

Table 12: Canola yields (Mg/ha) from Forage and Grain rotations that have nested treatments: injected (IM) vs broadcast manure (BM) & reduced (RH) vs "standard" herbicide (SH)

Crop	Year	Grain (G)			Forage (F)			G vs. F
		RH (6 yr)	SH (6 yr)	SE	IM (6 yr)	BM (6 yr)	SE	Constrast p value
		Mg ha ⁻¹			Mg ha ⁻¹			
Canola	2010	1.42	1.01	0.30	1.14	1.12	0.66	0.661
	2011	2.06	1.99	0.25	1.53	1.68	0.23	0.031

Canola		Tests of Fixed Effects			
Source of Variation	Year	df	Den DF	P	
Rotation	2011	1	3	0.031	
MainMgt(Rotation)	2011	2	6	0.091	
SubMgt(Rotation)	2011	2	6	0.4645	
MainMgt*SubMgt(Rotation)	2011	2	6	0.115	

Table 13: Grain crop yields (Mg/ha) from Grain and Corn-Soy rotations that compare injected manure (IM) versus broadcast manure (BM) for corn grain crop entries.

Crop	Year	Grain (G)		SE	Corn-Soy (C-S)		SE	p value	G vs. C-S
		RH (6 yr)	SH (6 yr)		IM (2 yr)	BM (2 yr)			
		Mg ha ⁻¹			Mg ha ⁻¹				
Corn Grain	2010	10.94	10.61	0.29	11.43	11.56	0.32	0.740	0.1133
	2011	8.95	8.39	0.25	6.95	6.75	0.32	0.037	0.0104
Soybean Grain ^{II}	2010	4.33	4.22	0.26	3.92	3.88	0.32	0.924	0.399
	2011	2.78	3.34	0.24	2.89	2.89	0.47	0.954	0.7429

2011 Tests of Fixed Effects				
Source of Variation	Year	df	Den DF	P
Rotation	2011	1	3	0.08
Crop	2011	1	6	<0.001
Rotation*Crop	2011	1	6	0.035
MainMgt(Rotati	2011	2	14	0.094

^{II} No manure was applied to soybeans.

a, b indicate rotation differences at p <0.05