

Wheat Planting Date



OBJECTIVE

To evaluate the impact of planting date on winter wheat yield.



eFields Collaborating Farm

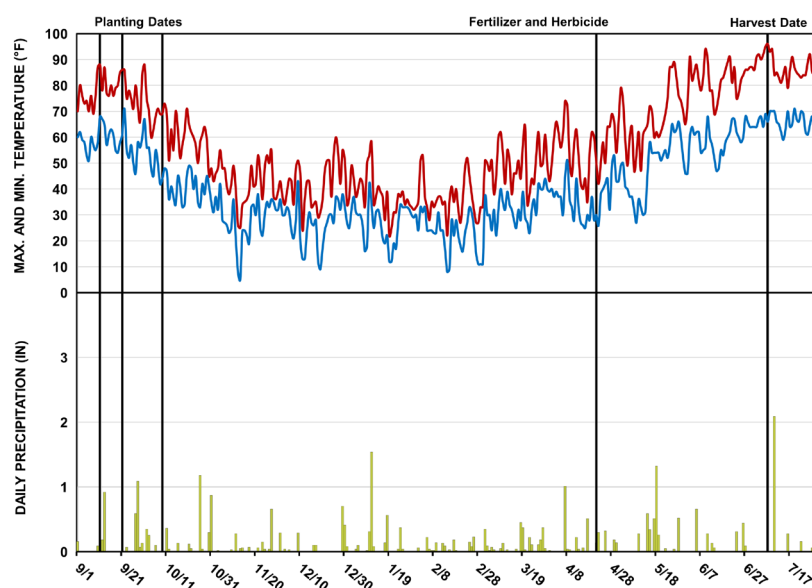
OSU Extension

Fulton County

STUDY INFORMATION

Planting Date	See Treatments
Harvest Date	7/7/2020
Variety	DynaGro 9941
Population	1.4 million sds/ac
Acres	17
Treatments	3
Reps	4
Treatment Width	30 ft.
Tillage	Conventional
Management	Fertilizer, Herbicide
Previous Crop	Fallow
Row Spacing	7.5 in.
Soil Type	Galen Loamy Fine Sand, 35% Colwood Loam, 20% Bixler Loamy Fine Sand, 15%

WEATHER INFORMATION



Growing Season Weather Summary

	OCT	NOV-FEB	MAR	APR	MAY	JUN	Total
Precip (in.)	3.83	8.23	2.74	3.04	3.93	2.00	23.77
Cumulative GDDs	219	247	290	407	724	1342	1342

STUDY DESIGN

Prevented planting (2019), improved early soybean maturities and corn silage systems allow for early planting of winter wheat--in many cases, prior to the fly-free date. Fulton County's fly-free date is September 22. Intended planting dates were 10 days prior to, on, and 10 days after the fly-free date. Actual treatment dates were September 11, September 21, and October 9 based on ideal field and weather conditions. Fall starter fertilizer was applied based on soil tests and 96 lbs/ac of N was applied to all treatments on April 21. All fertilizer, crop protection and tillage passes were uniform across treatments.



Prevented planting acres in 2019 allowed for earlier than normal planting of winter wheat.

OBSERVATIONS

The earliest planted wheat (Sept. 11) produced the greatest tillers per plant and foliage height in the fall. It also showed fall yellowing, presumably from nitrogen deficiency. The latest planting (Oct. 9) resulted in some competition with winter annual weeds as well as the least biomass at Feeke's stage 6. Spring head counts showed that the planting on the fly-free date (Sept. 21) resulted in the greatest number of harvestable heads. Rainfall was limited during grain fill at this site in 2020. Vomitoxin was not an issue in any treatment.



RESULTS

Treatments	Fall Tillers/ plant	Spring Head Count (hds/ft)	Moisture (%)	Test Weight (lb/bu)	Yield (bu/ac)
9/11/2019	3.1	56	11.5 a	58 a	76 a
9/21/2019	2.9	63	10.7 a	58 a	81 a
10/9/2019	1.1	57	14.0 b	57 a	62 b
Treatment Means with the same letter are not significantly different according to Fisher's Protected Least Significant Differences (LSD) test at alpha = 0.1.			LSD:1.75 CV: 8.34%	LSD:1.53 CV: 1.53%	LSD:7.75 CV: 6.11%

SUMMARY

- There was no significant difference in yield between the Sept. 11 and Sept. 21 plantings.
- However, the Oct. 9th planted wheat yielded significantly lower than either of the September plantings.
- The results of this study support Ohio State's small plot findings that suggest planting wheat as near to the fly-free date will result in maximum yield.
- Grain moisture was significantly different for the October 9 planting,
- Test weight was not significantly between treatments.

TOOLS OF THE TRADE

John Deere 750 No-till Drill

Equipped with single-disc openers and cast closing wheels, this drill was used in this trial and allowed for simple implementation of planting date treatments.



PROJECT CONTACT

For inquiries about this project, contact Eric Richer (richer.5@osu.edu).