

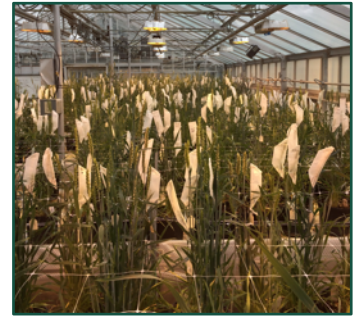
MSU Wheat Variety Development

Michigan State University Wheat Breeding and Genetics

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- MSU Wheat Breeding and Genetics develops improved wheat varieties for Michigan and the Eastern soft wheat region.
- 800 crosses are made each year between wheat lines with:
 - High yield potential
 - Resistance to Fusarium head blight, rusts
 - and leaf spot pathogens
 - Excellent milling and baking properties
- 1000 potential new varieties are tested in preliminary yield trials and screened for FHB resistance each year.



Line	Pedigree	Yield bu/ac	DON ppm	Stripe Rust 0-9	Leaf Spot 0-9	PHS 0-9
MI14R0011	Unknown	122.3	-	2.4	4.0	0
MI14R0213	Jupiter//MO050699/Truman	120.4	4.9	5.0	3.0	1
MI14R0489	D6234/Batavia	119.6	9.7	3.4	6.0	0
MI14R0267	Oasis/D8006W	114.3	3.1	3.8	6.0	1
MI14R0330	D8006W//FHB12/P25R47	114.1	3.2	5.2	3.0	2
MI14R0421	D8006W/P25R37	111.1	2.3	2.6	5.0	0
MI14W0003	Unknown	121.0	11.2	5.6	5.0	7.0
MI14W0598	E0027/E5201	118.3	6.6	5.8	2.0	3.5
MI14W0064	Ambassador/Jupiter	117.9	5.0	6.8	8.0	1.0
MI14W0054	P25W33/D8006W	117.3	7.9	5.8	4.0	4.0
MI14W0652	TW93213/D6234	116.6	6.7	5.8	4.0	1.5
MI14W0190	Jupiter/3/E6003//FHB12/Ambassador	115.9	4.7	3.4	7.0	5.0
Ambassador	P27W37/D1148	105.0	14.8	7.8	8.0	8.0

Grain yield data were collected from two locations in 2015 and five locations in 2016

- DON data is from heavy disease pressure in a nursery inoculated with FHB-infected grain. Resistant varieties have under 5 ppm DON.
- Heavy stripe rust was present across Michigan in 2016.
- Cool, wet weather in 2015 favored leaf spot diseases in 2015.



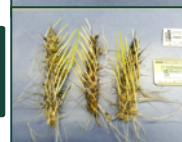
PHS
score
0 to 1



PHS
score
2 to 4



PHS
score
5 to 9



Pre-harvest sprouting (PHS) can be caused by rainfall events when wheat is past physiological maturity. Several high yielding white wheat lines in the MSU breeding program have low sprouting under wet and rainy conditions.

