Wheat plus Second Crop Economics

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Objective

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

Background

Crop Year:	2017		
County:	Wood	Planting Date:	Oct. 12, 2016 (Wheat)
Location:	Custar, OH		June 6, 2017 (Soybean)
Drainage:	Systematic, 35' laterals	Harvest Date:	July 3, 2017 (Wheat)
Previous Crop:	Soybeans		Oct. 19, 2017 (Soybeans)
Varieties:	Wheat: Rupp 902	Soil Type:	Hoytville clay loam
	Soybean: Pioneer 31T11	Tillage:	Conventional
	Red clover: Cisco Gallant	Soil Test (grid avg):	pH 7.0
	Oats: Everleaf Forage		P 34 ppm (Bray-P1)
			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)		60.6 a		$545
2. Frost seed red clover in March (10#/A)			1.8 b	$90
3. Wheat in 7.5" rows (1.8 M seeds/ac)	113.4 a			$454
4. Wheat in 15" rows (.9 M seeds/ac)	107.2 b			$429
5. Wheat in 7.5" rows fb dbl crop soybeans	114.0 a	29.7 c		$723
6. Wheat in 7.5" rows w/ frost seed clover	110.4 ab		2.9 a	$587
7. Wheat in 15" rows w/MRI soybeans	92.8 c	42.9 b		$757
8. Wheat in 15" rows w/frost seed clover	108.8 ab		3.1 a	$590
9. Wheat in 7.5" rows fb forage oats	112.9 ab		1.1 b	$507
LSD (P<.05)	5.82	11.03	0.96	
	CV 3.61	CV 14.35	CV 41.87	

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

Discussion:
Treatments 3, 5, 6, 8 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. Treatments 6 and 8 resulted in the significantly highest forage yield of the four treatments with forage.

After an economic calculation using standard prices, treatments 5 and 7 resulted in the greatest economic return (over $700 each) for 2017. Treatment 2 resulted in the lowest economic return of all treatments in 2017.

This trial is a three year trial in its second year, it will be repeated in 2018. Corn yield impact in the year following will also be evaluated from 2017-2019.

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