

Agriculture Development Branch 2009 Report – Ontario Dry Bean Variety Trials for 2007 - 2009

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 2009. The information is prepared annually by the Ontario Pulse Crop Committee and edited by the Ontario Ministry of Agriculture, Food and Rural Affairs.

REFERENCES:

For more information contact:

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

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

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Table 1a – White Bean Variety Performance Trial Long Season Area : 2007 - 2009

	Days to Maturity	Yield (t/ha) ¹				
		Long Season Area		Kippen		
		3 year	2 year	3 year	2 year	2009
AC Compass	89	3.40	3.57	3.24	3.41	3.37
Lightning	93	3.43	3.39	3.44	3.39	3.26
T9903	94	3.16	3.29	3.15	3.33	3.32
AC Cruiser	95	3.52	3.47	3.52	3.43	3.23
AC Mast	95	3.63	3.57	3.54	3.39	3.22
OAC Thunder	96	3.64	3.57	3.60	3.49	3.56
OAC Dublin	96	3.32	3.45	3.28	3.47	3.60
GTS 544	97	3.12	2.98	3.25	3.11	3.19
Vista	97	3.17	3.10	3.19	3.11	3.08
T9905	97	3.47	3.53	3.42	3.49	3.53
Reliant	97	3.40	3.35	3.49	3.46	3.32
GTS 564	97	3.38	3.43	3.49	3.62	3.55
Viscount	100	3.07	3.02	3.07	2.99	3.02
Nautica	101	3.21	3.12	3.17	3.01	2.86
OAC Rex	101	3.41	3.58	3.32	3.51	3.32
Average Yield (tonnes/ha)		3.36	3.36	3.34	3.35	3.30
LSD (0.05) kg/ha ²				289	272	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			
Kippen	2009	2008	2007
Kemptville			
Granton			

Table 1b – White Bean Variety Performance Trial Short Season Area: 2007 - 2009

	Days to Maturity	Yield (t/ha) ¹										
		Short Season All Locations ³		Brussels			Kippen			Elora		
		3 year	2 year	3 year	2 year	2009	3 year	2 year	2009	3 year	2 year	2009
AC Compass	94	2.95	3.22	3.61	4.23	3.46	3.24	3.41	3.37	2.00	2.00	1.87
Lightning	99	3.03	3.18	3.20	3.80	3.17	3.44	3.39	3.26	2.46	2.36	2.39
T9903	99	2.78	2.99	2.90	3.50	2.41	3.15	3.33	3.32	2.28	2.14	1.65
AC Cruiser	100	2.91	3.11	3.23	3.93	3.22	3.52	3.43	3.23	1.97	1.97	2.02
OAC Thunder	100	3.14	3.32	3.45	4.12	3.54	3.60	3.49	3.56	2.36	2.36	2.36
AC Mast	102	3.07	3.15	3.35	3.99	3.06	3.54	3.39	3.22	2.31	2.07	2.21
OAC Dublin	102	2.85	3.16	3.04	3.79	3.33	3.28	3.47	3.60	2.23	2.23	2.16
GTS 544	102	2.77	2.84	3.02	3.54	2.88	3.25	3.11	3.19	2.04	1.86	1.60
Reliant	105	2.99	3.12	3.14	3.74	3.07	3.49	3.46	3.32	2.33	2.16	2.14
Vista ³	105	3.07	3.03		3.75	3.10	3.19	3.11	3.08		2.22	1.87
GTS 564 ³	106	3.29	3.31		3.95	3.39	3.49	3.62	3.55		2.34	2.25
T9905 ³	106	3.17	3.15		3.80	3.25	3.42	3.49	3.53		2.17	2.01
OAC Rex	108	2.89	3.19	3.34	4.08	3.62	3.32	3.51	3.32	2.03	1.98	2.04
Nautica	108	2.74	2.91	2.98	3.59	3.12	3.17	3.01	2.86	2.08	2.13	2.38
Viscount ³	109	3.13	3.11		3.88	3.40	3.07	2.99	3.02		2.47	2.39
Average Yield (t/ha)¹		2.99	3.12	3.21	3.84	3.20	3.34	3.35	3.30	2.19	2.16	2.09
LSD (0.05) kg/ha ²				265	280	272	289	272	314			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

³ - the 3 Year Short Season yield for Vista, GTS 564, T9905, and Viscount does not have 2007 data for Brussels and Elora

Short Season Testing Locations			
Blyth/ Brussels	2009	2008	2007
Kippen	2009	2008	2007
Elora	2009	2008	2007



Table 2 – White Bean Characteristics and Distributors

Variety	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	20.9	R	R	S	S	S	2.6	2.6	Cooks	
T9903	21.4	R	R	R	R	R	3.2	3.2	Hyland	
Lightning	20.3	R	R	S	S	S	1.7	2.2	Hensall DC	
AC Mast	20.0	R	R	S	S	S	2.2	3.4	Advantage	
AC Cruiser	19.6	R	R	S	S	S	2.5	2.9	Hensall DC	
OAC Thunder	21.3	R	R	S	S	S	2.2	3.0	SeCan	
OAC Dublin	19.5	R	S	S	S	S	2.0	3.0	Bolton, Rosebank Farms	
T9905	20.7	R	R	R	R	S	2.3	2.9	Hyland	
Vista	18.6	R	R	R	R	S	2.2	2.8	Cooks, Hyland, Hensall DC	
Reliant	18.8	R	R	NA	NA	S	2.3	3.2	Cooks, Hyland, Hensall DC	
Nautica	17.9	R	R	S	S	S	2.0	2.1	SeCan	
GTS 564	18.3	R	R	S	S	S	NA	2.9	Cooks, Hyland, Hensall DC	
GTS 544	20.6	R	R	NA	R	S	2.4	3.2	Cooks, Hyland, Hensall DC	
Viscount	18.0	R	R	NA	NA	S	2.2	3.0	Cooks, Hyland, Hensall DC	
OAC Rex*	20.3	R	R	S	S	S	2.0	2.7	Hensall DC	

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

² 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.

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 for 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 Trial – Three Year Summary

Variety	Market Class	Days to Maturity ²	Yield (t/ha) ¹		100 Seed Weight ² (g)	Disease Reaction ³					Distributor
			3 Year	2 Year		Bean Common Mosaic Virus		Anthracnose ⁴			
						Race 1	Race 15	Alpha Race 17	Delta Race 23	Race 73	
Etna	Cran	94	2.67	2.64	63	R	R	S	S	S	Cooks
AC Red Rider	Cran	100	2.92	2.93	61	R	R	R	R	NA	SeCan
Hooter	Cran	101	2.99	2.99	66	R	R	S	S	NA	Cooks
Red Hawk	DRK	95	2.54	2.53	56	R	R	R	S	R	Hyland
OAC Redstar	DRK	97	2.63	2.63	60	R	R	R	S	NA	SeCan
Montcalm	DRK	100	2.49	2.54	58	R	R	R	S	R	Public Variety
AC Calmont	DRK	100	2.61	2.65	57	R	R	R	S	R	Hensall DC
Majesty	DRK	99	2.66	2.61	68	R	R	R	S	NA	Hensall DC
GTS 104 ²	DRK	99		2.90	57	NA	NA	NA	NA	NA	Gentec
OAC Lyrik	LRK	92	2.65	2.70	68	R	R	R	S	NA	Public
AC Elk	LRK	94	2.60	2.60	63	R	S	R	R	R	Public Variety
Pink Panther	LRK	95	2.81	2.83	65	R	R	R	S	R	Cooks
Red Kanner	LRK	105	2.88	2.92	54	R	R	S	S	NA	Hyland
Average (t/ha)			2.73	2.76							

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

² Days to Maturity and Seed weight is 3 year average. GTS 104 information is for 2 years 2008-09

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.

Testing Locations			
Kippen	2009	2008	2007
Monkton	2009	2008	
St. Thomas	2009	2008	
Thorndale	2009	2008	2007
Elora	2009	2008	

Thorndale Station Report: 2007 – 2009 Coloured Bean Performance Trial

Cultivar	Market Class	Days to Maturity Thorndale ²	100 Seed Weight ² (g)	Yield t/ha ¹			3 Year All Locations
				Thorndale			
				3 Year	2 Year	2009	
Etna	Cran	97	63	2.60	2.41	1.94	2.67
Red Rider	Cran	102	61	2.92	3.01	2.54	2.92
Hooter	Cran	103	66	3.06	3.13	2.31	2.99
Average (t/ha)				2.86	2.85	2.26	2.97
Red Hawk	DRK	97	56	2.28	2.20	1.65	2.54
OAC Redstar	DRK	101	60	2.39	2.25	1.57	2.63
Majesty	DRK	102	68	2.79	2.85	2.24	2.66
Montcalm	DRK	103	58	2.35	2.51	2.42	2.49
GTS 104 ²	DRK	103	58		2.98	2.47	
AC Calmont	DRK	103	57	2.32	2.39	2.33	2.61
Average (t/ha)				2.46	2.53	2.11	2.61
OAC Lyrik	LRK	95	68	2.37	2.22	1.79	2.65
AC Elk	LRK	97	63	2.47	2.31	1.84	2.60
Pink Panther	LRK	98	65	2.75	2.73	2.10	2.81
Red Kanner	LRK	106	54	2.52	2.63	2.47	2.88
Average (t/ha)	--			2.53	2.47	2.05	2.77

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

² Days to Maturity & seed weight is 3 year average for Thorndale station. GTS 104 maturity & seed weight is for 2 years 2008-09

Kippen Station Report: 2007 – 2009 Coloured Bean Performance Trial

Cultivar	Market Class	Days to Maturity Kippen ²	100 Seed Weight ² (g)	Yield t/ha ¹			
				Kippen			3 Year All Locations
				3 Year	2 Year	2009	
Etna	Cran	89	63	2.70	2.72	2.81	2.67
Red Rider	Cran	95	61	3.06	3.08	3.14	2.92
Hooter	Cran	97	66	3.26	3.36	3.49	2.99
Average (t/ha)				3.00	3.03	3.15	2.97
Red Hawk	DRK	90	56	2.54	2.50	2.61	2.54
OAC Redstar	DRK	92	60	2.64	2.68	2.85	2.63
GTS 104 ²	DRK	95	57		2.82	3.06	
Majesty	DRK	94	68	2.93	2.83	3.19	2.66
AC Calmont	DRK	95	57	2.75	2.80	2.84	2.61
Montcalm	DRK	94	58	2.56	2.63	2.87	2.49
Average (t/ha)				2.71	2.74	2.94	2.61
OAC Lyrik	LRK	88	68	2.51	2.71	3.19	2.65
AC Elk	LRK	90	63	2.56	2.63	2.98	2.60
Pink Panther	LRK	90	65	2.85	2.96	3.25	2.81
Red Kanner	LRK	100	54	2.93	2.87	2.84	2.88
Average (t/ha)	--			2.75	2.80	3.07	2.77

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

² Days to Maturity and seed weight is 3 year average for Kippen Station. GTS 104 maturity & seed weight is for 2 years 2008-09

St. Thomas Station: 2007 – 2009 Coloured Bean Performance Trial

Cultivar	Market Class	Days to Maturity St Thomas ²	100 Seed Weight ² (g)	Yield t/ha ¹			3 Year All Locations
				St Thomas			
				3 Year (2006, 2008, 2009)	2 Year	2009	
Etna	Cran	86	63	3.33	3.17	2.34	2.67
Red Rider	Cran	92	61		3.41	3.32	2.92
Hooter	Cran	92	66	2.80	3.00	2.96	2.99
Average (t/ha)				3.07	3.19	2.87	2.97
Red Hawk	DRK	88	56	2.86	2.68	1.94	2.54
OAC Redstar	DRK	89	60	2.81	2.91	2.26	2.63
AC Calmont	DRK	91	57	2.81	2.86	2.59	2.61
GTS 104	DRK	91	58		3.24	3.30	
Montcalm	DRK	92	58	2.58	2.49	2.42	2.49
Majesty	DRK	94	68	2.59	2.47	2.32	2.66
Average (t/ha)				2.73	2.78	2.47	2.61
OAC Lyrik	LRK	83	68	3.27	3.37	2.84	2.65
AC Elk	LRK	84	63	3.18	3.27	2.60	2.60
Pink Panther	LRK	88	65		3.30	2.61	2.81
Red Kanner	LRK	96	54	3.08	3.36	3.32	2.88
Average (t/ha)	--			3.18	3.33	2.84	2.77

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

² Days to Maturity and seed weight is 2 year average for St Thomas Station 2008-2009. GTS data is for 2 years 2008- 2009

Monkton Station Report: 2007 – 2009 Coloured Bean Performance Trial

Cultivar	Market Class	Days to Maturity Monkton ²	100 Seed Weight (g)	Yield t/ha ¹			
				Monkton			3 Year All Locations
				3 Year (2006, 2008, 2009)	2 Year	2009	
Etna	Cran	99	63	3.40	3.06	2.68	2.67
Red Rider	Cran	106	61		3.33	3.06	2.92
Hooter	Cran	106	66	3.70	3.36	3.25	2.99
Average (t/ha)				3.55	3.25	3.00	2.97
Red Hawk	DRK	97	56	3.38	3.23	2.45	2.54
OAC Redstar	DRK	99	60	3.55	3.33	3.08	2.63
GTS 104	DRK	100	57		3.43	3.17	
Majesty	DRK	100	68	3.49	3.45	2.84	2.66
AC Calmont	DRK	101	57	3.21	3.05	2.78	2.61
Montcalm	DRK	102	58	3.11	2.97	2.44	2.49
Average (t/ha)				3.35	3.24	2.79	2.61
OAC Lyrik	LRK	94	68	3.13	3.00	2.88	2.65
AC Elk	LRK	95	63	3.02	2.76	2.55	2.60
Pink Panther	LRK	99	65		3.02	2.84	2.81
Red Kanner	LRK	108	54	3.74	3.63	3.14	2.88
Average (t/ha)	--			3.30	3.10	2.85	2.77

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

² Days to Maturity is 2 year average (2008-2009) for Monkton Station.

Table 4 – Addresses of Distributors for Edible Bean Varieties

Advantage Seed Growers and Processors Inc. Box 351 Lucknow, Ontario 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
Rosebank Seed Farms Ltd. 7340 Perth Line 24, R. R. #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

Agricultural Information Contact Centre:

1-877-424-1300

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

Northern Ontario Regional Office:

1-800-461-6132

www.ontario.ca/omafra