

(Greg Endres, Tim Indergaard, Mike Ostlie, Sheldon Gerhardt, and Crystal Schaunaman)

Proseed '30-20 RR2Y' seed inoculated with rhizobium bacteria was planted in 14-inch rows on May 25. North Dakota Agricultural Weather Network (NDAWN) monthly rain (inches): May = 3.1; June = 3.3; July = 3.9; August = 1.6; and September = 1.8. Soybean seed was harvested with a plot combine on September 26.

1. Conventional check (no rye). PP Roundup PowerMax (32 fl oz/A) plus NIS+AMS (2.5% v/v) and Zidua Pro (4.5 fl oz/A) on May 25.
2. PP Roundup PowerMax plus NIS+AMS on May 2 to 3-leaf (tillering) rye.
3. PP Roundup PowerMax plus NIS+AMS on May 25 to 1- to 2-joint rye.

Rye termination method and timing had minimal influence on dates of soybean plant emergence (Table). Soybean plant stand was statistically similar among treatments but tended to be greater with the conventional check and near recommended level with early spring rye termination versus rye termination at soybean planting. Soil moisture was similar among treatments. Seed yield and quality were similar among treatments. However, yield tended to be greater with the conventional check compared with rye as a cover crop.

Trt no.	Plant ^a		Soil moisture (%) ^b			Seed				
	Emergence	Stand (21-Jun; V2 stage)				Yield	Test weight	count	Oil	Protein
			DOY	pl/A	25-May					
1	154	162,200	16.5	19.4	16.4	60.0	54.8	2785	19.0	35.9
2	154	147,300	16.4	17.0	15.6	50.9	55.0	2815	19.0	35.8
3	155	120,500	13.9	18.8	16.7	51.2	55.0	2735	18.8	35.8
Mean	154	143,300	15.5	18.4	16.2	54.0	54.9	2780	18.9	35.8
CV (%)	0.0	18.3	12.3	13.2	8.7	13.0	0.8	9.4	1.0	1.0
LSD (0.10)	1	NS				NS				

^bExtech digital soil moisture meter (model MO750) at 4-inch soil depth.