7.5" vs 15" vs 30" Row Spacing for Soybeans

Study ID: 0073081201802
County: Hamilton
Soil Type: Hastings silt loam 0-1% slope; Hastings silt loam 1-3% slope; Hastings silty clay loam 3-7% slopes, eroded
Planting Date: 5/8/18
Harvest Date: 10/29/18 - 10/30/18
Population: 160,000
Variety: Credenz® 2601 LL
Reps: 3
Previous Crop: Corn
Tillage: No-Till

Seed Treatment: Acceleron®
Irrigation: Pivot, Total: 2.25”
Rainfall (in):

Introduction: The objective of this study was to evaluate soybeans drilled in 7.5" row spacing versus planted in 15" and 30" row spacings. One 15” row spacing treatment was not established due to error, therefore there are only 2 replications of the 15” row spacing treatment. Yield was recorded using a yield monitor; yield data was post-processed to remove erroneous data points prior to analysis. Aerial imagery was collected through the summer to observe differences in total vegetation and canopy closure for each of the row spacings. True color imagery and normalized difference vegetative index (NDVI) is presented for July 10 (Figure 1) when treatment differences were most obvious.

Results:

	Yield† (bu/acre)	Marginal Net Return‡ ($/ac)
7.5"	62 A*	459.81 A
15"	61 A	458.72 A
30"	60 A	446.81 A
P-Value	0.527	0.527

*Values with the same letter are not significantly different at a 90% confidence level.
†Yield values are from cleaned yield monitor data. Bushels per acre corrected to 13% moisture.
‡Marginal net return based on $7.40/bu soybean.

Summary:

- There was no yield difference between the 7.5", 15", and 30" row spacing treatments.
- Imagery showed that sprayer tracks were less apparent in the 7.5" row on July 10.

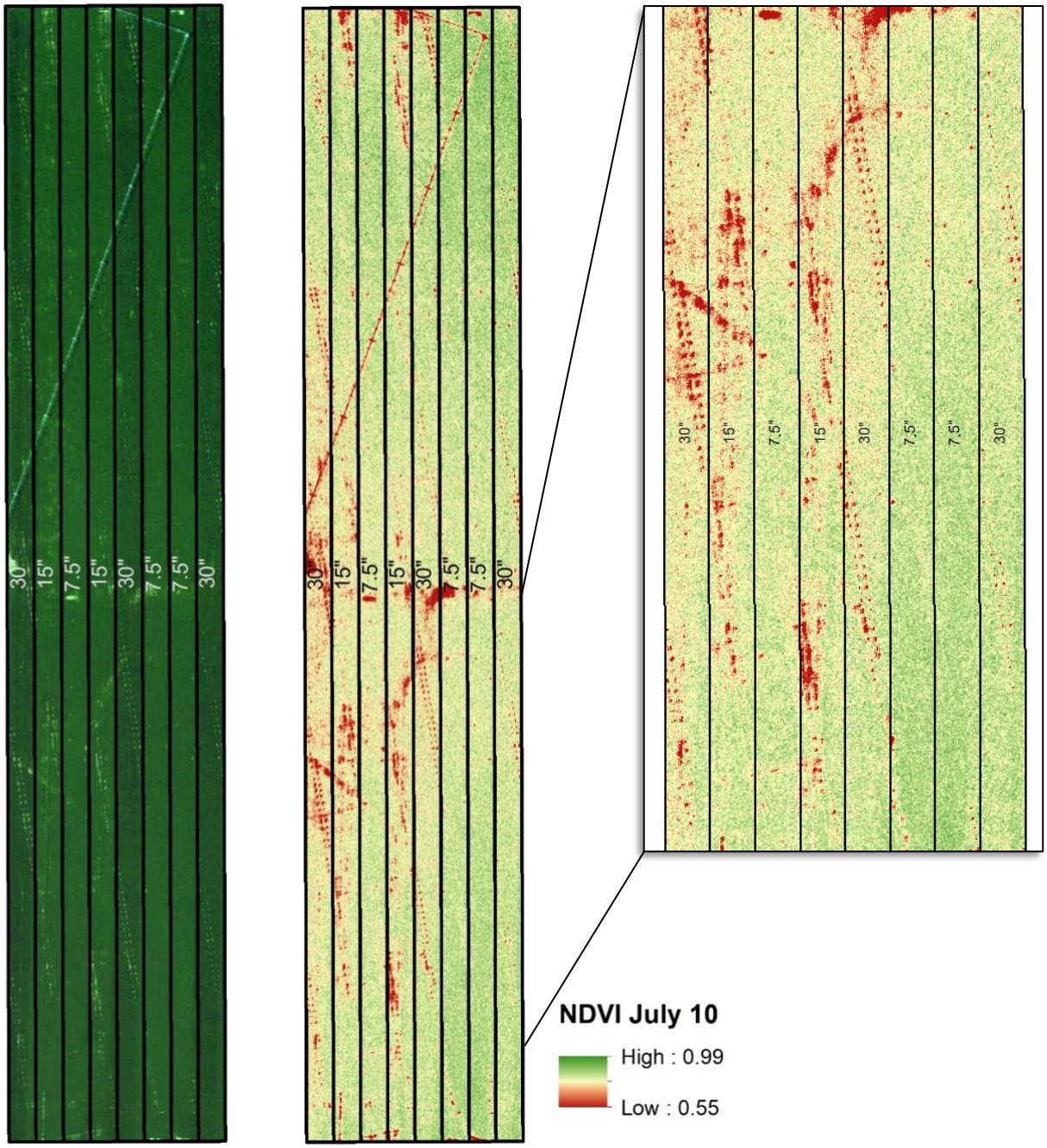

Figure 1. True color imagery (left), NDVI (middle), and NDVI zoom in (right) from July 10, 2018. Higher NDVI values are related to more plant biomass and/or darker green plants; lower NDVI values are related to lower plant biomass and/or lighter green plants.

Sponsored by: University of Nebraska Lincoln

In Partnership with: Nebraska Corn Board; Nebraska Soybean Checkoff; Nebraska Corn Growers Association; Nebraska Dry Bean Commission