

Agriculture Development Branch 2013 Report – Ontario Dry Bean Variety Trials for 2010 - 2012

Prepared by the Ontario Pulse Crop Committee

Infosheet

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This Infosheet contains the most recent variety information for dry edible beans planted and harvested in 2012. The information is prepared annually by the Ontario Pulse Crop Committee and edited by the Ontario Ministry of Agriculture, Food and Rural Affairs.

REFERENCES:

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Table 1a – 2010-2012 White Bean Variety Performance Trial Long Season Area

Variety	Days to Maturity ²	Yield (t/ha) ¹							
		Long Season Average		St Thomas			Kippen		
		3 Year	2 Year	3 Year	2 Year	2012	3 Year	2 Year	2012
AC Compass	91	3.04	2.96	3.51	3.36	3.11	3.11	2.88	2.60
T9903	91	3.04	2.91	3.59	3.45	3.24	2.84	2.58	2.43
Lightning	93	3.16	3.16	3.47	3.52	3.36	3.36	3.12	2.79
OAC Thunder	94	3.22	3.18	3.70	3.58	3.70	3.35	3.23	3.03
Nautica	96	3.31	3.22	3.67	3.57	3.54	3.21	3.10	2.95
T9905	96	3.38	3.26	3.65	3.59	3.71	3.41	3.24	3.04
AC Cruiser	96	3.06	2.83	3.42	3.19	3.40	3.16	3.06	2.82
AC Mast	97	3.14	3.00	3.63	3.52	3.60	3.16	3.12	2.87
OAC Dublin	97	3.23	3.06	3.46	3.40	3.27	3.35	3.04	2.81
GTS 544	97	3.02	2.76	3.37	3.16	3.67	3.17	3.07	3.01
Vista	97	3.28	3.20	3.53	3.37	3.23	3.30	3.27	3.13
Lighthouse	97	3.52	3.31	3.75	3.60	3.31	3.26	3.00	2.72
Reliant	97	3.06	2.84	3.31	3.05	3.32	3.29	3.25	3.18
OAC Rex	98	3.29	3.16	3.70	3.73	3.68	3.19	2.84	2.33
Apex	98	3.54	3.33	3.73	3.62	3.76	3.43	3.25	3.01
Rexeter	99	3.59	3.35	3.72	3.44	3.92	3.49	3.36	3.22
Viscount	99	3.19	3.07	3.35	3.19	3.18	3.31	3.22	3.15
Average Yield (t/ha) ¹		3.24	3.09	3.56	3.43	3.47	3.26	3.10	2.89
LSD (0.05) ³		0.12	0.15	0.24	0.30	0.31	0.20	0.26	0.27

¹ To convert t/ha to lbs/acre multiply by 893.

² 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.

³ 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	2012	2011	2010
Kippen	2012	2011	2010
Woodstock	--	2011	2010
Granton	--	2011	2010

Table 1b – 2010-2012 White Bean Variety Performance Trial Short Season Area

Variety	Days to Maturity ²	Yield (t/ha) ¹										
		Short Season Average		Brussels/Blyth			Kippen			Elora		
		3 Year	2 Year	3 Year	2 Year	2012	3 Year	2 Year	2012	3 Year	2 Year	2012
T9903	97	2.92	2.77	3.68	3.77	3.74	2.84	2.58	2.43	2.35	2.12	3.11
AC Compass	98	2.84	2.62	3.26	3.08	3.09	3.11	2.88	2.60	2.08	1.90	2.80
Lightning	100	3.14	2.94	3.49	3.28	3.39	3.36	3.12	2.79	2.43	2.19	3.09
OAC Thunder	101	3.14	2.98	3.68	3.59	3.50	3.35	3.23	3.03	2.42	2.16	3.15
Nautica	104	3.09	2.82	3.65	3.62	3.80	3.21	3.10	2.95	2.12	1.51	1.89
AC Mast	104	2.95	2.77	3.49	3.55	3.50	3.16	3.12	2.87	2.14	1.96	3.04
T9905	104	3.41	3.11	4.07	4.03	4.08	3.41	3.24	3.04	2.71	2.27	3.08
OAC Dublin	104	3.00	2.64	3.25	3.06	3.11	3.35	3.04	2.81	2.13	1.79	2.68
AC Cruiser	104	2.89	2.55	3.44	3.31	3.35	3.16	3.06	2.82	1.93	1.57	2.20
Lighthouse	105	3.41	3.12	3.75	3.75	3.83	3.26	3.00	2.72	2.69	2.34	3.50
OAC Rex	105	3.18	2.85	3.51	3.40	3.51	3.19	2.84	2.33	2.50	2.17	3.23
Vista	105	3.26	3.09	3.86	3.89	4.10	3.30	3.27	3.13	2.55	2.17	2.91
GTS 544	105	3.07	2.79	3.77	3.99	4.06	3.17	3.07	3.01	2.37	1.89	2.10
Reliant	106	3.20	3.00	3.94	4.02	4.19	3.29	3.25	3.18	2.46	2.12	2.80
Apex	107	3.35	3.00	3.69	3.63	3.56	3.43	3.25	3.01	2.27	1.91	2.60
Rexeter	107	3.40	3.08	3.94	3.85	3.85	3.49	3.36	3.22	2.17	1.77	2.57
Viscount	107	3.17	3.00	3.81	3.92	3.85	3.31	3.22	3.15	2.37	2.04	2.43
Average Yield		3.14	2.89	3.66	3.63	3.68	3.26	3.10	2.89	2.33	1.99	2.78
LSD (0.05) ³		0.11	0.12	0.19	0.24	0.34	0.20	0.26	0.27	0.24	0.22	0.37

¹ To convert t/ha to lbs/acre multiply by 893.

² 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.

³ 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			
Brussels/Blyth	2012	2011	2010
Kippen	2012	2011	2010
Elora	2012	2011	2010
Woodstock	--	2011	2010

Table 2 – 2010-2012 White Bean Characteristics and Distributors

Variety	100 Seed Weight ³ (g)	Disease Reaction ¹					Common Blight	Suitability for Direct Harvest 4	Distributor
		Bean Common Mosaic Virus		Anthracnose ²					
		Race		Race					
		1	15	17	23	73			
T9903	24.0	R	R	R	R	R	S	3.2	Hyland/Dow
AC Compass	21.8	R	R	S	S	S	S	2.8	Cook's
Indi	20.8	R	R	S	S	S	S	1.7	ADM Seedwest
Lightning	22.4	R	R	S	S	S	S	2.3	Hensall DC
OAC Thunder	23.0	R	R	S	S	S	S	2.6	SeCan
Nautica	20.4	R	R	S	S	S	S	2.2	SeCan
AC Cruiser	21.6	R	R	S	S	S	S	2.9	Hensall DC
T9905	23.0	R	R	R	R	S	S	2.8	Hyland/Dow
AC Mast	22.7	R	R	S	S	S	S	3.4	Advantage
OAC Dublin	22.0	R	S	S	S	S	S	3.1	R.T. Bolton, Rosebank
Lighthouse	22.8	R	R	NA	R	S	R*	2.4	Cook's
OAC Rex*	22.2	R	R	S	S	S	R*	2.3	Hensall DC
Vista	20.4	R	R	R	R	S	S	3.1	Cook's, Hyland/Dow, Hensall DC
GTS 544	21.7	R	R	NA	R	S	S	3.2	Cook's, Hyland/Dow, Hensall DC
Reliant	21.1	R	R	NA	NA	S	S	2.8	Cook's, Hyland/Dow, Hensall DC
Apex	24.5	NA	NA	NA	NA	NA	R*	2.4	SeCan
Rexeter	21.2	R	S	S	S	S	R*	2.4	Hensall DC
Viscount	20.1	R	R	NA	NA	S	S	3.2	Cook's, Hyland/Dow, Hensall DC

¹ R = Resistant, S = Susceptible, NA = Not Available

² 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.

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

⁴ A variety's suitability of direct harvest 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.

* Resistance gene for common bacterial blight (*Xanthomonas campestris* pv. *Phaseoli*). Very little disease will develop on this variety.

Table 3 – 2010-2012 Coloured Bean Variety Performance and Characteristics

Variety	Market Class	Days to Maturity ²	Yield (t/ha) ^{1,2}	100 Seed Weight ² (g)	Disease Reaction ³					Distributor
					Bean Common Mosaic Virus		Anthracnose ⁴			
					Race 1	Race 15	Alpha Race 17	Delta Race 23	Race 73	
Etna	Cranberry	88	2.71	62	R	R	S	S	S	Cook's
Red Rider	Cranberry	97	3.18	64	R	R	R	R	S	SeCan
Hooter	Cranberry	98	2.94	66	R	R	S	S		Cook's
Red Hawk	Dark Red Kidney	93	2.34	56	R	R	R	S	R	Hyland/Dow
Majesty	Dark Red Kidney	92	2.91	71	R	R	R	S	S	Hensall DC
Dynasty	Dark Red Kidney	95	3.04	64						Hensall DC
AC Calmont	Dark Red Kidney	96	2.53	58	R	R	R	S	R	Hensall DC
GTS 104	Dark Red Kidney	97	2.88	56	-	-	-	-	-	Gen-Tec
OAC Lyrik	Light Red Kidney	86	2.29	65	R	R	R	R	R	Public
Pink Panther	Light Red Kidney	89	2.57	62	R	R	R	S	R	Cook's
OAC Inferno	Light Red Kidney	101	3.29	65	R	S	R	S	R	Hensall DC

¹ To convert t/ha to lbs/acre multiply by 893.

² Yield, Days to Maturity and Seed weight are 3 year averages.

³ R = Resistant, S = Susceptible, NA = Not Available

⁴ 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.

⁵ To convert 100 Seed Weight (g) to seeds per pound divide 45,400 by seed weight. Example: 45,400 / 63 gm = 720 seeds/lb.

Coloured Bean Testing Locations							
Monkton		2011	2010	St. Thomas	2012	2011	2010
Kippen	2012	2011	2010	Thorndale	-	-	2010
Elora	2012	2011	-	Woodstock	-	2011	

Table 4a – Monkton Station Report: 2010-2012 Coloured Bean Performance Trial

Variety	Market Class	Days to Maturity Monkton ²	100 Seed Weight ³ (g)	Yield (t/ha) ¹		
				Monkton		3 Year All Locations
				2 Year	2012	
Etna	Cran	95	62	2.92	3.11	2.71
Red Rider	Cran	98	64	3.13	3.16	3.18
Hooter	Cran	99	66	3.10	2.95	2.94
Average (t/ha)				3.05	3.08	2.94
Red Hawk	DRK	95	56	2.39	2.58	2.34
AC Calmont	DRK	96	58	2.76	2.65	2.53
Majesty	DRK	94	71	3.32	3.19	2.91
Dynasty	DRK	96	64	2.96	2.76	3.04
GTS 104	DRK	99	56	3.46	3.45	2.88
Average (t/ha)				2.98	2.93	2.74
OAC Lyrik	LRK	94	65	2.72	2.93	2.29
Pink Panther	LRK	94	62	2.57	2.84	2.57
OAC Inferno	LRK	99	65	3.52	3.88	3.29
Average (t/ha)				2.94	3.22	2.72

Table 4b – St. Thomas Station Report: 2010-2012 Coloured Bean Performance Trial

Variety	Market Class	Days to Maturity St Thomas ²	100 Seed Weight ³ (g)	Yield (t/ha) ¹			
				St Thomas			3 Year All Locations
				3 Year	2 Year	2012	
Etna	Cran	76	62	3.30	3.29	3.09	2.71
Red Rider	Cran	86	64	4.08	4.15	3.94	3.18
Hooter	Cran	86	66	3.46	3.62	3.47	2.94
Average (t/ha)				3.62	3.69	3.50	2.94
Red Hawk	DRK	83	56	3.23	3.32	2.88	2.34
Dynasty	DRK	84	64	4.08	4.16	3.74	3.04
AC Calmont	DRK	85	58	3.37	3.29	3.15	2.53
Majesty	DRK	84	71	3.41	3.65	3.29	2.91
GTS 104	DRK	87	56	3.56	3.61	3.15	2.88
Average (t/ha)				3.53	3.61	3.24	2.74
OAC Lyrik	LRK	73	65	2.71	2.47	1.61	2.29
Pink Panther	LRK	75	62	3.32	3.30	2.95	2.57
OAC Inferno	LRK	91	65	4.07	4.02	4.16	3.29
Average (t/ha)				3.37	3.26	2.91	2.72

Table 4c – Kippen Station Report: 2010-2012 Coloured Bean Performance Trial

Variety	Market Class	Days to Maturity Kippen ²	100 Seed Weight ³ (g)	Yield (t/ha) ¹			
				Kippen			3 Year All Locations
				3 Year	2 Year	2012	
Etna	Cran	91	62	2.47	2.2	1.84	2.71
Red Rider	Cran	105	64	2.93	2.78	2.08	3.18
Hooter	Cran	108	66	2.74	2.55	1.67	2.94
Average (t/ha)				2.72	2.51	1.86	2.94
Red Hawk	DRK	96	56	2.05	1.94	1.58	2.34
Majesty	DRK	96	71	2.68	2.70	1.95	2.91
Dynasty	DRK	100	64	2.80	2.68	2.04	3.04
GTS 104	DRK	101	56	2.29	2.22	1.66	2.88
AC Calmont	DRK	103	58	2.09	1.85	1.29	2.53
Average (t/ha)				2.38	2.28	1.70	2.74
OAC Lyrik	LRK	88	65	2.02	1.86	1.37	2.29
Pink Panther	LRK	93	62	2.30	2.07	1.81	2.57
OAC Inferno	LRK	108	65	3.07	3.13	2.71	3.29
Average (t/ha)				2.46	2.35	1.96	2.72

Table 4d – Elora Station Report: 2010-2012 Coloured Bean Performance Trial

Variety	Market Class	Days to Maturity Elora ²	100 Seed Weight ³ (g)	Yield (t/ha) ¹		
				Elora		3 Year All Locations
				2 Year	2012	
Etna	Cran	89	62	1.75	1.91	2.71
Red Rider	Cran	94	64	2.41	2.80	3.18
Hooter	Cran	95	66	2.21	2.46	2.94
Average (t/ha)				2.12	2.39	2.94
Red Hawk	DRK	92	56	1.52	1.76	2.34
Dynasty	DRK	94	64	2.18	2.54	3.04
Majesty	DRK	92	71	2.32	2.66	2.91
GTS 104	DRK	95	56	2.02	2.39	2.88
AC Calmont	DRK	94	58	1.65	1.99	2.53
Average (t/ha)				1.94	2.27	2.74
OAC Lyrik	LRK	88	66	1.54	1.66	2.29
Pink Panther	LRK	91	62	1.80	2.19	2.57
OAC Inferno	LRK	99	65	2.28	2.75	3.29
Average (t/ha)				1.87	2.20	2.72

¹ To convert t/ha to lbs/ac multiply by 893.

² Days to Maturity is 2 year average for Elora Stations, Maturity is affected by planting date and location.

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

Table 5 2010-2012 Black Bean Variety Performance Trial Report

Variety	Days to Maturity ²	Yield (t/ha) ¹							
		All Location		St. Thomas			Kippen		
		3 Year	2 Year	3 Year	2 Year	2012	3 Year	2 Year	2012
Eclipse	90	-	3.43		3.54	3.62	-	3.32	3.03
Zorro	95	3.89	3.65	3.93	3.74	4.43	3.74	3.57	3.52
Average Yield		3.66	3.54	3.73	3.64	4.03	3.53	3.45	3.27
LSD (0.05) ³		NA	0.21	NA	0.30	0.33	NA	0.29	0.29

¹ To convert t/ha to lbs/acre multiply by 893

² 2 Year average yield and days to maturity is average of St Thomas, Kippen in 2011-2012. Maturity rating is affected by planting date and location.

³ 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 and amount less or equal to the LSD should be considered the same.

Testing Locations			
St Thomas	2012	2011	2010
Kippen	2012	2011	2010
Woodstock	--	-	2010

Table 6 –Black Bean Characteristics and Distributors

Variety	100 Seed Weight ³ (g)	Disease Reaction ¹					Suitability for Direct Harvest ⁴	Distributor
		Bean Common Mosaic Virus		Anthracnose ²				
		Race		Race				
		1	15	17	23	73		
Eclipse	21.3	R	R	R	R	S	1.8	Duncan Seeds
Zorro	22.6	R	R	R	R	S	1.8	Hensall DC

¹ R = Resistant, S = Susceptible, NA = Not Available

² 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.

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

4 A variety's suitability of direct harvest 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

Advantage Seed Growers and Processors Inc. Box 351 Lucknow, ON N0G 2H0 1-800-651-7333	Cook's Division of Parrish and Heimbecker P.O. Box 10 Centralia, ON N0M 1K0 (519) 228-7000	Duncan Seeds Limited 301 South Railway Street Morden, MB R6M 1G7 (204) 822-6629
Gen-Tec Seeds Ltd. P. O. Box 98 Woodslee, ON NOR 1V0 (519) 975-2557	Hensall District Co-op P.O. Box 219 Hensall, ON N0M 1X0 (519) 262-3002	Hyland/ Dow Agro-Sciences 7061 Cobble Hills Rd St. Mary's, On N4X 1C7 (519) 349-2600
R.T. Bolton and Sons 43234 Winthrop Road, RR#1 Dublin, ON N0K 1E0 (519) 527-0455	Rosebank Seed Farms Ltd 7340 Perth Line 24, RR#2 Staffa, ON N0K 1Y0 (519) 345-2697	SeCan Association 400-300 Terry Fox Drive Kanata, ON K2K 0E3 (613) 592-8600

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