

# Interseeding Cover Crops into Standing Crops

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## Interseeding of cover crops into soybean at R4 and R6

	Soybean	
Cover crop	Grain yield	
	Mg ha <sup>-1</sup>	Bu/acre
Winter camelina	3.91	59
Austrian winter pea	4.23	62
Radish	4.06	58
Cereal rye	4.09	60
Mix	3.98	59
No cover crop	3.96	60
LSD (0.05)	NS	NS

Combined across both location and both planting dates







Pea 1<sup>st</sup> planting



Pea 2<sup>nd</sup> planting



Radish 1<sup>st</sup> planting



Radish 2<sup>nd</sup> planting



Rye 1<sup>st</sup> planting

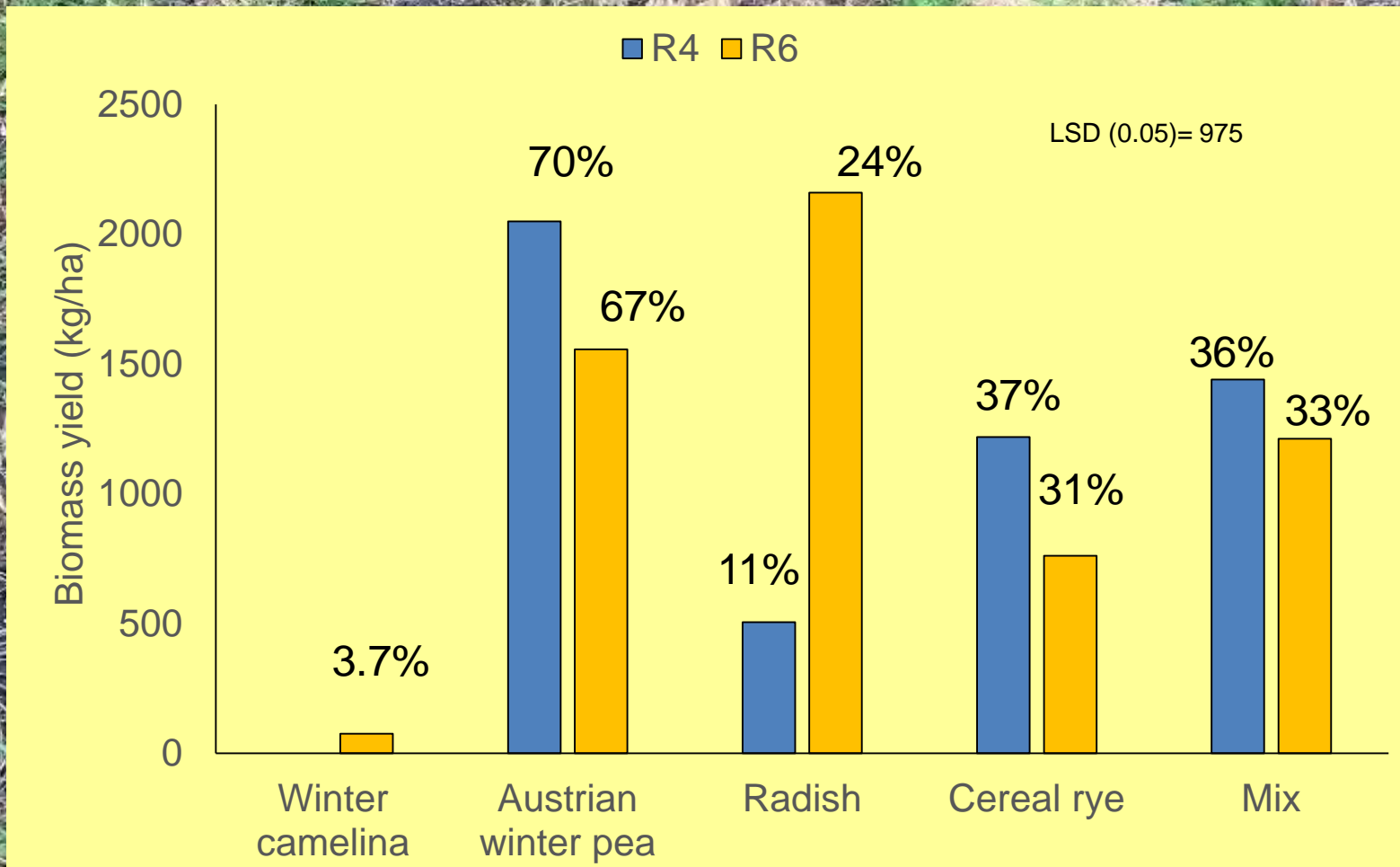


Rye 2<sup>nd</sup> planting

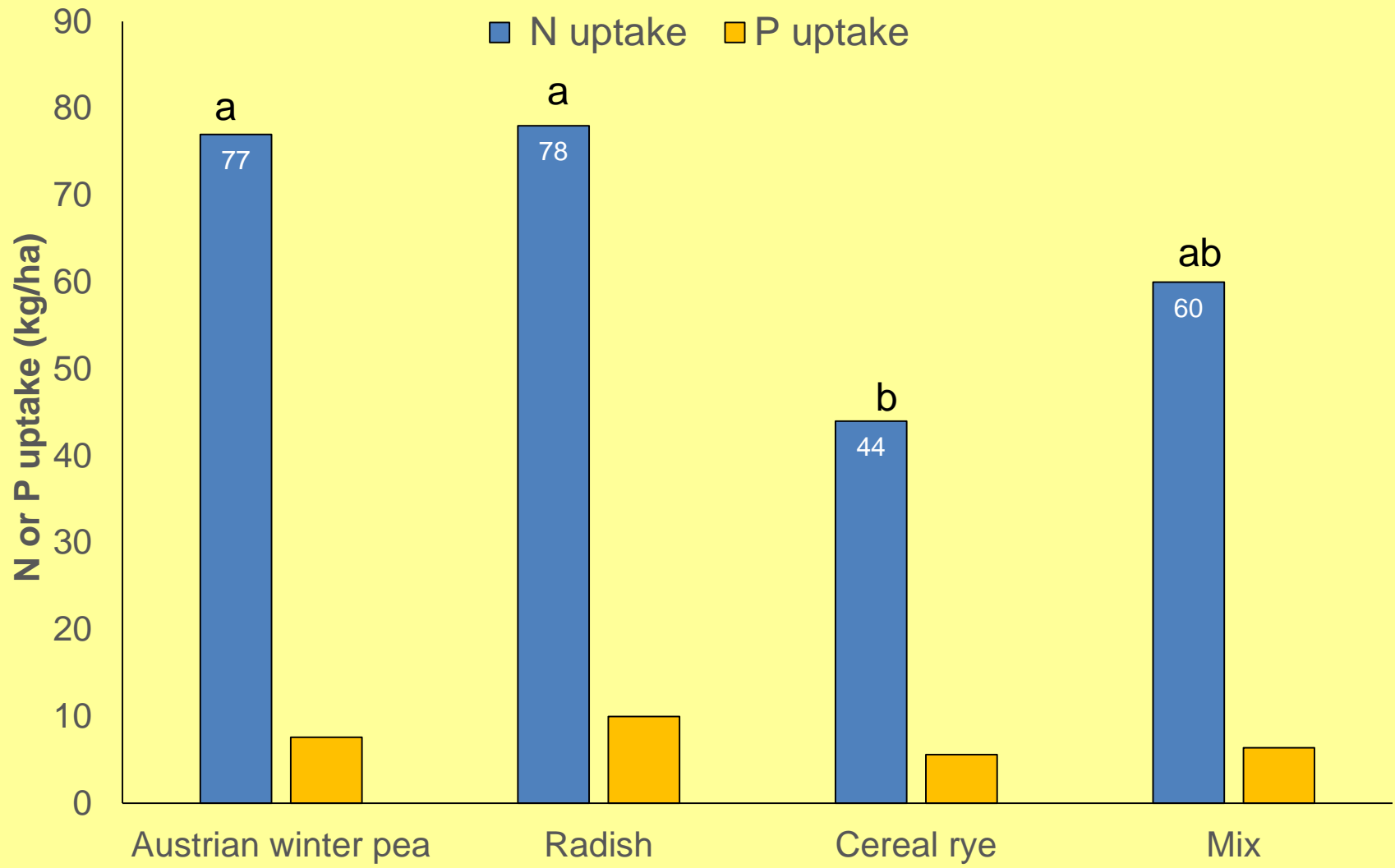
October 11, 2016



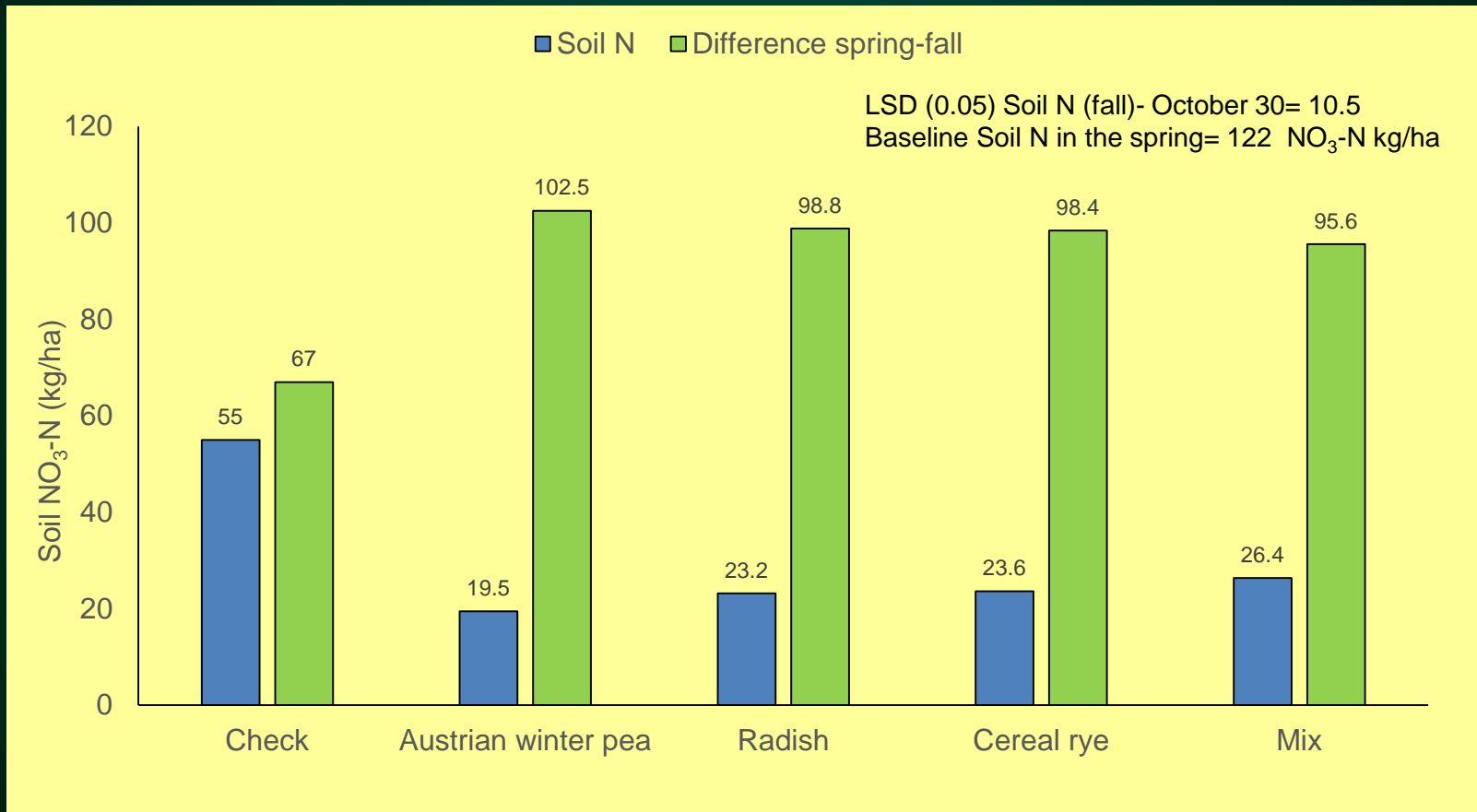
# Cover crops fall biomass and green cover in soybean



# N and P uptake of cover crops biomass



# Soil NO<sub>3</sub>-N in the fall (0-60cm depth) and difference from spring N



Cover crops decreased soil residual N significantly from the check

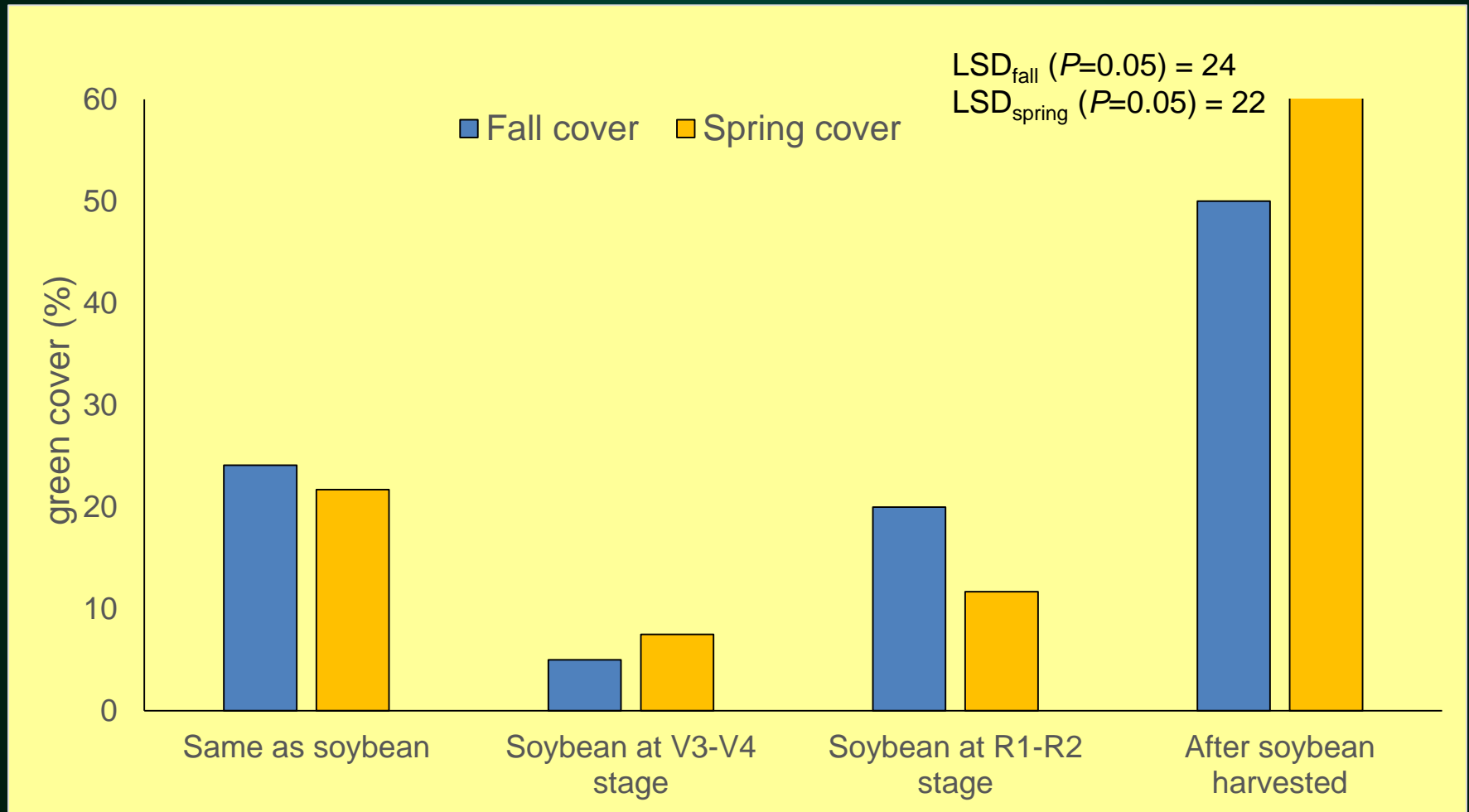


# Soybean yield- camelina interseeding

Soybean growth stage	Grain yield
	Mg ha <sup>-1</sup>
No winter camelina	4.2
Same seeding date as soybean	3.8
Soybean at V3-V4 stage	4.4
Soybean at R1-R2 stage	4.6
After soybean harvested	4.1
LSD ( $P=0.05$ )	0.2



# Camelina fall and spring cover







July 27



October 1



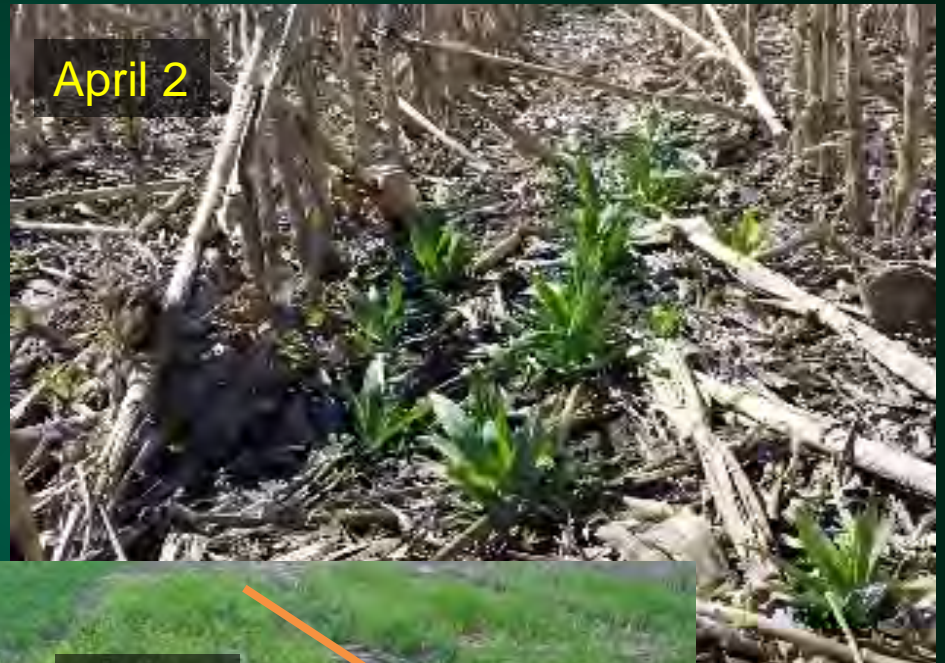
May 8



# Interseeding into standing corn



September 30



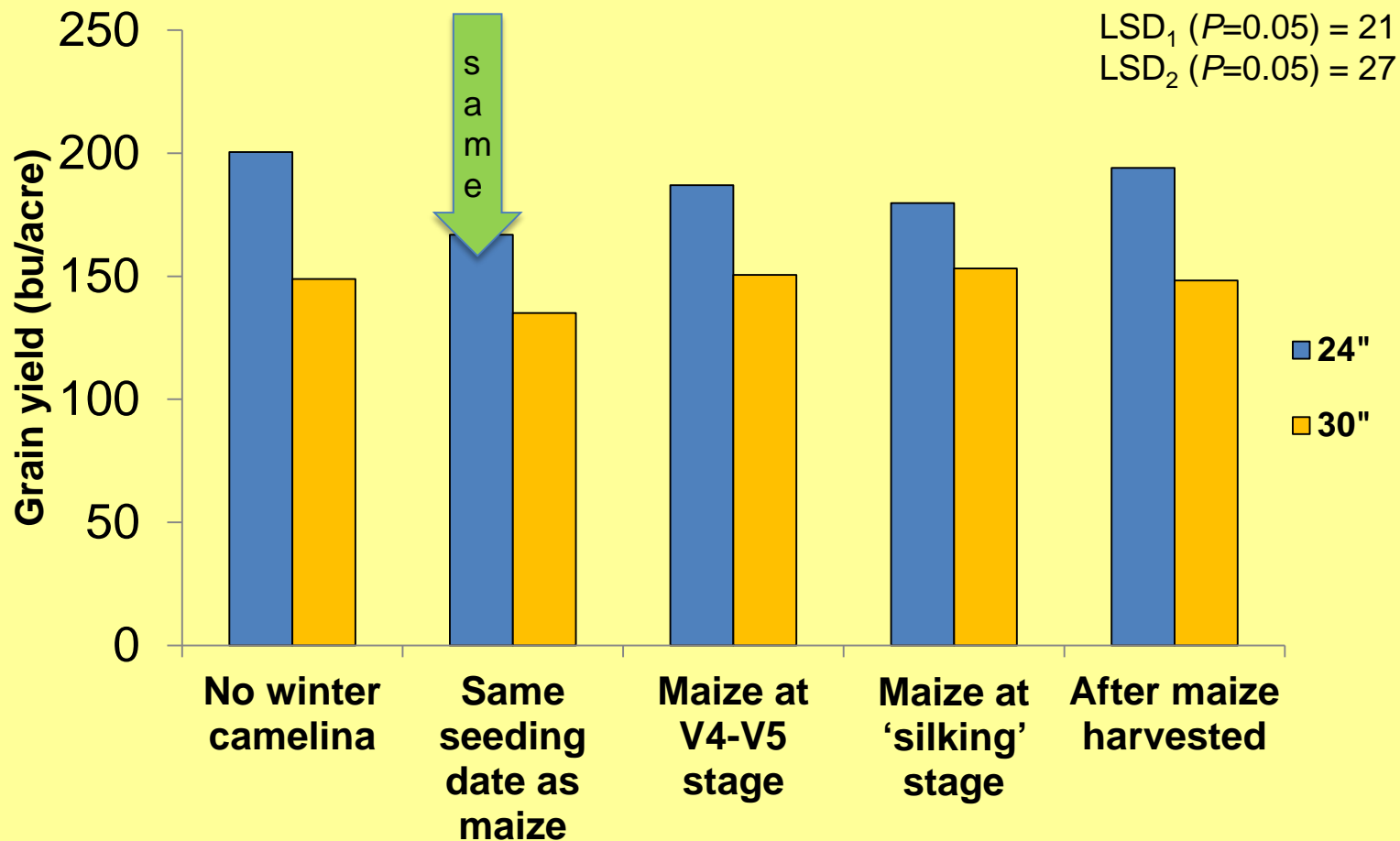
April 2



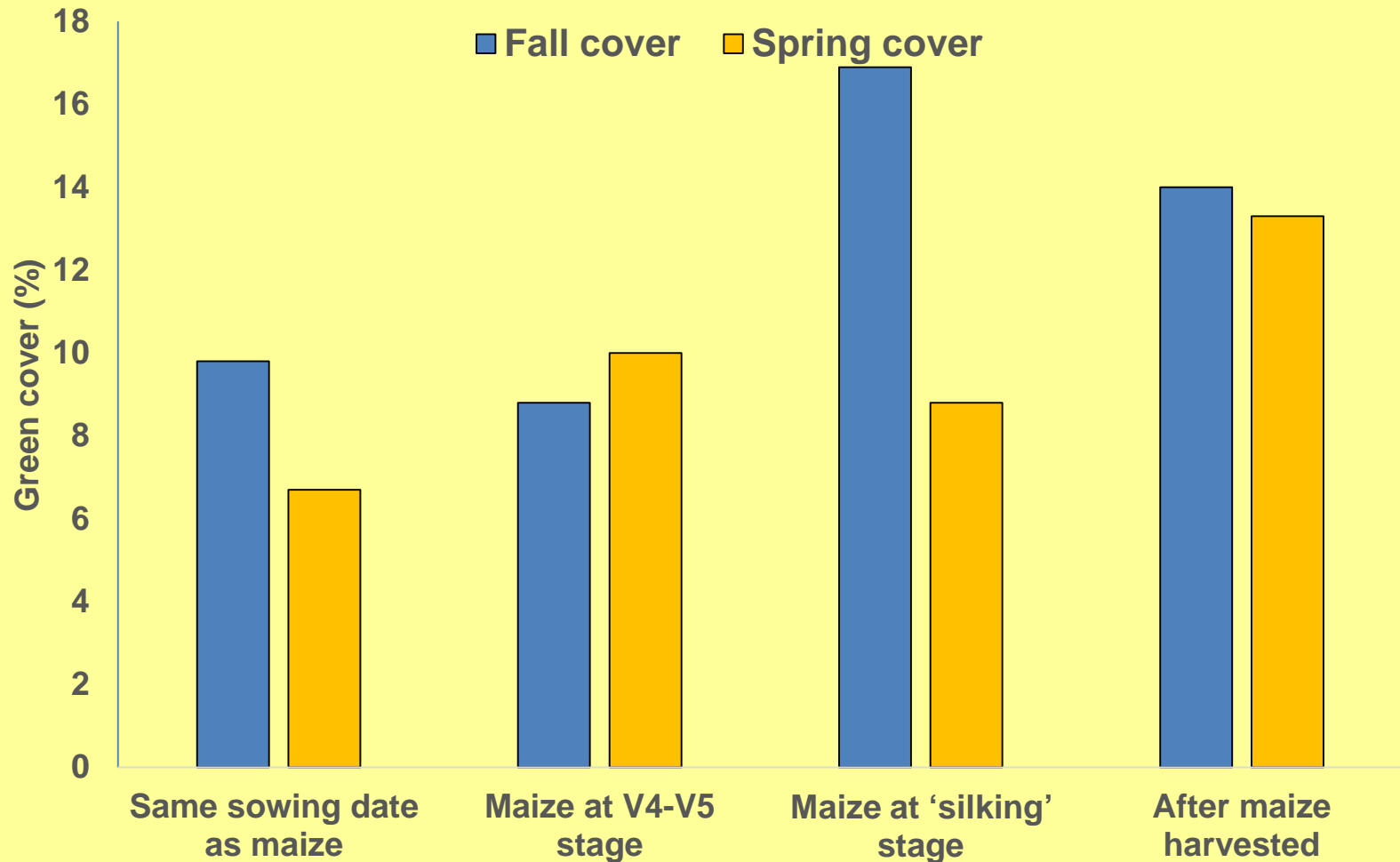
June 3



# Corn yield- camelina interseeding



# Camelina green cover in fall and spring





# Interseeding into standing corn- on farm



Photo : Abbey Wick



Photo : Karen Hertsgaard



Photo : Abbey Wick



Aerial rye + c.  
clover + radish  
@ R4 corn



Hagie rye  
+radish @R1  
corn



Rye + radish in twin  
rows @ V7 corn





# Post harvest- going into winter



Photo : Abbey Wick

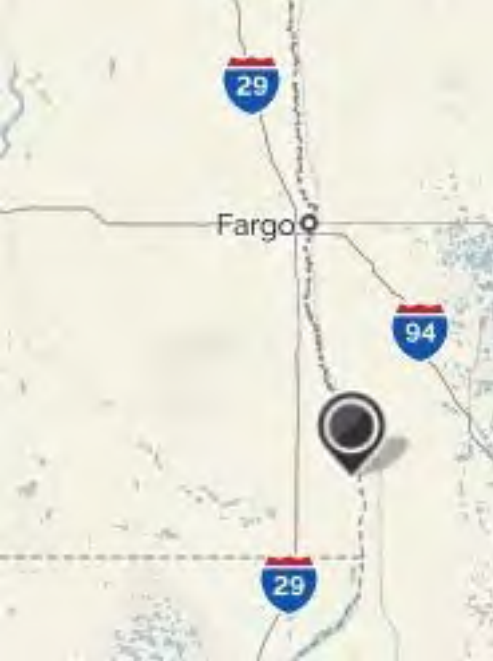


# Toussaint Farms

Wahpeton, ND







**Crops in Rotation:** Small grain, Corn, Soybean, Sunflower

**Perennial Grass:** Reed Canary



Little to no slope



Clay (Daisy's)



Loamy clay (Bulles)



# Equipment

Drag  
Supercoultter  
Planter  
Air Seeder  
Small Drill – Test Plots





# Main Goal:

*Fit a cover crop in every part of the rotation*

Living Roots



Improved Seedbed



Living Soil

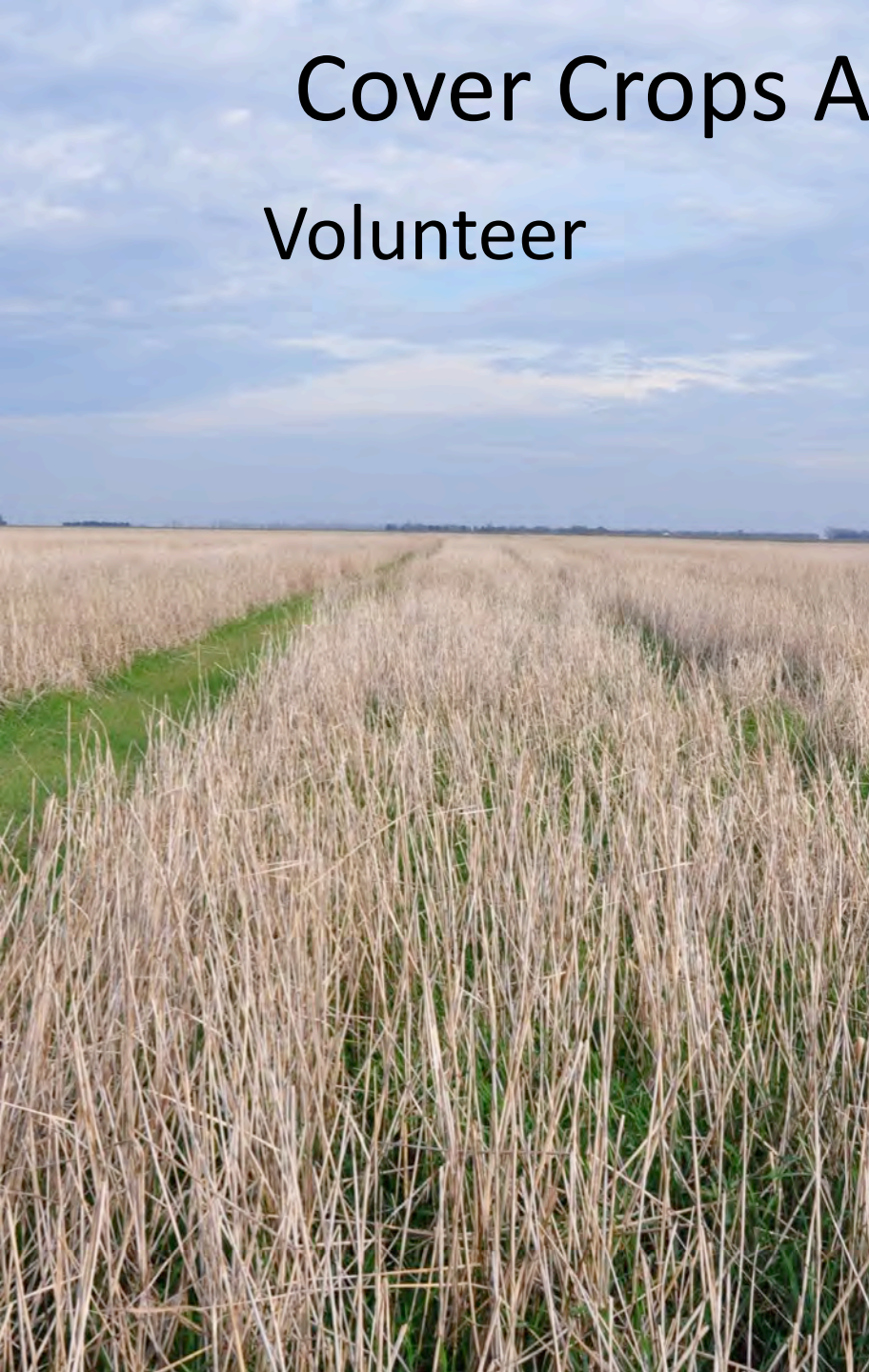


Reduce Erosion, Manage Water



# Cover Crops After Small Grains

Volunteer



Seeded





# Cover Crops in Corn

Airplane



Inter-seeding





# Cover Crops in Soybean

Planting Green



Post-Harvest



Airplane







After Wheat

Flown on into Soybean

Inter-seeded in Corn





# Cover Crops in Sunflower

Airplane



Seeded with Sunflower





# Thank you



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Photo: Nick Toussaint

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