

# Yield of Modified Relay Intercropping Soybeans and Double Crop Soybeans Grown in 15 inch Rows

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## Objective

To evaluate yield response of Modified Relay Intercrop soybeans versus Double Crop (DC) soybean grown in 15 inch rows.

## Background

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Crop Year: 2014	Wheat Variety: Pioneer 25R39
Location: OARDC South Charleston	Wheat Seeding Rate: 1 million sds/acre
County/Town: Clark	MRI Soybean Planting Date: May 28, 2013
Soil Type: Kokomo/Stawn-Crosby	Double Crop Soybean Planting date: July 11
Drainage: Systematic	Soybean Varieties: S 2.9 CMV; Asgrow 3.5
Previous Crop: Soybeans	MRI Seeding Rate: 200,000 seeds/acre
Tillage: No – tillage	Double crop seeding rate: 200,000 sds/acre
Soil Test: pH 6.5, P 48 (M3) ppm, K 152 ppm	Herbicide: Post 1 quart Glyphosate (7/22)
SCN # in area of plots: 60 eggs per 100cc	Wheat harvest date: July 10, 2014
Row width: 15 inches	Date of MRI Soybean harvest: Oct. 28
Fertilizer: (wheat & beans) 90-0-0	Date of Double Crop harvest, Nov. 11
Wheat Planting Date, 10-1-13	Rainfall: 8.9 inches (from 6/1-9/1)

## Methods

Pioneer 29R37 soft red winter wheat was planted Oct. 1, 2013 in 15 inch rows at a rate of 1.0 million seeds per acre. Soybeans were interseeded into standing wheat with 15 inch row spacing on May 28 with a Great Plains units custom interseeder mounted on a 3 point hitch. Wheat was harvested on July 10, 2014 with a Kincaid small plot combine with a 5 foot header. DC soybeans were planted on July 11 with a Kinze 15 inch row planter.

This study used a completely randomized design with two treatments replicated 4 times to compare yield of soybeans MRI into wheat versus soybeans planted after wheat harvest. A small plot combine was used to harvest soybean plots on October 28 and November 11, 2014. Plot size averaged 80 inches by 40 feet.

### Treatments

- 1) Interseeding of soybeans into headed wheat (MRI wheat )
- 2) Double Crop Soybeans (planted after wheat harvest)



## Results

Table 1. Moisture and Yield of Soybeans (Adjusted to 13.5% moisture)

Treatment	Ave. Moisture	Ave. Yield (bu/A)
MRI 15 inch	13.9	38.8
Double Crop 15 inch	15.0	27.1

F=11.12, Significant; P>F= .02, CV = 15, LSD= 8.6

## Summary

There was a significant difference in yield between soybeans interseeded into wheat and soybeans planted after wheat harvest in 2014 for this study conducted at OARDC South Charleston located in central Ohio. However, it should be noted that there was a 7.2 bushel none statistically significant wheat yield advantage to wheat not intercropped. However, using harvest cash prices, MRI wheat and soybeans were more profitable ( $7.2 \text{ bu wheat} * 5.00 = \$36.00$  vs  $11.7 \text{ bu soybeans} * 9.82 = \$114.89$ ;  $\$114.89 - \$36.00 = \$78.89$ ).

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