Strip Till Corn Trial at Minot
NDSU North Central Research Extension Center

2017 and 2018 Combined Means

Strip Till Operation	Hybrid	Days to Emerge	Harvest Stand	Days to Silk	Ear Height	Harvest Moisture	Test Weight	Grain Yield
	RM	DAP*	plants/A	DAP*	inches	%	lbs/bu	bu/A
Fall	76 Day	11	22,075	67	31	22.8	61.3	84.4
	85 Day	11	26,070	71	32	22.1	58.0	92.4
Spring	76 Day	12	21,747	67	30	21.3	59.3	79.6
	85 Day	12	25,481	74	32	23.5	57.2	89.8
Fall & Spring	76 Day	12	21,551	67	31	21.7	60.9	82.6
	85 Day	12	26,267	73	33	24.1	58.0	99.4
None (no-till)	76 Day	11	21,616	67	30	21.4	60.5	84.6
	85 Day	11	23,057	72	30	22.6	58.1	88.0
C.V.%		6.0	14.7	2.3	6.2	9.5	2.8	7.1
LSD 5%		1	3,720	2	2	NS	1.8	6.7

Combined Means - Strip Till Operation

Strip Till Operation	Days to Emerge	Harvest Stand	Days to Silk	Ear Height	Harvest Moisture	Test Weight	Grain Yield
	DAP*	plants/A	DAP*	inches	%	lbs/bu	bu/A
Fall	11	24,073	69	32	22.4	59.6	88.4
Spring	11	23,614	70	31	22.4	58.2	84.7
Fall & Spring	12	23,909	70	32	22.9	59.4	91.0
None (no-till)	11	22,337	70	30	22.0	59.3	86.3
LSD 5%	NS	NS	NS	NS	NS	NS	NS

Combined Means - Hybrid

Hybrid	Days to Emerge	Harvest Stand	Days to Silk	Ear Height	Harvest Moisture	Test Weight	Grain Yield
RM	DAP*	plants/A	DAP*	inches	%	lbs/bu	bu/A
76 day	11	21,747	67	30	21.8	60.5	82.8
85 day	12	25,219	72	32	23.1	57.8	92.4
LSD 5%	1	1813	1	1	1.1	0.9	3.7

**Days after planting.* *NS = No statistical difference between treatments.*

Planting Date: May 12, 2017 & May 14, 2018
Planting Rate: 30,000 PLS/A *Row Spacing: 30"*
Previous Crop: 2017 = Durum, 2018 = spring wheat *Soil Type: Williams Loam*
Harvest Date: October 21, 2017 and October 11, 2018

Summary: Strip tillage is a common practice in many corn growing areas of the contry. Advantages of strip tillage include limiting tillage to a smaller area, quicker warming of the strip till zone and the ability to apply fertilizer during the tillage operation. The main objective of this trial was to compare corn that was planted into tilled strips that were formed in the Fall, Spring, Fall and freshened again in the Spring, or planted directly into no-till stubble. Tillage strips were formed with a Dawn Pluribus system and the trial was planted with a SRES small plot planter using Great Plains no-till openers and Monosem seed singulation meters. The trial yielded suprisingly well considering drought conditions during both 2017 and 2018 growing seasons, however, moisture stress was still the most yield limiting factor. There was a slight yield advantage with Fall strip tillage compared to strips produced in the spring or no-till, however, there was no statistical advantage or disadvantage between any of these operations

however, there was no statistical advantage or disadvantage between any of these operations. In conclusion, these results indicate that strip tillage would not provide an economical return under similar growing conditions.