and no DON detected in samples. Because of the low disease pressure, there were no significant differences. Foliar disease severity was significantly different, with Miravis Ace followed by Sphaerex reducing the yield the most out of all treatments.



**Figure 1.** Graph showing mean FHB index by treatment. The untreated check, Prosaro, and Miravis Ace @FGS 10.3 had the highest FHB, but no significant differences were detected. Most treatments held the FHB index below one in a very dry season. ( $\alpha=0.05$ )



**Figure 2.** There were significant differences in the DON levels, with the untreated check having the most DON (ppm). Most treated plots had extremely low or no DON detected. The Miravis Ace, Miravis Ace followed by Tebuconazole, and Prosaro Pro had the lowest DON levels. ( $\alpha=0.05$ )

### Acknowledgements:

All products used in this trial were provided by BASF, Bayer- Crop Science, FMC Agricultural Solutions, and Syngenta.