Wheat Plant Growth Regulator Trial

Objective: The purpose of this project is to quantify the agronomic and economic impacts of using a plant growth regulator on plant height, lodging, yield and quality of wheat and barley.

Summary: 2 site-years showed a significant difference in yield and a significant reduction in plant stand using a plant growth regulator versus untreated. Between 2018 and 2020 6 site-years out of 33 have shown a significant difference.

Trial ID	Rural Municipality	Variety	Height			Yield			CV	P-Value	Statistically Significant @ 95%	Protein		
			Manipulator™ 620	Omex	Untreated	Manipulator™ 620	Omex	Untreated				Manipulator™ 620	Omex	Untreated
			cm			bu/ac			%			%		
2020-WPGR05	Woodlands	Marquette	82	85	86	61.8	66.5	63.3	4.4	0.0361	Yes	12.6	12.0	12.8

Trial ID	Rural Municipality	Variety	Height		Height Difference	Yield		Yield Difference	CV	P-Value	Statistically Significant @ 95%	Protein	
			Treated	Untreated		Treated	Untreated					Treated	Untreated
			cm		cm	bu/ac		bu/ac	%			%	
2020-WPGR01	De Salaberry	Faller	80	81	-1	79.2	74.3	4.9	7.0	0.0790	No	13.0	12.5
2020-WPGR02	Woodlands	AAC Starbuck	73	72	1	71.5	71.3	0.2	1.4	0.8800	No	15.1	14.9
2020-WPGR03	Tache	AAC Brandon	71	76	-5	74.1	75.6	-1.5	12.0	0.6970	No	14.1	13.8
2020-WPGR04	Alexander	Faller	88	89	-1	92.0	96.1	-4.1	5.7	0.4450	No	13.9	
2020-WPGR06	Morris	AAC Brandon	77	82	-5	77.0	76.9	0.1	1.1	0.0915	No	15.3	14.6
2020-WPGR07	Montcalm	AAC Brandon	68	76	-8	75.5	72.6	2.9	2.5	0.0006	Yes	14.4	14.9
2020-WPGR08	Louise	AAC Redberry	82	85	-3	57.4	56.6	0.8	3.4	0.0620	No	16.3	15.6
2020-WPGR09	Morris	Faller	76	83	-7	102.1	98.8	3.3	2.9	0.0621	No	12.2	12.6
2020-BPGR01	Westlake-Gladstone	CDC Austenson	59	62	-3	102.4	107.7	-5.3	3.6	0.0611	No	12.9	12.9

Indicates Statistical Difference at 95% confidence interval

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Wheat Plant Growth Regulator Trial cont'd

Trial ID	Rural Municipality	Variety	Height		Height Difference	Yield		Yield Difference	CV	P-Value	Statistically Significant @ 95%	Protein	
			Treated	Untreated		Treated	Untreated					Treated	Untreated
			cm		cm	bu/ac		bu/ac	%			%	
2018-WPGR01	Morris	AAC Brandon	57	66	-9	64.6	65.0	-0.4	1.8	0.6629	No	16.4	16.4
2018-WPGR02	Rhineland	AAC Brandon	77	86	-10	100.8	97.5	3.4	2.5	0.0455	Yes	14.1	14.5
2018-WPGR03	Grey	AAC Brandon	63	73	-10	75.6	74.9	0.7	1.8	0.3317	No	13.1	13.1
2018-WPGR04	Pembina	Faller	81	90	-10	103.7	99.9	3.7	6.8	0.4920	No	13.1	13.4
2018-WPGR05	Hanover	SY Rowyn	83	87	-4	96.9	94.9	2.0	1.7	0.0855	No	11.3	11.8
2018-WPGR06	Oakland-Wawaneesa	AC Cardale	78	90	-11	78.4	78.4	0.0	4.7	0.9905	No	13.6	13.7
2018-WPGR07	Woodlands	AAC Brandon	79	87	-8	69.9	69.3	0.6	2.4	0.6340	No	13.3	14.8
2018-WPGR08	Killarney-Turtle Mountain	AAC Brandon	86	90	-4	95.9	94.3	1.6	1.4	0.1823	No	14.2	14.1
2018-WPGR09	St. Andrews	AAC Brandon	84	91	-7	86.5	79.5	7.0	5.8	0.0323	Yes	12.7	12.3
2018-WPGR10	Macdonald		63	71	-8	94.2	85.9	8.3	10.2	0.2249	No	15.4	15.5
2019-WPGR01	St. Clements	AAC Brandon	31	34	-3	95.6	92.9	2.7	5.8	0.5127	No	13.5	13.8
2019-WPGR02	Roland	AAC Brandon	27	36	-9	72.7	70.0	2.7	2.5	0.0253	Yes	15.2	15.5
2019-WPGR03	Roland	AAC Brandon	27	29	-2	52.3	48.4	3.9	7.3	0.2768	No	11.0	11.0
2019-WPGR04	Hanover	AAC Brandon	27	30	-3	66.5	65.3	1.2	3.1	0.2420	No	14.6	14.7
2019-WPGR05	St. Pierre	AAC Brandon	29	32	-3	59.6	59.3	0.3	3.9	0.8271	No	14.8	14.8
2019-WPGR06	Morris	AAC Cameron VB	31	31	0	47.6	46.2	1.4	2.8	0.3342	No	15.0	14.9
2019-WPGR07	St. Andrews	AAC Brandon	27	29	-2	57.3	59.2	-1.9	3.7	0.0548	No	13.7	13.4
2019-WPGR08	Oakland-Wawanesa	AC Cardale	33	36	-3	58.1	54.6	3.5	4.0	0.0012	Yes	15.5	15.7
2019-WPGR09	Woodlands	Faller	31	33	-2	81.1	78.0	3.1	5.4	0.2331	No	12.4	11.8
2019-WPGR10	Woodlands	AAC Brandon	29	32	-3	77.9	73.3	4.6	4.1	0.0490	Yes	14.4	14.5
2019-WPGR11	Macdonald	AAC Brandon	27	28	-1	53.4	53.0	0.4	3.5	0.8025	No	15.1	15.1
2019-WPGR12	Tache	SY Rowyn	24	26	-2	55.6	54.6	1.0	1.9	0.3332	No	13.3	13.4
2019-WPGR13	Lorne	AC Cardale	32	34	-2	72.5	69.8	2.7	7.3	0.2768	No	16.7	16.8

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