WHEAT PERFORMANCE IN ILLINOIS TRIALS - 2020 Crop Sciences Special Report 2020-01, July 2020

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The 2019-20 wheat growing season in Illinois mostly favorable until freezing temperatures occurred in early May. The amount of freeze damage varied widely across the state and even within counties. Some fields were heavily affected while others were not. The growth stage at the time of the freeze largely determined how much damage occurred. Wheat spikes that experienced the freeze around heading and anthesis tended to be more heavily affected; however, the freeze could have affected plants even outside of these growth stages. This year, the early heading varieties were more likely to experience severe frost damage compared to varieties that headed later. We experienced severe frost damage at our Belleville trial location which caused high levels of experimental error at this location. The Belleville location was therefore excluded from our analyses this year.

After early May, the season was largely uneventful. The risk of Scab infection was predicted to be low for most parts of the state, except for the southernmost region near the border of Kentucky. In spite of these predictions, plenty of Scab infection could be observed on research plots in Urbana. Scab symptoms could even be observed research plots that were sprayed with fungicide at anthesis. However, as expected, Scab resistant/moderately resistant varieties experienced lower levels disease compared with Scab susceptible varieties. We continue to recommend varieties that are at lease moderately resistant to Scab to reduce the risk of producing grain with unacceptable levels of Vomitoxin. Although no variety is immune to Scab, there are now excellent Scab resistant varieties to choose from. Slow but steady improvements in Scab resistance, in combination with high yield, continue to be made.

After anthesis, a period of hot, dry weather accelerated the wheat crop. As a result, some fields were harvested slightly earlier than usual. In some parts of the state, rain and severe weather occurred right around harvest which could have had a negative impact on test weights.

In all our wheat variety trial, plots were seeded at the rate of 36 seeds per square foot, and consisted of six, 7.5-inch rows trimmed to about 16 feet before harvest. Yields were corrected to 13.5% moisture. Entries treated with seed-applied insecticide have insecticide treatment identified by the product trade name in the tables.

			Planting	N	Harvest
Location	Cooperator	Soil type	date	fertilizer	date
Elkville	Trent Funk	Hurst silt loam	Oct. 8	30 Fall 110 Spring	June 19
Belleville	Dane Hunter	Ebbert silt loam	Oct. 8	30 Fall 85 Spring	June 26
St Peter	Russ Schwarm	Hoyleton silt loam	Oct. 18	0 Fall 120 Spring	June 26
Perry/Orr Center	Luke Merritt	Clarksdale silt loam	Oct. 14	30 Fall 80 Spring	June 29
Urbana	Nick Eisenmenger	Flanagan silt loam	Sept. 27	30 Fall 40 Spring	July 6
Hampshire	Dezeri DeRaedt	Elburn silt loam	Sept. 24	30 Fall 80 Spring	July 14

Participating companies are listed on Page 2, regional data in Tables 1 and 2, individual location data in Tables 3 to 8, wheat variety characteristics in Table 9, and the Fusarium head scab ratings in Table 10.

Participating Companies

We thank these companies for their support of this program in 2020.

AgriMAXX Wheat Co 7167 Highbanks Rd Mascoutah, IL 62258 (855) 629-9432

AgriPro 200 E 4th St Hoffman, IL 62250 (618) 495-2617

Albert Lea Seed 1414 West Main Street Albert Lea, MN 56007 (800) 352-5247

BioTown Seeds Box 299 Reynolds, IN 47980 (219) 984-6038

DeRaedt Seed Corp. 10 N 971 Tower Road Hampshire, IL 60140 (847) 514-8844

Dyna-Gro Seed 200 W 2nd St. Flora, IL 44818 (618) 838-5024 FS Wheat 1701 Towanda Ave., PO 2500 Bloomington, IL 61701 (309) 557-6399

Green Valley Seed 121 West College St Kahoka, MO 63445 (800) 748-7943

GO Wheat 1530 HWY 79 South Stuttgart, AR 72160 (800) 264-4433

Hoffman Seed House PO Box 66, 200 E 4th St Hoffman, IL 62250 (618) 495-2617

Kitchen Seed Company PO Box 286 Arthur, IL 61911 (217) 543-3476

Kratz Farms LLC 4380 Sherman Road Slinger, WI 53086 (262) 644-9426 KWS Cereals 4101 Colleen Dr Champaign, IL 618/22 217-800-1008

Limagrain Cereal Seeds 2040 SE Frontage Rd Ft. Collins, CO 80525 (970) 498-2200

Monier Seed & Service 846 Yankee Lane Sparland, IL 61565 (309) 238-1227

Pioneer - Corteva 7100 NW 62nd Ave. Johnston, IA 50131 (800) 247-6803

Pro Harvest Seeds 2737 N 700 E Road Ashkum, IL 60911 (866) 807-7015

UniSouth Genetics, Inc. 3205C HWY 46 S Dickson, TN 37055 (615) 515-3133