

Agriculture Development Branch 2011 Report – Ontario Dry Bean Variety Trials for 2008-2010

Infosheet

Prepared by the Ontario Pulse Crop Committee

March 2011

This Infosheet contains the most recent variety information for dry edible beans planted and harvested in 2010. The information is prepared annually by the Ontario Pulse Crop Committee and edited by the Ontario Ministry of Agriculture, Food and Rural Affairs.

REFERENCES:

Agricultural Information Contact Centre:
1-877-424-1300

For more information contact:

E-mail: ag.info.omafra@ontario.ca

Chris Gillard, Ridgetown Campus of University
of Guelph
519-674-1632
cgillard@ridgetownc.uoguelph.ca

Brian Hall, OMAFRA Stratford
519-271-0083
brian.hall@ontario.ca

TABLE OF CONTENTS:

- Table 1a – White Bean Variety Performance Trial – Long Season Area
- Table 1b – White Bean Variety Performance Trial– Short Season Area
- Table 2 – White Bean Characteristics and Distributors
- Table 3 – Coloured Bean Variety Performance
- Coloured Bean Station Reports
- Table 4 – 6 Coloured bean Variety Performance Individual Locations
 - Thorndale
 - Kippen
 - St. Thomas
- Table 7 – Addresses of Distributors for Edible Bean Varieties

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

	Days to Maturity	Yield (t/ha) ¹				
		Long Season Area		Kippen		
		3 year	2 year	3 year	2 year	2010
AC Compass	89	3.34	3.21	3.46	3.47	3.56
T9903	91	3.25	3.25	3.34	3.34	3.37
Lightning	92	3.26	3.17	3.54	3.55	3.84
OAC Thunder	93	3.41	3.34	3.52	3.57	3.58
AC Cruiser	94	3.44	3.38	3.42	3.30	3.38
AC Mast	94	3.44	3.32	3.34	3.23	3.23
Vista	95	3.27	3.34	3.19	3.22	3.36
T9905	95	3.55	3.56	3.57	3.63	3.74
OAC Dublin	96	3.47	3.50	3.64	3.78	3.96
GTS 564	96	3.29	3.26	3.52	3.43	3.32
Nautica	96	3.30	3.32	3.15	3.15	3.44
Gts 544	96	3.23	3.37	3.19	3.27	3.36
Reliant	97	3.37	3.37	3.44	3.35	3.38
OAC Rex	98	3.52	3.45	3.63	3.60	3.88
Viscount	99	3.22	3.30	3.15	3.25	3.48
Average Yield (tonnes/ha)		3.36	3.34	3.41	3.41	3.52
LSD (0.05) kg/ha ²				0.28	0.311	0.314

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

² 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			
Harrow			2008
St Thomas	2010		
Kippen	2010	2009	2008
Woodstock	2010		
Granton	2010		

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

	Days to Maturity	Yield (t/ha) ¹										
		Short Season All Locations		Brussels			Kippen			Elora		
		3 year	2 year	3 year	2 year	2010	3 year	2 year	2010	3 year	2year	2010
AC Compass	96	3.22	3.09	4.03	3.55	3.63	3.46	3.47	3.56	2.14	2.15	2.42
T9903	99	3.07	2.88	3.50	2.96	3.50	3.34	3.34	3.37	2.37	2.24	2.82
OAC Thunder	100	3.37	3.31	4.04	3.70	3.87	3.52	3.57	3.58	2.56	2.66	2.96
Lightning	101	3.31	3.26	3.83	3.53	3.89	3.54	3.55	3.84	2.55	2.65	2.92
AC Cruiser	103	3.27	3.21	3.85	3.46	3.71	3.42	3.30	3.38	2.20	2.33	2.65
AC Mast	103	3.19	3.08	3.78	3.22	3.38	3.34	3.23	3.23	2.21	2.36	2.50
GTS 544	104	3.13	3.14	3.47	3.10	3.32	3.19	3.27	3.36	2.35	2.46	3.32
OAC Dublin	104	3.35	3.37	3.74	3.48	3.64	3.64	3.78	3.96	2.42	2.49	2.81
Vista	105	3.24	3.19	3.77	3.45	3.80	3.19	3.22	3.36	2.58	2.59	3.31
GTS 564	105	3.32	3.23	3.78	3.41	3.43	3.52	3.43	3.32	2.60	2.68	3.12
T9905	105	3.47	3.51	3.92	3.70	4.16	3.57	3.63	3.74	2.64	2.80	3.58
Reliant	106	3.30	3.25	3.75	3.43	3.79	3.44	3.35	3.38	2.49	2.63	3.13
Nautica	107	3.18	3.24	3.63	3.42	3.71	3.15	3.15	3.44	2.53	2.86	3.33
OAC Rex	108	3.42	3.44	3.96	3.68	3.74	3.63	3.60	3.88	2.37	2.60	3.15
Viscount	108	3.26	3.24	3.77	3.48	3.57	3.15	3.25	3.48	2.66	2.70	3.02
Average Yield (t/ha)¹		3.27	3.23	3.79	3.44	3.68	3.41	3.41	3.52	2.44	2.55	3.00
LSD (0.05) kg/ha ²			0.36	0.27	0.28	0.29	0.28	0.31	0.31		0.482	0.416

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

² 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/ Brussels	2010	2009	2008
Kippen	2010	2009	2008
Elora	2010	2009	2008
Woodstock	2010		



Table 2 – White Bean Characteristics and Distributors

	100 Seed Weight (g)	Disease Reaction ¹					White Mould ³	Suitability for Direct Harvest ⁴	Distributor
		Bean Common Mosaic Virus		Anthracnose ²					
		Race		Race					
		1	15	17	23	73			
AC Compass	20.3	R	R	S	S	S	2.6	2.8	Cooks
T9903	21.6	R	R	R	R	R	3.2	3.2	Hyland
Lightning	21.0	R	R	S	S	S	1.7	2.5	Hensall DC
AC Mast	20.8	R	R	S	S	S	2.2	3.6	Advantage
AC Cruiser	19.8	R	R	S	S	S	2.5	3.2	Hensall District Co-op
OAC Thunder	21.4	R	R	S	S	S	2.2	3.1	SeCan
OAC Dublin	20.3	R	S	S	S	S	2.0	3.3	R.T. Bolton, Rosebank
T9905	21.5	R	R	R	R	S	2.3	2.8	Hyland
Vista	19.0	R	R	R	R	S	2.2	3.2	Cooks, Hyland, Hensall DC
Reliant	19.3	R	R	NA	NA	S	2.3	3.4	Cooks, Hyland, Hensall DC
Nautica	18.4	R	R	S	S	S	2.0	2.1	Secan
GTS 564	18.6	R	R	S	S	S	NA	3.2	Hensall District Co-op
GTS 544	20.3	R	R	NA	R	S	2.4	3.6	Cooks, Hyland, Hensall DC
Viscount	18.2	R	R	NA	NA	S	2.2	3.5	Cooks, Hyland, Hensall DC
OAC Rex*	20.6	R	R	S	S	S	2.0	2.7	Hensall District Co-op

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 White mould ratings are based on a scale of 1-5, where 1 = very tolerant or low levels of natural infestation, 5 = very susceptible. White mould trials were located at 10 site years in total from 2004 – 2009.

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 – Coloured Bean Variety Performance

Variety	Market Class	Days to Maturity ²	Yield (t/ha) ¹	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	92	2.77	63	R	R	S	S	S	Cooks
Red Rider	Cranberry	99	3.08	62	R	R	R	R		Secan
Hooter	Cranberry	100	3.06	67	R	R	S	S		Cooks
Red Hawk	Dark red kidney	94	2.55	56	R	R	R	S	R	Hyland Seeds
OAC Redstar	Dark red kidney	96	2.70	60	R	R	R	S		Secan
GTS 104	Dark red kidney	97	2.96	57	na	na	na	na	na	Gentec Seeds
AC Calmont	Dark red kidney	98	2.74	58	R	R	R	S	R	Hensall District Co-op
Majesty	Dark red kidney	97	2.70	69	R	R	R	S		Hensall District Co-op
OAC Lyrik	Light red kidney	90	2.68	68	R	R	R	S		Public
Pink Panther	Light red kidney	93	2.88	66	R	R	R	S	R	Cooks
Red Kanner	Light red kidney	103	3.03	54	R	R	S	S		Hyland Seeds

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

² Days to Maturity and Seed weight is 3 year average.

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.

Coloured Bean Testing Locations			
Kippen	2010	2009	2008
Monkton		2009	2008
St. Thomas	2010	2009	2008
Thorndale	2010	2009	2008
Elora		2009	2008

Table 4: Thorndale Station Report: 2007 – 2009 Coloured Bean Performance Trial

Cultivar	Market Class	Days to Maturity Thorndale ²	100 Seed Weight (g) ³	Yield t/ha ¹			
				Thorndale			3 Year All Locations
				3 Year	2 Year	2010	
Etna	Cran	95	63	2.7	2.62	3.29	2.77
Red Rider	Cran	101	62	3.21	3.07	3.60	3.08
Hooter	Cran	101	67	3.30	2.98	3.65	3.06
Average (t/ha)				3.07	2.89	3.51	2.97
Red Hawk	DRK	97	56	2.31	2.09	2.54	2.55
OAC Redstar	DRK	100	59	2.45	2.21	2.86	2.70
GTS 104	DRK	101	57	3.18	3.03	3.59	2.96
AC Calmont	DRK	100	58	2.60	2.68	3.03	2.74
Majesty	DRK	101	69	3.04	2.83	3.41	2.70
Average (t/ha)				2.82	2.65	3.07	2.80
OAC Lyrik	LRK	94	67	2.26	2.06	2.34	2.68
Pink Panther	LRK	97	66	2.79	2.51	2.92	2.88
Red Kanner	LRK	105	54	2.98	3.06	3.66	3.03
Average (t/ha)				2.84	2.73	3.17	2.98

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

² Days to Maturity is 3 year average for Thorndale Station.

³ To convert 100 Seed weight (g) to seeds per pound divide 45,400 by seed weight.

Example – $\frac{45,400}{63 \text{ gm}} = 720 \text{ seeds/lb}$

Table 5: Kippen Station Report: 2008 – 2010 Coloured Bean Performance Trial

Cultivar	Market Class	Days to Maturity Kippen ²	100 Seed Weight (g) ³	Yield t/ha ¹			3 Year All Locations
				Kippen			
				3 Year	2 Year	2010	
Etna	Cran	87	63	2.83	2.93	3.06	2.77
Red Rider	Cran	96	62	3.13	3.19	3.24	3.08
Hooter	Cran	98	67	3.27	3.30	3.10	3.06
Average (t/ha)				3.08	3.14	3.13	2.97
Red Hawk	DRK	89	56	2.42	2.43	2.26	2.55
OAC Redstar	DRK	94	59	2.60	2.65	2.45	2.70
GTS 104	DRK	94	57	2.69	2.74	2.42	2.96
AC Calmont	DRK	96	58	2.72	2.71	2.58	2.74
Majesty	DRK	92	69	2.77	2.91	2.63	2.70
Average (t/ha)				2.73	2.81	2.58	2.80
OAC Lyrik	LRK	86	67	2.58	2.77	2.34	2.68
Pink Panther	LRK	89	66	2.90	3.01	2.78	2.88
Red Kanner	LRK	100	54	2.85	2.82	2.80	3.03
Average (t/ha)				2.89	2.96	2.71	2.98

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

² Days to Maturity is 3 year average for Kippen Station.

³ To convert 100 Seed weight (g) to seeds per pound divide 45,400 by seed weight.

Example – $\frac{45,400}{63 \text{ gm}} = 720 \text{ seeds/lb}$

Table 6: St. Thomas Station: 2008-2010 Coloured Bean Performance Trial

Cultivar	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	2010	
Etna	Cran	82	63	3.21	2.82	3.31	2.77
Red Rider	Cran	89	62	3.59	3.63	3.95	3.08
Hooter	Cran	89	67	3.05	3.05	3.15	3.06
Average (t/ha)				3.28	3.17	3.47	2.97
Red Hawk	DRK	85	56	2.8	2.5	3.06	2.55
OAC Redstar	DRK	86	59	3.1	2.88	3.50	2.70
GTS 104	DRK	88	57	3.32	3.38	3.47	2.96
AC Calmont	DRK	88	58	3.09	3.06	3.53	2.74
Majesty	DRK	90	69	2.63	2.63	2.94	2.70
Average (t/ha)				3.09	3.05	3.41	2.80
OAC Lyrik	LRK	80	67	3.31	3.01	3.19	2.68
Pink Panther	LRK	84	66	3.33	2.99	3.38	2.88
Red Kanner	LRK	93	54	3.47	3.51	3.69	3.03
Average (t/ha)				3.47	3.37	3.60	2.98

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

² Days to Maturity is 3 year average for St Thomas Station.

³ To convert 100 Seed weight (g) to seeds per pound divide 45,400 by seed weight.

Example – $\frac{45,400}{63 \text{ gm}} = 720 \text{ seeds/lb}$

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	Hensall District Co-op P.O. Box 219, Hensall, ON N0M 1X0 (519) 262-3002
ADM Agri Sales Inc. (ADM A.S.I.) 2385 Wright Ave. Twin Falls, Idaho (208) 734-2550	Gen-Tec Seeds Ltd. P. O. Box 98, Woodslee ON N0R 1V0 (519) 975-2557	Hyland Seeds Div. of Thompsons Ltd. P. O. Box 250, Blenheim ON N0P 1A0 (519) 676-8146
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 501-300 March Rd Kanata ON K2E 2E2 (613) 592-8600
	Syngenta Seeds Inc. P.O. Box 4188 Boise Idaho 83704-4188 (208) 322-7272	