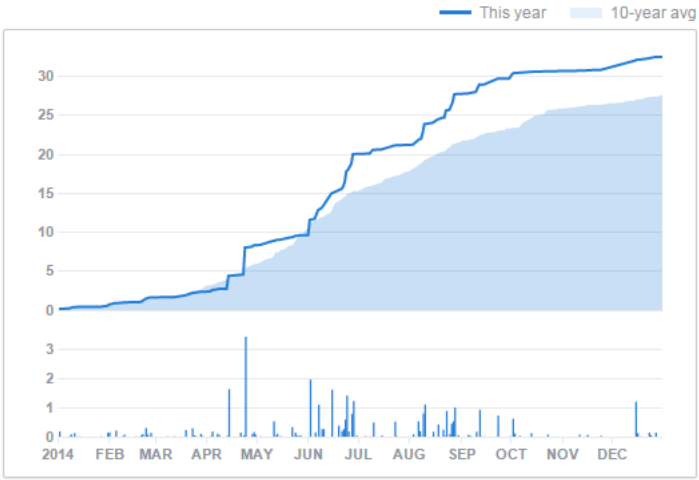
Nebraska On-Farm Research Network

Corn Planted Into Cover Crop Mix

Study ID: 041061201401
County: Franklin
Soil Type: Holdredge – Silt Loam
Planting Date: 5/4/2014
Harvest Date: Unknown
Population: 23,000
Row Spacing: 30”
Hybrid: Pioneer 1498
Reps: 12
Previous Crop: Wheat
Tillage: No-till
Herbicides: Unknown
Insecticides/Fungicides: Unknown
Fertilizer: UAN 32% 15lbs 2x2 – 5/4/14, UAN 32% 100lbs – 5/8/14

Irrigation: None
Rainfall:



Introduction: This study is looking at the effects of a cover crop on the subsequent cash crop. The cover crop used in this study was a mix of sorghum - 4%, sorghum X sudangrass - 4%, forage rape seed - 4%, tilth pro or jackhammer tillage radish- 4%, purple top turnip- 4%, forage pea- 59.1%, hairy vetch- 18.2%. It was seeded at 22#/acre into wheat stubble in August 2013 and was winter killed. Corn was planted into residue in 2014. The cover crop treatment was compared to planting into wheat stubble without a cover crop. Soil moisture was also compared for fall 2013, spring 2014, and fall 2014.

Figure 1: Cover crop versus no-cover crop treatment.

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Results:

	Yield† (bu/acre)	Moisture (%)	Soil Moisture			Net Return ‡
			Fall 2013	Spring 2014	Fall 2014	
			----------inches----------			
Check	158 A*	14.5 A	8.2 A	10.7 A	9.1 A	$554.16
Cover Crop	148 B	14.3 B	7.3 A	9.3 B	9.5 A	$476.48
P-Value	*<0.0001*	*0.0180*	*0.1182*	*0.0379*	*0.7277*	--

†Bushels per acre corrected to 15.5% moisture.

*Values with the same letter are not significantly different at a 90% confidence level.

‡ Net return based on $3.50/bu. corn, $27.28/acre cover crop, and $13.37/acre drill application cost.

Summary: The corn planted into the wheat stubble without a cover crop had greater yield and higher grain moisture than the corn following the cover crop. Yield monitor values are shown here, however the yield monitor needed to be recalibrated and actual field yields were approximately 20 bu/ac higher. There was no difference in soil moisture between the check and cover crop in fall of 2013 or 2014; however in spring of 2014 the check had higher soil moisture than the cover crop treatment.

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