

# **2021 Report**

## **Ontario Dry Bean Variety Trials**

**prepared by the Ontario Pulse Crop Committee**

**Data collected 2016 – 2020**

**[www.gobeans.ca](http://www.gobeans.ca)**

*Current as of  
November 19, 2020*

This Infosheet contains the most recent variety information for registered dry edible bean varieties planted and harvested in 2020. Experimental and non-registered varieties may also be included in the trials, but data is not presented. Contact one of the individuals listed below, for information on other varieties or to comment on the trials. The information is prepared annually by the Ontario Pulse Crop Committee (OPCC).

#### **REFERENCES:**

##### **For more information contact:**

Dr. K. Peter Pauls  
Professor, Genomics and Dry Bean Breeding  
Department of Plant Agriculture  
University of Guelph  
Crop Science Bldg., Room 325  
Guelph, ON N1G 2W1  
E-mail: ppauls@uoguelph.ca  
Phone: 519-824-4120 x54136

Tom Smith  
Technician, Secretary of the OPCC  
Co-ordinator of the White Bean Variety Performance Trial  
Department of Plant Agriculture  
University of Guelph  
Crop Science Bldg., Room 112  
Guelph, ON N1G 2W1  
E-mail: thsmith@uoguelph.ca  
Phone: 519-824-4120 x58339

Dr. Jamie Larsen  
Research Scientist, Dry Bean Breeding  
Co-ordinator of the Coloured Bean Variety Performance Trial  
Agriculture and Agri-Food Canada  
Harrow, ON NOR 1G0  
E-mail: jamie.larsen@canada.ca  
Phone: 519-738-1216

Chris Gillard  
Associate Professor, Dry Bean Agronomy & Pest Management  
Chair of the OPCC Variety Subcommittee  
Department of Plant Agriculture  
University of Guelph, Ridgetown Campus  
Ridgetown, ON NOP 2C0  
E-mail: cgillard@uoguelph.ca  
Phone: 519-674-1500 x63632

Meghan Moran  
Canola & Edible Bean Specialist  
Ontario Ministry of Agriculture, Food and Rural Affairs  
Email: meghan.moran@ontario.ca  
Phone: 519-546-1725

## TABLE OF CONTENTS:

- Table 1a – 2016–2020 White Bean Variety Performance Trial, Long Season Area
- Table 1b – 2016–2020 White Bean Variety Performance Trial, Short Season Area
- Graph 1c – 2018-2020 White Bean Variety Performance Trial, Short Season Area, 3 Year Average
- Graph 1d – 2018-2020 White Bean Variety Performance Trial, Long Season Area, 3 Year Average
- Table 2 – 2018–2020 White Bean Characteristics and Distributors
- Table 3 – 2018–2020 Coloured Bean Variety Performance and Characteristics
- Table 4 – 2016–2020 Average Coloured Bean Performance
- Table 4a – St. Thomas Station Report: 2016–2020 Coloured Bean Performance Trial
- Table 4b – Exeter Station Report: 2018–2020 Coloured Bean Performance Trial
- Table 4c – Elora Station Report: 2016–2020 Coloured Bean Performance Trial
- Table 4d – Woodstock Station Report: 2016-2020 Coloured Bean Performance Trial
- Graph 4e – 2018-2020 Cranberry Bean Variety Performance Trial, All Areas, 3 Year Average
- Graph 4f – 2018-2020 Kidney Bean Variety Performance Trial, All Areas, 3 Year Average
- Table 5 – 2016–2020 Coloured Minor Bean Variety Performance Trial
- Graph 5a – 2018-2020 Coloured Minor Bean Variety Performance Trial, All Areas, 3 Year Average
- Table 6 – 2016–2020 Coloured Bean Minor Bean Characteristics and Distributors
- Table 7 – Addresses of Distributors for Edible Bean Varieties

**Table 1a - 2016-2020 White Bean Variety Performance Trial, Long Season Area**

Variety	Days to Maturity <sup>2</sup>	Yield (lbs/ac) <sup>1</sup>													
		Long Season All Locations				St Thomas					Woodstock				
		5 Year	4 Year	3 Year	2 Year	5 Year	4 Year	3 Year	2 Year	2020	5 Year	4 Year	3 Year	2 Year	2020
Indi	90	--	--	3704	3524	--	--	4221	4426	4770	--	--	3188	2622	1790
Bolt	90	2842	3021	3171	2984	3105	3180	3270	3440	3685	2580	2862	3072	2528	2149
AAC Shock	90	2901	3058	3215	3283	3161	3195	3255	3589	3784	2641	2921	3176	2977	2396
HMS Medalist	91	--	--	--	3566	--	--	--	4291	4443	--	--	--	2840	2256
OAC Thunder	91	2707	2944	3038	3132	3187	3389	3446	3971	3968	2228	2499	2629	2292	1949
SV1893GH	92	--	--	--	--	--	--	--	--	4280	--	--	--	--	2000
Lightning	92	2737	2897	3050	2960	2967	3041	3102	3491	3424	2507	2753	2999	2430	2249
Armada	92	--	--	3844	3708	--	--	4221	4362	4580	--	--	3467	3054	2414
Blizzard	93	--	--	3762	3673	--	--	4269	4478	4648	--	--	3255	2867	2392
OAC Plasma	94	3213	3416	3538	3541	3456	3553	3627	4057	4341	2971	3278	3449	3025	2510
Mist	94	3093	3293	3546	3466	3582	3637	3921	4138	4438	2604	2949	3172	2795	2157
Lighthouse	95	3201	3407	3558	3426	3783	3909	3981	4235	4464	2619	2905	3136	2616	2091
AAC Argosy	95	3264	3474	3581	3522	3736	3875	3909	4121	4141	2792	3072	3253	2923	2418
Nautica	95	3171	3346	3370	3238	3683	3799	3740	3962	3828	2659	2893	3000	2515	1716
T9905	95	3391	3601	3821	3545	3912	4040	4326	4346	4547	2870	3162	3316	2744	2256
Apex	95	3206	3419	3495	3518	3603	3699	3682	4166	4095	2808	3140	3309	2871	2452
Rogue	97	3304	3519	3610	3490	3574	3667	3671	3890	3952	3035	3371	3549	3091	2500
Rexeter	98	3062	3234	3374	3247	3699	3787	3912	4258	4380	2425	2681	2837	2235	1880
Average Yield (lbs/ac) <sup>1</sup>		3084	3279	3480	3401	3496	3598	3784	4072	4209	2672	2960	3175	2731	2199
LSD (0.05) <sup>3</sup>		153	173	203	213	254	288	330	323	470	171	194	234	278	348

<sup>1</sup> To convert lbs/acre to t/ha divide by 893.

<sup>2</sup> Maturity is 3 year average. Maturity rating is affected by planting date and area where variety is being grown. Varieties are rated as mature when 95% of the pods are ripe. Normally, 3-10 additional drying days are needed before the crop is dry enough for combining.

<sup>3</sup> LSD (0.05) - the LSD is a measure of variability within the trial. There is a ninety five percent probability that yields that differ by an amount greater than the LSD are different.

Yields that differ by an amount less or equal to the LSD should be considered the same.

Long Season Testing Locations					
St Thomas	2020	2019	2018	2017	2016
Woodstock	2020	2019	2018	2017	2016

**Table 1b - 2016-2020 White Bean Variety Performance Trial, Short Season Area**

Variety	Days to Maturity <sup>2</sup>	Yield (lbs/ac) <sup>1</sup>															
		Short Season All Locations				Blyth		Exeter			Elora					Winchester	
		5 Year	4 Year	3 Year	2 Year	2 Year	2020	3 Year	2 Year	2020	5 Year	4 Year	3 Year	2 Year	2020	2 Year	2020
Bolt	96	2744	2825	2806	2757	3097	3188	2836	2665	2870	2462	2507	2354	2116	2203	3150	3340
Indi	97	--	--	3154	3108	3501	3756	3360	3151	3142	--	--	2495	2292	2229	3487	3656
AAC Shock	98	2978	3074	3046	3010	3478	3413	3131	2962	3123	2682	2754	2590	2431	2573	3169	3021
HMS Medalist	99	--	--	--	3229	3403	3814	--	3099	3136	--	--	--	2741	2618	3674	3751
OAC Thunder	99	2933	3067	3096	3068	3226	3365	3115	3015	3379	2569	2717	2603	2356	2383	3675	3442
OAC Plasma	100	3002	3103	3048	3031	3096	3215	2976	2922	3054	2785	2907	2781	2597	2476	3510	3368
Lightning	100	2730	2802	2804	2749	3009	3075	2955	2860	2671	2474	2512	2386	2124	2108	3003	3008
Blizzard	100	--	--	3158	3155	3190	3342	3309	3247	3294	--	--	2683	2569	2534	3613	3660
Armada	100	--	--	3327	3265	3574	3965	3399	3162	3081	--	--	2904	2717	2580	3605	3531
Lighthouse	101	3043	3175	3142	3076	3305	3496	3206	3002	3063	2742	2948	2780	2573	2673	3425	3496
Mist	101	3043	3192	3140	3062	3132	3554	3215	2992	2987	2751	2965	2796	2571	2450	3552	3430
T9905	101	2985	3046	3128	3133	3108	3268	3211	3171	3284	2754	2770	2698	2586	2480	3668	3882
AAC Argosy	103	3079	3205	3148	3081	3037	2959	3334	3196	3409	2812	2967	2733	2488	2341	3602	3636
Apex	103	3053	3144	3113	3025	3088	2923	3369	3238	3454	2807	2812	2684	2375	2391	3397	3232
Rogue	103	3131	3191	3152	3106	3146	3202	3373	3359	3478	2929	2922	2832	2610	2480	3307	3483
Nautica	103	2988	2955	2904	2873	2946	3027	3033	2974	3007	2808	2646	2454	2227	1928	3346	2961
Rexeter	104	3093	3146	3071	3015	3277	3250	3284	3182	3109	2712	2750	2535	2253	2246	3349	3319
SV1893GH	105	--	--	--	--	--	3394	--	--	3511	--	--	--	--	2044	--	3852
Average Yield (lbs/ac) <sup>1</sup>		2985	3071	3077	3044	3212	3345	3194	3070	3170	2714	2783	2644	2449	2374	3443	3448
LSD (0.05) <sup>3</sup>		96	107	113	143	321	525	215	273	472	165	179	192	230	244	313	392

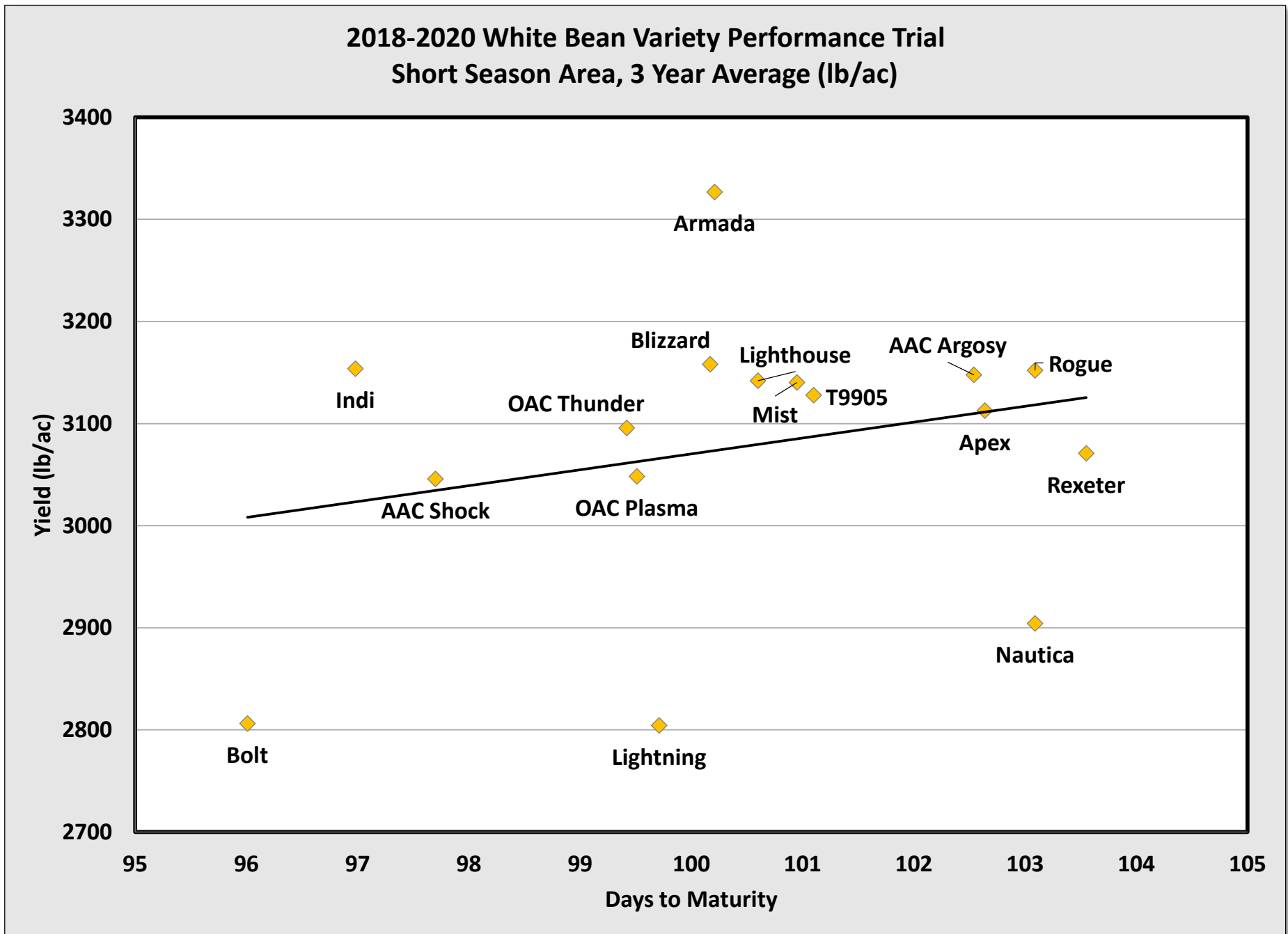
<sup>1</sup> To convert lbs/acre to t/ha divide by 893.

<sup>2</sup> Maturity is 3 year average. Maturity rating is affected by planting date and area where variety is being grown. Varieties are rated as mature when 95% of the pods are ripe. Normally, 3-10 additional drying days are needed before the crop is dry enough for combining.

<sup>3</sup> LSD (0.05) - the LSD is a measure of variability within the trial. There is a ninety five percent probability that yields that differ by an amount greater than the LSD are different. Yields that differ by an amount less or equal to the LSD should be considered the same.

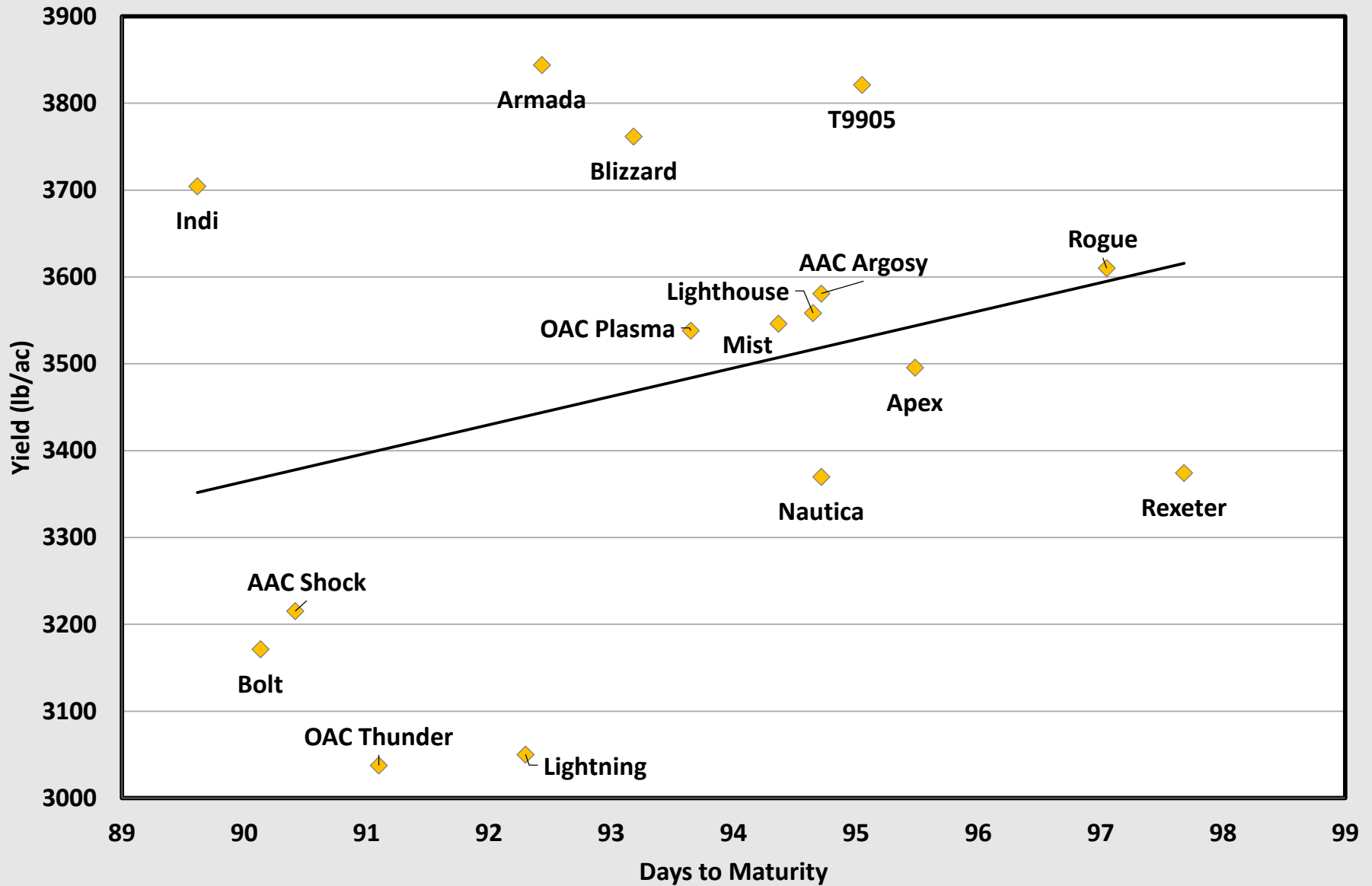
Short Season Testing Locations					
Blyth	2020	2019	--	2017	2016
Exeter	2020	2019	2018	--	2016
Elora	2020	2019	2018	2017	2016
Winchester	2020	2019	--	--	--

Graph 1c: White Bean Short Season Area



Graph 1d: White Bean Long Season Area

2018-2020 White Bean Variety Performance Trial  
Long Season Area, 3 Year Average (lb/ac)



**Table 2 - 2018-2020 White Bean Characteristics and Distributors**

Variety	100 Seed Weight <sup>3</sup> (g)	Disease Reaction <sup>1</sup>					Common Blight	Harvestability <sup>4</sup>	Distributor
		Bean Common Mosaic Virus		Anthracnose <sup>2</sup>					
		Race		Race					
		1	15	17	23	73			
Bolt	25.4	R	R	S	S	R	S	1.7	Hensall Co-op
Indi	20.9	R	S	S	S	S	S	1.3	ADM Seedwest
AAC Shock	25.2	R	R	S	S	S	R	2.2	Hensall Co-op
OAC Thunder	24.3	R	R	S	S	S	S	2.3	SeCan
HMS Medalist	21.2	R	S	S	S	S	S	2.0	ADM Seedwest
Lightning	23.2	R	R	S	S	S	S	2.2	Hensall Co-op
Armada	24.7	NA	NA	NA	NA	NA	NA	1.9	ProVita
OAC Plasma	22.6	R	R	NA	NA	R	R	2.4	AAFC/U of G
Blizzard	22.6	NA	NA	NA	NA	S	S	2.0	ProVita, ADM Seedwest
Lighthouse	23.3	R	R	NA	R	S	R	2.0	R.T. Bolton
Mist	23.5	R	R	S	S	S	R	1.9	Hensall Co-op
T9905	25.1	R	R	R	R	S	S	2.7	Treasure Valley, The Andersons
AAC Argosy	24.9	R	R	S	S	S	R	2.4	Hensall Co-op
Nautica	21.2	R	R	S	S	S	S	2.1	Hensall Co-op
Apex	25.8	R	R	S	R	S	R	2.2	SeCan
Rogue	21.1	R	R	NA	NA	R	R	3.2	Hensall Co-op
SV1893GH	24.9	NA	NA	NA	NA	NA	NA	2.2	Hensall Co-op
Rexeter	22.1	R	S	S	S	S	R	2.8	Hensall Co-op

<sup>1</sup> R = Resistant, S = Susceptible, NA = Not Available

<sup>2</sup> Anthracnose ratings, the predominant race found now in Ontario is Race 73. Race 17 (binary system) is equivalent to the Alpha race, race 23 (binary system) is equivalent to the Delta race.

<sup>3</sup> To convert 100 seed weight (g) to seeds per pound divide 45,400 by seed weight. Example: 45,400 / 63 gm = 720 seeds/lb

<sup>4</sup> A variety's harvestability is based on a scale of 1-5, where 1 = upright plant type, standing erect with good bottom pod height and 5 = more prostrate plant type or plants that are not erect, with poor bottom pod height.



**Table 3 - 2018-2020 Coloured Bean Characteristics and Distributors**

Variety	Market Class	100 Seed Weight <sup>1</sup> (g)	Disease Reaction <sup>2</sup>					Harvestability <sup>4</sup>	Distributor
			Bean Common Mosaic Virus		Anthracnose <sup>3</sup>				
			Race 1	Race 15	Alpha Race 17	Delta Race 23	Race 73		
Amaranto	Cranberry	65	R	NA	NA	NA	NA	2.9	Hensall Co-op
Etna	Cranberry	65	R	R	S	S	S	2.6	Public
OAC Navabi	Cranberry	63	R	R	NA	NA	R	2.2	Plovgh
OAC Racer	Cranberry	65	R	R	NA	NA	R	2.8	AAFC/U of G
Vero	Cranberry	63	NA	NA	NA	NA	NA	3.3	ADM Seedwest
OAC Firestripe	Cranberry	69	R	R	NA	NA	R	2.1	Plovgh
OAC Candycane	Cranberry	68	R	R	NA	NA	R	2.2	AAFC/U of G
Red Rider	Cranberry	62	R	R	R	R	S	3.2	SeCan
Red Hawk	Dark Red Kidney	57	R	R	R	S	R	2.9	Public
Gallantry	Dark Red Kidney	58	NA	NA	NA	NA	R	2.5	Hensall Co-op
OAC Jasper	Dark Red Kidney	66	R	R	NA	NA	R	2.7	AAFC/U of G
Dynasty	Dark Red Kidney	65	R	S	R	S	R	2.9	Hensall Co-op
Big Red	Light Red Kidney	63	NA	NA	NA	NA	R	2.7	ProVita
Pink Panther	Light Red Kidney	64	R	R	R	S	R	2.7	Public
OAC Jewel	Light Red Kidney	64	R	R	NA	NA	R	2.6	AAFC/U of G
OAC Inferno	Light Red Kidney	66	R	S	R	S	R	3.3	Hensall Co-op
OAC Snowshoe	White Kidney	63	R	R	NA	NA	R	3.0	Plovgh
Yeti	White Kidney	58	R	R	NA	S	R	2.7	Hensall Co-op

<sup>1</sup> Seed weight is 3 year average. Maturity rating is affected by planting date and area where variety is being grown.

Varieties are rated as mature when 95% of the pods are ripe. Normally, 3-10 additional drying days are needed before the crop is dry enough for combining.

<sup>2</sup> R = Resistant, S = Susceptible, NA = Not Available

<sup>3</sup> Anthracnose ratings- the predominant race in Ontario is Race 73. Race 17 (binary system) is equivalent to the Alpha race, race 23 (binary system) is equivalent to the Delta race.

<sup>4</sup> A variety's harvestability is based on a scale of 1-5, where 1 = upright plant type, standing erect with good bottom pod height and 5 = more prostrate plant type or plants that are not erect, with poor bottom pod height.

**Table 4 - 2016-2020 Average Coloured Bean Performance**

Variety	Market Class	Days to Maturity <sup>2</sup>	100 Seed Weight <sup>3</sup> (g)	Yield (lbs/ac) <sup>1</sup>				
				5 Year	4 Year	3 Year	2 Year	2020
Amaranto	Cranberry	84	65	1978	1978	1978	1827	1541
Etna	Cranberry	86	65	2093	2087	2116	1970	1751
OAC Navabi	Cranberry	87	63	2276	2276	2288	2261	2172
OAC Racer	Cranberry	87	65	2092	2042	2052	1965	1916
Vero	Cranberry	89	63	1958	1958	1972	1931	1869
OAC Firestripe	Cranberry	91	69	2500	2500	2577	2543	2303
OAC Candycane	Cranberry	92	68	2440	2486	2559	2569	2577
Red Rider	Cranberry	93	62	2296	2316	2375	2338	2208
<b>Average (lbs/ac)</b>				<b>2204</b>	<b>2205</b>	<b>2240</b>	<b>2176</b>	<b>2042</b>
Red Hawk	Dark Red Kidney	88	57	1932	1906	1958	1931	2007
Gallantry	Dark Red Kidney	91	58	2293	2313	2308	2317	2382
OAC Jasper	Dark Red Kidney	92	66	2118	2118	2110	2036	1840
Dynasty	Dark Red Kidney	94	65	2330	2369	2377	2316	2240
<b>Average (lbs/ac)</b>				<b>2168</b>	<b>2177</b>	<b>2188</b>	<b>2150</b>	<b>2117</b>
Big Red	Light Red Kidney	85	63	2059	2080	2127	2045	1816
Pink Panther	Light Red Kidney	86	64	1922	1889	1890	1693	1334
OAC Jewel	Light Red Kidney	94	64	2228	2244	2340	2330	2383
OAC Inferno	Light Red Kidney	97	66	2402	2510	2585	2456	2527
<b>Average (lbs/ac)</b>				<b>2153</b>	<b>2181</b>	<b>2235</b>	<b>2131</b>	<b>2015</b>
OAC Snowshoe	White Kidney	94	63	2482	2482	2500	2382	2374
Yeti	White Kidney	95	58	2142	2140	2221	2160	2270
<b>Average (lbs/ac)</b>				<b>2312</b>	<b>2311</b>	<b>2360</b>	<b>2271</b>	<b>2322</b>
<b>LSD (0.05)<sup>4</sup></b>				<b>98</b>	<b>109</b>	<b>125</b>	<b>144</b>	<b>197</b>

<sup>1</sup> To convert lbs/acre to t/ha divide by 893.

<sup>2</sup> Days to Maturity is 3 year average. Maturity rating is affected by planting date and area where variety is being grown. Varieties are rated as mature when 95% of the pods are ripe. Normally, 3-10 additional drying days are needed before the crop is dry enough for combining.

<sup>3</sup>Seed Weight is 3 year average. To convert 100 Seed weight (g) to seeds per pound divide 45,400 by seed weight. Example: 45,400 / 63 gm = 720 seeds/lb

<sup>4</sup> LSD (0.05) - the LSD is a measure of variability within the trial. There is a ninety five percent probability that yields that differ by an amount greater than the LSD are different. Yields that differ by an amount less or equal to the LSD should be considered the same.

Testing Locations					
St Thomas	2020	2019	2018	2017	2016
Exeter	2020	2019	2018	--	2016
Elora	2020	2019	2018	2017	2016
Woodstock	2020	2019	2018	2017	2016

**Table 4a - St Thomas Station Report: 2016-2020 Coloured Bean Performance Trial**

Variety	Market Class	Days to Maturity St Thomas <sup>2</sup>	100 Seed Weight <sup>3</sup> (g)	Yield (lbs/ac) <sup>1</sup>					3 Year All Locations
				St Thomas					
				5 Year	4 Year	3 Year	2 Year	2020	
Amaranto	Cranberry	79	65	2670	2670	2670	2245	1804	1978
Etna	Cranberry	80	65	2747	2728	2646	2178	2039	2116
OAC Navabi	Cranberry	82	63	3078	3078	3147	3035	3117	2288
OAC Racer	Cranberry	84	65	2672	2501	2319	2128	2116	2052
Vero	Cranberry	87	63	2376	2376	2303	2088	2302	1972
OAC Firestripe	Cranberry	88	69	3097	3097	3167	3099	3184	2577
OAC Candycane	Cranberry	89	68	3226	3266	3409	3305	3411	2559
Red Rider	Cranberry	92	62	2875	2921	2950	2811	2965	2375
<b>Average (lbs/ac)</b>				<b>2842</b>	<b>2830</b>	<b>2826</b>	<b>2611</b>	<b>2617</b>	<b>2240</b>
Red Hawk	Dark Red Kidney	84	57	2493	2412	2469	2324	2826	1958
Gallantry	Dark Red Kidney	87	58	3038	3061	3032	2916	3224	2308
OAC Jasper	Dark Red Kidney	89	66	2686	2686	2636	2589	2482	2110
Dynasty	Dark Red Kidney	92	65	2931	2980	2866	2766	3037	2377
<b>Average (lbs/ac)</b>				<b>2787</b>	<b>2785</b>	<b>2751</b>	<b>2649</b>	<b>2892</b>	<b>2188</b>
Big Red	Light Red Kidney	80	63	2833	2876	2918	2440	2141	2127
Pink Panther	Light Red Kidney	80	64	2448	2291	2182	1790	1640	1890
OAC Jewel	Light Red Kidney	92	64	2756	2756	2837	2931	3192	2340
OAC Inferno	Light Red Kidney	96	66	2928	3108	3165	2928	3197	2585
<b>Average (lbs/ac)</b>				<b>2741</b>	<b>2758</b>	<b>2775</b>	<b>2522</b>	<b>2543</b>	<b>2235</b>
OAC Snowshoe	White Kidney	92	63	3184	3184	3156	2981	3279	2500
Yeti	White Kidney	94	58	2789	2705	2778	2814	3400	2221
<b>Average (lbs/ac)</b>				<b>2986</b>	<b>2944</b>	<b>2967</b>	<b>2898</b>	<b>3339</b>	<b>2360</b>
<b>LSD (0.05)<sup>4</sup></b>				<b>251</b>	<b>271</b>	<b>325</b>	<b>356</b>	<b>506</b>	<b>125</b>

<sup>1</sup> To convert lbs/acre to t/ha divide by 893.

<sup>2</sup> Days to Maturity is 3 year average for St Thomas Station. Maturity rating is affected by planting date and area where variety is being grown. Varieties are rated as mature when 95% of the pods are ripe. Normally, 3-10 additional drying days are needed before the crop is dry enough for combining.

<sup>3</sup> To convert 100 Seed weight (g) to seeds per pound divide 45,400 by seed weight. Example: 45,400 / 63 gm = 720 seeds/lb

<sup>4</sup> LSD (0.05) - the LSD is a measure of variability within the trial. There is a ninety five percent probability that yields that differ by an amount greater than the LSD are different. Yields that differ by an amount less or equal to the LSD should be considered the same.

**Table 4b - Exeter Station Report: 2018-2020 Coloured Bean Performance Trial**

Variety	Market Class	Days to Maturity Exeter <sup>2</sup>	100 Seed Weight <sup>3</sup> (g)	Yield (lbs/ac) <sup>1</sup>			
				Exeter			3 Year All Locations
				3 Year	2 Year	2020	
Amaranto	Cranberry	89	65	1332	1589	1559	1978
Etna	Cranberry	93	65	1432	1739	1864	2116
OAC Navabi	Cranberry	93	63	1501	1922	1951	2288
OAC Racer	Cranberry	94	65	1580	1763	1833	2052
Vero	Cranberry	94	63	1592	1908	1995	1972
Red Rider	Cranberry	97	62	1779	2187	2126	2375
OAC Firestripe	Cranberry	97	69	1788	2185	1869	2577
OAC Candycane	Cranberry	97	68	1851	2219	2466	2559
<b>Average (lbs/ac)</b>				<b>1607</b>	<b>1939</b>	<b>1958</b>	<b>2240</b>
Red Hawk	Dark Red Kidney	91	57	1473	1762	1767	1958
Gallantry	Dark Red Kidney	93	58	1486	1903	2127	2308
OAC Jasper	Dark Red Kidney	96	66	1592	1797	1704	2110
Dynasty	Dark Red Kidney	97	65	1769	1990	1990	2377
<b>Average (lbs/ac)</b>				<b>1580</b>	<b>1863</b>	<b>1897</b>	<b>2188</b>
Big Red	Light Red Kidney	87	63	1480	1845	1842	2127
Pink Panther	Light Red Kidney	89	64	1316	1511	1196	1890
OAC Jewel	Light Red Kidney	96	64	1686	1979	1841	2340
OAC Inferno	Light Red Kidney	98	66	2110	2427	2576	2585
<b>Average (lbs/ac)</b>				<b>1648</b>	<b>1941</b>	<b>1864</b>	<b>2235</b>
OAC Snowshoe	White Kidney	94	63	1827	2047	2148	2500
Yeti	White Kidney	97	58	1702	2003	2155	2221
<b>Average (lbs/ac)</b>				<b>1765</b>	<b>2025</b>	<b>2151</b>	<b>2360</b>
<b>LSD (0.05)<sup>4</sup></b>				<b>193</b>	<b>260</b>	<b>421</b>	<b>125</b>

<sup>1</sup> To convert lbs/acre to t/ha divide by 893.

<sup>2</sup> Days to Maturity is 3 year average for Exeter Station. Maturity rating is affected by planting date and area where variety is being grown. Varieties are rated as mature when 95% of the pods are ripe. Normally, 3-10 additional drying days are needed before the crop is dry enough for combining.

<sup>3</sup> To convert 100 Seed weight (g) to seeds per pound divide 45,400 by seed weight. Example: 45,400 / 63 gm = 720 seeds/lb

<sup>4</sup> LSD (0.05) - the LSD is a measure of variability within the trial. There is a ninety five percent probability that yields that differ by an amount greater than the LSD are different. Yields that differ by an amount less or equal to the LSD should be considered the same.

**Table 4c - Elora Station Report: 2016-2020 Coloured Bean Performance Trial**

Variety	Market Class	Days to Maturity Elora <sup>2</sup>	100 Seed Weight <sup>3</sup> (g)	Yield (lbs/ac) <sup>1</sup>					3 Year All Locations
				Elora					
				5 Year	4 Year	3 Year	2 Year	2020	
Etna	Cranberry	81	65	1717	1739	1782	1927	1513	2116
Amaranto	Cranberry	81	65	1602	1602	1602	1776	1510	1978
OAC Racer	Cranberry	82	65	1669	1701	1663	1790	1729	2052
OAC Navabi	Cranberry	83	63	2154	2154	2086	2180	1966	2288
Vero	Cranberry	85	63	1625	1625	1550	1695	1475	1972
OAC Firestripe	Cranberry	88	69	2142	2142	2103	2306	2082	2577
OAC Candycane	Cranberry	89	68	2089	2148	2130	2275	2366	2559
Red Rider	Cranberry	91	62	1924	1947	1883	2037	1657	2375
<b>Average (lbs/ac)</b>				<b>1865</b>	<b>1882</b>	<b>1850</b>	<b>1998</b>	<b>1787</b>	<b>2240</b>
Red Hawk	Dark Red Kidney	86	57	1670	1701	1715	1861	1761	1958
Gallantry	Dark Red Kidney	89	58	2002	2050	1988	2166	2150	2308
Dynasty	Dark Red Kidney	92	65	1944	2022	1951	2101	1855	2377
OAC Jasper	Dark Red Kidney	92	66	1922	1922	1784	1797	1568	2110
<b>Average (lbs/ac)</b>				<b>1885</b>	<b>1924</b>	<b>1859</b>	<b>1981</b>	<b>1834</b>	<b>2188</b>
Big Red	Light Red Kidney	84	63	1572	1568	1507	1683	1450	2127
Pink Panther	Light Red Kidney	84	64	1681	1705	1659	1657	1217	1890
OAC Jewel	Light Red Kidney	92	64	1992	2081	2119	2176	2199	2340
OAC Inferno	Light Red Kidney	95	66	2103	2227	2150	2137	2023	2585
<b>Average (lbs/ac)</b>				<b>1837</b>	<b>1895</b>	<b>1859</b>	<b>1913</b>	<b>1722</b>	<b>2235</b>
Yeti	White Kidney	93	58	1650	1648	1606	1710	1652	2221
OAC Snowshoe	White Kidney	93	63	2148	2148	2041	2167	1942	2500
<b>Average (lbs/ac)</b>				<b>1899</b>	<b>1898</b>	<b>1823</b>	<b>1939</b>	<b>1797</b>	<b>2360</b>
<b>LSD (0.05)<sup>4</sup></b>				<b>152</b>	<b>171</b>	<b>197</b>	<b>267</b>	<b>275</b>	<b>125</b>

<sup>1</sup> To convert lbs/acre to t/ha divide by 893.

<sup>2</sup> Days to Maturity is 3 year average for Elora Station. Maturity rating is affected by planting date and area where variety is being grown. Varieties are rated as mature when 95% of the pods are ripe. Normally, 3-10 additional drying days are needed before the crop is dry enough for combining.

<sup>3</sup> To convert 100 Seed weight (g) to seeds per pound divide 45,400 by seed weight. Example: 45,400 / 63 gm = 720 seeds/lb

<sup>4</sup> LSD (0.05) - the LSD is a measure of variability within the trial. There is a ninety five percent probability that yields that differ by an amount greater than the LSD are different. Yields that differ by an amount less or equal to the LSD should be considered the same.

**Table 4d - Woodstock Station Report: 2016-2020 Coloured Bean Performance Trial**

Variety	Market Class	Days to Maturity Woodstock <sup>2</sup>	100 Seed Weight <sup>3</sup> (g)	Yield (lbs/ac) <sup>1</sup>					3 Year All Locations
				Woodstock					
				5 Year	4 Year	3 Year	2 Year	2020	
Amaranto	Cranberry	87	65	2309	2309	2309	1699	1290	1978
Etna	Cranberry	89	65	2100	2287	2603	2038	1590	2116
OAC Racer	Cranberry	89	65	2149	2272	2645	2181	1985	2052
OAC Navabi	Cranberry	89	63	2177	2177	2416	1907	1655	2288
Vero	Cranberry	90	63	2147	2147	2445	2034	1705	1972
OAC Candycane	Cranberry	91	68	2333	2520	2848	2475	2064	2559
OAC Firestripe	Cranberry	92	69	2797	2797	3248	2582	2076	2577
Red Rider	Cranberry	94	62	2287	2483	2887	2317	2085	2375
<b>Average (lbs/ac)</b>				<b>2287</b>	<b>2374</b>	<b>2675</b>	<b>2154</b>	<b>1806</b>	<b>2240</b>
Red Hawk	Dark Red Kidney	92	57	1807	1931	2174	1777	1673	1958
OAC Jasper	Dark Red Kidney	93	66	2139	2139	2427	1961	1608	2110
Dynasty	Dark Red Kidney	95	65	2391	2556	2923	2408	2077	2377
Gallantry	Dark Red Kidney	95	58	2180	2449	2726	2285	2025	2308
<b>Average (lbs/ac)</b>				<b>2129</b>	<b>2269</b>	<b>2562</b>	<b>2108</b>	<b>1846</b>	<b>2188</b>
Pink Panther	Light Red Kidney	88	64	1894	2103	2401	1813	1283	1890
Big Red	Light Red Kidney	89	63	2063	2245	2604	2210	1830	2127
OAC Jewel	Light Red Kidney	94	64	2125	2315	2720	2234	2299	2340
OAC Inferno	Light Red Kidney	99	66	2281	2495	2914	2332	2313	2585
<b>Average (lbs/ac)</b>				<b>2091</b>	<b>2290</b>	<b>2660</b>	<b>2147</b>	<b>1931</b>	<b>2235</b>
OAC Snowshoe	White Kidney	97	63	2605	2605	2974	2333	2127	2500
Yeti	White Kidney	97	58	2202	2396	2799	2114	1872	2221
<b>Average (lbs/ac)</b>				<b>2403</b>	<b>2500</b>	<b>2887</b>	<b>2223</b>	<b>1999</b>	<b>2360</b>
<b>LSD (0.05)<sup>4</sup></b>				<b>182</b>	<b>210</b>	<b>260</b>	<b>256</b>	<b>338</b>	<b>125</b>

<sup>1</sup> To convert lbs/acre to t/ha divide by 893.

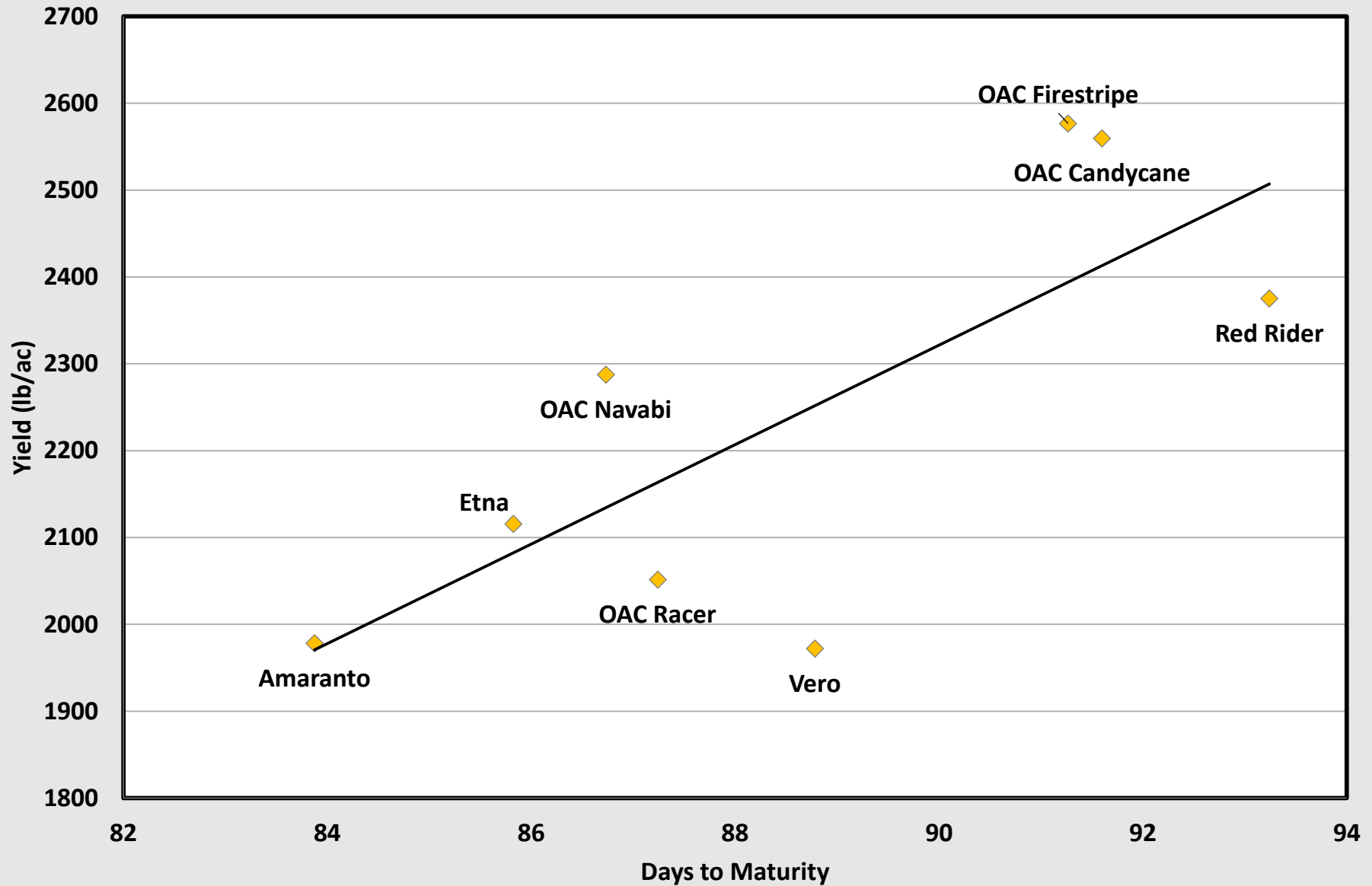
<sup>2</sup> Days to Maturity is 3 year average for Woodstock Station. Maturity rating is affected by planting date and area where variety is being grown. Varieties are rated as mature when 95% of the pods are ripe. Normally, 3-10 additional drying days are needed before the crop is dry enough for combining.

<sup>3</sup> To convert 100 Seed weight (g) to seeds per pound divide 45,400 by seed weight. Example: 45,400 / 63 gm = 720 seeds/lb

<sup>4</sup> LSD (0.05) - the LSD is a measure of variability within the trial. There is a ninety five percent probability that yields that differ by an amount greater than the LSD are different. Yields that differ by an amount less or equal to the LSD should be considered the same.

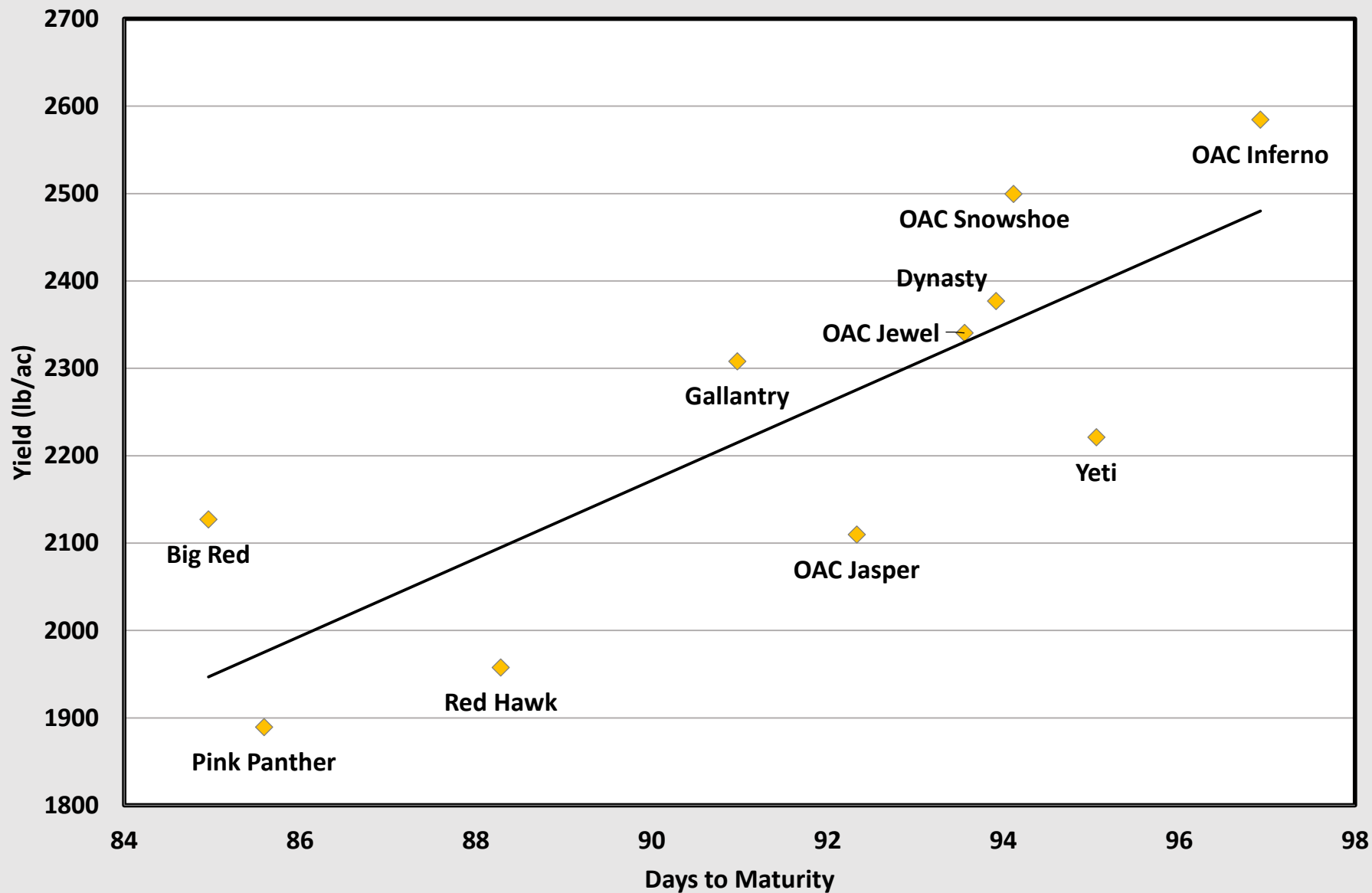
Graph 4e: Cranberry Bean

2018-2020 Cranberry Bean Variety Performance Trial  
All Areas, 3 Year Average (lb/ac)



Graph 4f: Kidney Bean

2018-2020 Kidney Bean Variety Performance Trial  
All Areas, 3 Year Average (lb/ac)





**Table 5 - 2016-2020 Coloured Minor Bean Variety Performance Trial**

Variety	Days to Maturity <sup>2</sup>	Yield (lbs/ac) <sup>1</sup>																	
		All Locations				St Thomas					Exeter					Winchester			
		5 Year	4 Year	3 Year	2 Year	5 Year	4 Year	3 Year	2 Year	2020	5 Year	4 Year	3 Year	2 Year	2020	4 Year	3 Year	2 Year	2020
Black Tails	92	--	--	--	3720	--	--	--	3773	4175	--	--	--	3406	3360	--	--	3981	3498
OAC Rosito	95	3353	3388	3307	3503	3614	3694	3704	3992	4112	3210	3266	3089	2854	2608	3203	3127	3662	2938
La Paz	95	3510	3576	3478	3605	3536	3579	3485	3747	3937	3301	3412	3256	3394	3084	3738	3694	3674	3599
Viper	97	3704	3768	3770	3869	3964	4032	4044	4165	4443	3549	3700	3691	3711	3628	3572	3574	3732	3451
Zenith	97	3510	3562	3585	3713	3856	3879	4060	4269	4751	3232	3382	3414	3388	3595	3426	3281	3481	3023
OAC Vortex	98	3594	3626	3609	3633	3573	3730	3677	3660	3961	3563	3489	3478	3409	3668	3660	3672	3829	3226
Zorro	98	3640	3626	3598	3774	3925	3908	3917	4118	4362	3451	3452	3416	3368	3323	3519	3461	3836	3338
Average Yield (lbs/ac) <sup>1</sup>		3552	3591	3558	3688	3745	3804	3815	3960	4249	3384	3450	3391	3361	3324	3520	3468	3742	3296
LSD (0.05) <sup>3</sup>		157	170	193	204	295	326	406	407	651	229	263	273	356	600	290	307	292	441

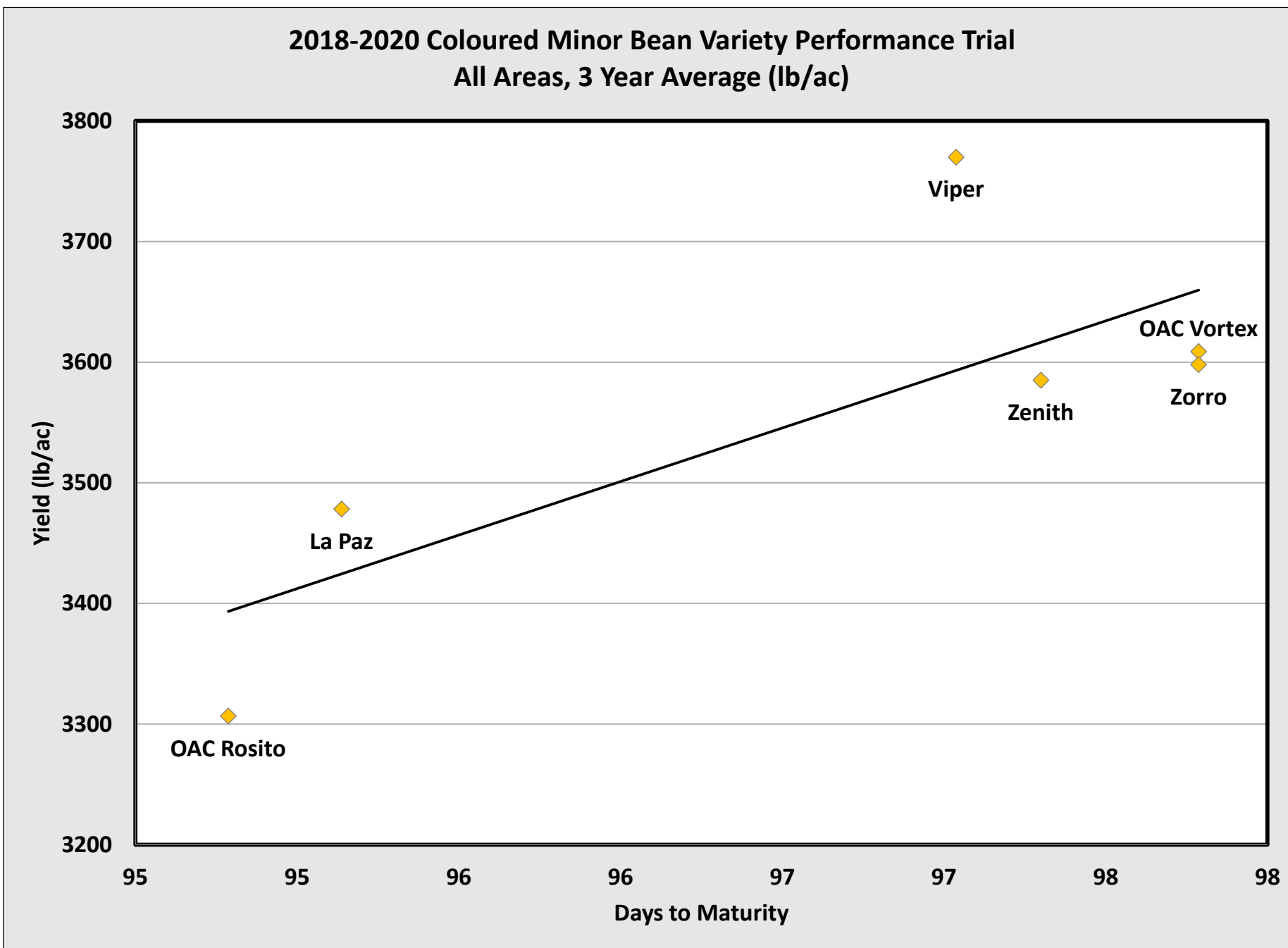
<sup>1</sup> To convert lbs/acre to t/ha divide by 893.

<sup>2</sup> Maturity is 3 year average. Maturity rating is affected by planting date and area where variety is being grown. Varieties are rated as mature when 95% of the pods are ripe. Normally, 3-10 additional drying days are needed before the crop is dry enough for combining.

<sup>3</sup> LSD (0.05) - the LSD is a measure of variability within the trial. There is a ninety five percent probability that yields that differ by an amount greater than the LSD are different. Yields that differ by an amount less or equal to the LSD should be considered the same.

Testing Locations					
St Thomas	2020	2019	2018	2017	2016
Exeter	2020	2019	2018	2017	2016
Winchester	2020	2019	2018	2017	--

Graph 5a: Coloured Minor Bean



**Table 6 - 2018-2020 Coloured Minor Bean Characteristics and Distributors**

Variety	Market Class	100 Seed Weight <sup>3</sup> (g)	Disease Reaction <sup>1</sup>					Common Blight	Harvestability <sup>4</sup>	Distributor
			Bean Common Mosaic Virus		Anthracnose <sup>2</sup>					
			Race		Race					
			1	15	17	23	73			
Black Tails	Black	24.3	NA	NA	NA	NA	NA	S	1.7	ADM Seedwest
OAC Rosito	Small Red	24.9	R	R	NA	NA	S	S	2.0	Hensall Co-op
La Paz	Pinto	41.4	NA	NA	NA	NA	S	S	2.7	ADM Seedwest
Viper	Small Red	32.3	NA	NA	NA	NA	S	S	2.4	ADM Seedwest
Zenith	Black	24.5	NA	NA	NA	NA	R	S	1.8	Hensall Co-op
Zorro	Black	24.6	R	R	R	R	S	S	2.2	Hensall Co-op
OAC Vortex	Black	23.9	R	R	NA	NA	S	R	2.3	W.A. Grain

<sup>1</sup> R = Resistant, S = Susceptible, NA = Not Available

<sup>2</sup> Anthracnose ratings, the predominant race found now in Ontario is Race 73. Race 17 (binary system) is equivalent to the Alpha race, race 23 (binary system) is equivalent to the Delta race.

<sup>3</sup> To convert 100 seed weight (g) to seeds per pound divide 45,400 by seed weight. Example: 45,400 / 63 gm = 720 seeds/lb

<sup>4</sup> A variety's harvestability is based on a scale of 1-5, where 1 = upright plant type, standing erect with good bottom pod height and 5 = more prostrate plant type or plants that are not erect, with poor bottom pod height.

**Table 7. Addresses of Distributors for Edible Bean Varieties**

<p><b>ADM Seedwest</b>          4666 Faries Parkway          Decatur, ID 62526          800-637-5843 x4707  <a href="http://www.adm.com/products-services/food/edible-beans/seedwest">www.adm.com/products-services/food/edible-beans/seedwest</a></p>	<p><b>Elliott Grain Ltd.</b>          21964 Fairview Road, RR3          Thorndale, ON N0M 2P0          519-461-1545</p>	<p><b>Ferguson Bros. of St. Thomas Ltd.</b>          43850 Ferguson Line, RR #6          St. Thomas, ON N5P 3T1          519-631-3463  <a href="http://fergusonbros.com">fergusonbros.com</a></p>
<p><b>Gen-Tec Seeds Ltd.</b>          P. O. Box 98          Woodslee, ON N0R 1V0          (519) 975-2557</p>	<p><b>Hensall Co-op</b>          P.O. Box 219          Hensall, ON N0M 1X0          1-800-265-5190  <a href="http://www.hdc.on.ca">www.hdc.on.ca</a></p>	<p><b>Plovgh, Inc.</b>          P.O. Box 295          Viroqua, WI 54665          1-877-567-1678  <a href="http://www.plovgh.com">www.plovgh.com</a></p>
<p><b>ProVita Inc.</b>          P.O. Box #628          Kuna, ID 83634          (208) 463-7624</p>	<p><b>R.T. Bolton and Sons</b>          43234 Winthrop Road, RR#1          Dublin, ON N0K 1E0          (519) 525-6430</p>	<p><b>SeCan Association</b>          400-300 Terry Fox Drive          Kanata, ON K2K 0E3          (613) 592-8600  <a href="http://www.secan.com">www.secan.com</a></p>
<p><b>The Andersons Canada Ltd.</b>          2 Hyland Drive          Blenheim, ON N0P 1A0          (519) 676-5411  <a href="http://www.AndersonsCanada.com">www.AndersonsCanada.com</a></p>	<p><b>Treasure Valley Seed Co.</b>          4633 E. River Road          Freeland, MI 48623  <a href="http://tvseed.com">tvseed.com</a></p>	<p><b>W.A. Grain</b>          #4 Slemon Park          Slemon Park, PE C0B 2A0          902-724-2170  <a href="http://www.wagrains.ca">www.wagrains.ca</a></p>