

**Table S1.** Costs of variable inputs, including seed, hopper seed treatments, (inoculant for conventional soybean and SaBrex for organic crops), starter fertilizer, N fertilizer, herbicide, and fungicide in conventional and/or organic soybean in 2017 and 2018, maize in 2017, and wheat in 2018.

Input	Conventional	Organic
\$		
<b>Soybean</b>		
Seed/140,000	84.50 (including seed treatment)	52.50
Seed Treatment	52.25/g (Cell-Tech inoculant)	200/g (SaBrex)
Herbicide	295/L (Glyphosate)	-
Fungicide	2170/L (Fluxapyroxad + Pyraclostrobin)	-
<b>Maize</b>		
Seed/80,000	335 (including seed treatment)	245
Seed Treatment		200/g (SaBrex)
Starter Fertilizer	460/tonne (Mg)	325/tonne (Mg)
Side-dress N	1.10/kg N	12.76/kg N
Herbicide	288/L (Glyphosate)	
<b>Wheat</b>		
Seed/bag	31 (including seed treatment)	24
Seed Treatment		200/g (Sabrex)
Starter Fertilizer	480/tonne (Mg)	330/tonne (Mg)
Herbicide	276/mL (thifensulfuron + tribenuron)	
Top-dress N	1.09/kg N	13.05/kg N
Fungicide	1325/L (Prothioconazole + Tebuconazole)	

**Table S2.** Income, selected production costs, and returns above selected production costs for conventional maize with recommended management (M1) and high input management (M2) and organic maize with recommended management (M3) and high input management (M4) in a soybean-wheat/red clover-maize-soybean rotation, and conventional maize with recommended management (M5) and high input management (M6) and organic maize with recommended management (M7) and high input management (M8) in a maize-soybean-maize-soybean rotation at a Cornell University Research Farm in central New York, USA in 2017.

Production Value, Income	Maize Treatments			
	M1	M2	M3	M4
	\$/ha			
Grain	1538	1670	3597	4123
<b>Selected Production Costs <sup>1</sup></b>				
<b>Variable Inputs</b>				
Fertilizers	188.34	237.74	115.74	483.16
Seeds	306.16	367.19	223.91	268.54
Sprays & Other Crop Inputs	115.97	137.28	106.21	155.12
Labor	1.21	1.21	28.97	28.97
Repairs & Maintenance				
Tractor	0.25	0.25	7.04	7.04
Equipment	1.16	1.16	8.74	8.74
Fuels & Lubricants	0.67	0.67	17.73	17.73
Interest on Operating Capital	15.34	18.65	12.72	24.23
<b>Total Selected Variable Input Costs</b>	629.08	764.12	521.05	993.51

<b>Fixed Inputs</b>				
Tractors	1.73	1.73	41.69	41.69
Equipment	5.53	5.53	37.37	37.37
<b>Total Selected Fixed Input Costs</b>	7.26	7.26	79.04	79.04
<b>Total Selected Costs</b>				
	636.37	771.38	600.11	1072.57
<b>Partial Returns</b>				
	902	899	2983	3033
<b>Production Value, Income</b>				
	<b>M5</b>	<b>M6</b>	<b>M7</b>	<b>M8</b>
	\$/ha			
Grain	1600	1902	3277	3821
<b>Selected Production Costs <sup>1</sup></b>				
<b>Variable Inputs</b>				
Fertilizers	237.74	299.49	850.57	1144.50
Seeds	306.16	367.19	223.91	268.54
Sprays & Other Crop Inputs	119.08	136.37	123.75	136.99
Labor	1.21	1.21	28.97	28.97
Repairs & Maintenance	0.00	0.00	0.00	0.00
Tractor	0.25	0.25	7.04	7.04
Equipment	1.16	1.16	8.74	8.74
Fuels & Lubricants	0.67	0.67	17.73	17.73
Interest on Operating Capital	16.65	20.16	31.52	40.31
<b>Total Selected Variable Input Costs</b>	682.91	826.49	1292.23	1652.80
<b>Fixed Inputs</b>				
Tractors	1.73	1.73	41.69	41.69
Equipment	5.53	5.53	37.37	37.37
<b>Total Selected Fixed Input Costs</b>	7.26	7.26	79.04	79.04
<b>Total Selected Costs</b>				
	690.19	833.75	1371.27	1731.87
<b>Returns above Selected Costs</b>				
	910	1068	1906	2089

<sup>1</sup>This reporting of costs focused on those costs that differed among the eight maize treatments. Seed costs differed among treatments due to price per unit differences between non-GM and GM hybrids, and seeding rate differences for recommended versus high input management. Spray and other crop inputs that differed included pest and disease management materials, and hauling as a function of yield. Labor costs reported included only those attributed to spray applications for treatments M1, M2, M5, and M6, and those attributed to weeding tasks for M3, M4, M7, and M8. Labor costs reported do not include labor associated with tillage, planting and harvesting tasks considered constant, not differing among treatments. Similar explanations underlie estimates for the remaining cost items that differ.

**Table S3.** Income, selected production costs, and returns above selected production costs for conventional soybean with recommended management (S1) and high input management (S2); and organic soybean with recommended management (S3) and high input management (S4) at a Cornell University Research Farm in central New York, USA in 2017.

Production Value, Income	Soybean Treatments			
	S1	S2	S3	S4
	\$/ha			
Seed	1353	1397	2252	2314
<b>Selected Production Costs<sup>1</sup></b>				
<b>Variable Inputs</b>				
Fertilizers				
Seeds	222.30	296.40	137.60	183.50
Sprays & Other Crop Inputs	33.57	80.65	10.20	35.74
Labor	1.16	2.35	32.16	32.16
Repairs & Maintenance				
Tractor	0.25	0.47	8.42	8.42
Equipment	1.19	2.35	10.47	10.47
Fuels & Lubricants	0.67	1.36	21.02	21.02
Interest on Operating Capital	6.47	9.58	5.51	7.29
<b>Total Selected Variable Input Costs</b>	265.60	393.15	225.39	298.57
<b>Fixed Inputs</b>				
Tractors	1.73	3.48	49.77	49.77
Equipment	5.61	11.21	44.48	44.48
<b>Total Selected Fixed Input Costs</b>	7.34	14.70	94.26	94.26
<b>Total Selected Costs</b>	272.94	407.85	319.64	392.83
<b>Returns above Selected Costs</b>	1080	989	1932	1921

<sup>1</sup> See Table S2 for an explanation of selected production costs.

**Table S4.** Income, selected production costs, and returns above selected production costs for conventional wheat with recommended management (W1) and high input management (W2); and organic soybean with recommended management (W3) and high input management (W4) at a Cornell University Research Farm in central New York, USA in 2018.

Production Value, Income	Wheat Treatments			
	W1	W2	W3	W4
	\$/ha			
Seed	935	927	1438	1547
<b>Selected Production Costs<sup>1</sup></b>				
<b>Variable Inputs</b>				
Fertilizers	192.66	229.71	616.86	803.79
Seeds	150.62	213.38	116.61	165.22
Sprays & Other Crop Inputs	46.24	137.06	46.24	92.08
Labor	0.00	2.25	0.00	0.00
Repairs & Maintenance				
Tractor	0.00	0.44	0.00	0.00
Equipment	0.00	2.32	0.00	0.00
Fuels & Lubricants	0.00	1.85	0.00	0.00
Interest on Operating Capital	9.73	14.67	19.49	26.53
<b>Total Selected Variable Input Costs</b>	399.25	601.72	799.19	1087.62
<b>Fixed Inputs</b>				
Tractors	0.00	3.29	0.00	0.00
Equipment	0.00	11.02	0.00	0.00
<b>Total Selected Fixed Input Costs</b>	0.00	14.30	0.00	0.00
<b>Total Selected Costs</b>	399.25	616.02	799.19	1087.62
<b>Returns above Selected Costs</b>	536	311	639	459

<sup>1</sup> See Table S2 for an explanation of selected production costs.