

Soybean Response to Crop Rotation, Wishek, 2005

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A field study was initiated in 2003 at the Tri-county trial site near Wishek by the NDSU Carrington Research Extension Center to examine the performance of continuously-grown soybean compared to soybean grown on the previous year's wheat ground. In 2005, inoculated 'RG200RR' soybean was direct-planted into standing stubble in a dryland, loam soil at 200,000 pure live seeds/acre in 7-inch rows on May 26 with previous crop history of two years of soybean or alternating wheat and soybean (wheat in 2004). Experimental design was a randomized complete block with four replications. The trial was harvested with a plot combine on September 27.

Crop rotation did not impact seed yield or quality (Table). In addition, tests of harvested seed for germination and disease (fungi and bacteria) indicated no difference between rotations.

Table.

Treatment	Plant height inch	Pod height inch	Seed yield bu/A	Test weight lb/bu	250 Kernel weight gram	Oil %	Protein %	Seed germ %	Seed fungi 0-5	Seed bacteria 0-5
soybean	71.5	5.5	40.8	58.6	35.02	19.7	37.8	95	2.1	1.3
soy/wht	60.5	5.0	40.9	58.6	36.34	19.8	37.9	96	2.3	1.3
LSD (0.05)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CV	10.3	13.5	28.1	0.7	2.1	0.7	0.4	4.7	15.5	40.0
mean	66.0	5.3	40.8	58.6	35.68	19.7	37.9	96	2.2	1.3