

Wheat plus Second Crop Economics

Eric Richer, Ohio State University Extension Educator, Fulton County

Bruce Clevenger, Ohio State University Extension Educator, Defiance County

Laura Lindsey, Ohio State University Extension State Specialist, Soybean & Wheat Production

Objective

To determine effects of wheat and soybean grain yield and profitability.

Background

Crop Year:	2016	Planting Date:	Sept. 28, 2015 (Wheat)
County:	Wood		May 23, 2016 (Soybean)
Location:	Custar, OH	Harvest Date:	July 5, 2016 (Wheat)
Drainage:	Systematic, 35' laterals		Oct. 25, 2016 (Soybeans)
Previous Crop:	Soybeans	Soil Type:	Hoytville clay loam
Varieties:	Wheat: Rupp 911	Tillage:	Minimal
	Soybean: Pioneer 31T11	Soil Test (grid avg):	pH 7.0
	Red clover: Cisco Gallant		P 34 ppm (Bray-P1)
	Oats: Forage Oats		K 196 ppm
			CEC 16.1 meq/100g
			OM 3.8%
		Starter Fertilizer:	30-78-78/acre

Methods

This trial was designed with nine treatments replicated four times in a randomized complete block design (See Table 1). Plots were 10 feet wide by 75 feet long. All treatments received the same starter fertilizer, herbicide and topdress nitrogen. The trial was planted, sprayed and harvested with small test plot equipment. Yields and moistures were measured by using a calibrated weigh wagon and commercial moisture tester. Yields were standardized to 15% moisture content.



Results

Table 1. Wheat plus Second Crop Economics

Treatment	Wheat Yield (bu/ac)	Soybean Yield (bu/ac)	Forage Yield (tons/ac)	System Gross Revenue*
1. Soybeans in 15" rows (160,000 seeds/ac)		49.5 a		\$446
2. Frost seed red clover in March (10#/A)			1.5 a	\$75
3. Wheat in 7.5" rows (1.8 M seeds/ac)	88.9 a			\$356
4. Wheat in 15" rows (0.9 M seeds/ac)	65.8 c			\$263
5. Wheat in 7.5" rows fb dbl crop soybeans	86.8 a	12.8 b		\$462
6. Wheat in 7.5" rows w/ frost seed clover	78.9 b		1.4 a	\$386
7. Wheat in 15" rows w/MRI soybeans	51.6 d	17.4 b		\$363
8. Wheat in 15" rows w/frost seed clover	70.4 c		1.1 a	\$337
9. Wheat in 7.5" rows fb forage oats	92.6 a		1.8 a	\$460
LSD (P<.05)	6.24	5.41	0.77	
	CV 5.5	CV 11.8	CV 26.6	

* Based on \$9.00/bu soybeans, \$4.00/bu wheat and \$50/ton forage

Discussion:

Treatments 3, 5, and 9 resulted in a significantly higher wheat yield than all other treatments. Treatment 1 resulted in the significantly highest soybean yield of the three treatments with soybeans. All of the forage treatments resulted in no statistical yield difference.

After an economic calculation using standard prices, treatments 5 and 9 resulted in the greatest economic return for 2016. Treatment 2 resulted in the lowest economic return of all treatments in 2016.

This trial is a three year trial that will be repeated in 2017 and 2018. Corn yield impact in the year following will also be evaluated from 2017-2019.

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For more information, contact:
Eric Richer
OSU Extension –Fulton County
8770 State Route 108
Wauseon, Ohio 43567
Richer.5@osu.edu

agcrops.osu.edu

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