



Annual Report

October 31st, 2013





Vision

**Ontario Apples...a healthy consumer...
a healthy industry.**

Mission

**To foster a viable apple industry through
advocacy with government and collaboration
with industry partners for the health of
consumers and the wealth of producers.**

ONTARIO APPLE GROWERS

TENTH ANNUAL REPORT

October 31, 2013



COMMENTS FROM THE CHAIR

What a difference a year makes. This time last year we were dealing with a devastating crop failure due to warm March temperatures followed by bud killing spring freezes. Apple farmers continue to deal with the repercussions of 2012.

Generally speaking, the 2013 Ontario apple crop returned to at least normal. With production areas in a variety of locations across southern Ontario, crops often vary dramatically. While some apple farmers in the southwest lost a second crop to spring frosts, a number of orchards saw new production records. Apple size was certainly above normal with ample rainfall in most growing areas. Hail was at or slightly above average across the province but, for those affected, the losses were painful.

We were deeply disappointed when the provincial and federal governments announced there would not be any AgriRecovery funding for Ontario's apple farmers. Governments' assessment of the 2012 freeze/frost events, under the federal-provincial-territorial AgriRecovery Framework, found that the estimated "comprehensive assistance" available under business risk management programs would sufficiently address the resulting income and production losses. Apple farmers with production insurance received significant claims, however, it remains to be seen how AgriStability will react and assist farmers. Once the hard numbers are available, we are asking for a review to be conducted, to confirm that program coverage estimates were accurate.

The federal and provincial governments did respond with a 'Weather Risk Mitigation Strategy Program' implemented in early 2013. This funding was to provide a little something to help apple farmers strategize on how they could minimize future weather perils. This program also assisted Ontario's apple farmers to be better positioned when applying for funding assistance through the GF2 Implementation Program.

The OAG Risk Management Committee worked closely with Agricorp this year reviewing some of the crop insurance plan components. Our greatest concern was the ongoing impact the 2012 yield would have on a farmer's crop insurance coverage. We are pleased to advise that there will be an adjustment to a farmer's 2012 FAY, starting in 2014, which will help. OAG thanks Agricorp and both the provincial and federal governments for their assistance in this area. We look forward to continuing our work with Agricorp to strengthen the apple production plan. There seems to be an increased willingness on governments' part to help make improvements to our production insurance. More details on risk management activities can be found on page 16. I'd like to thank Brett Schuyler for taking on the position of Risk Management Committee Chair during these demanding times.

Our relationship with both levels of government is not limited to business risk management and other support programming. In Ontario, the minimum wage issue has been discussed at great length and efforts are being made to develop a non-political mechanism to deal with increases. A Minimum Wage Panel was established and the OAG, along with a number of farm groups, made presentations. With a high percentage of our Cost of Production (COP) linked to wages, our sector is dramatically affected by any wage increases. It is important for government stakeholders to understand that apples are a commodity priced item and that we are not able to simply pass COP increases on to the consumers in the price of our apples.

The Local Food Act has been passed and some policy is beginning to take shape. The goal of the Act is to increase local food awareness, boost sales by setting local food targets all in consultation with

industry stakeholders. The new legislation also includes creating a non-refundable tax credit of 25% for farmers who donate their surplus harvest to eligible community food programs such as food banks.

Charles Stevens, our Vice-Chair, is also the Chair of the Crop Protection Committees for both the Ontario Fruit & Vegetable Growers' Association (OFVGA) and the Canadian Horticultural Council (CHC). Product cost differentials and the ongoing review of the crop protection materials that we use require our continued input and thanks to Charles for his work in this very important area.

The OAG continues to be very involved with research and development for the apple industry. We are very fortunate to have excellent staff at OMAF/MRA working on the apple team. They provide us with information and support for which we are greatly appreciative. Thank you to Cathy McKay who once again led the Research Committee. This past year, the OAG's 12% contribution in seed funding has resulted in just under \$500,000 in research for the Ontario apple sector. Funding from the provincial and federal governments is critical to our industry and we thank them, the Agricultural Adaptation Council, University of Guelph and Vineland Research and Innovation Centre, for their continue work and contributions. Further details on all the research projects undertaken by the OAG and our research partners are included later in this Annual Report.

The Remote Storage Lab in Simcoe continues to be fully utilized on apple related projects – both provincial and national in scope. Under the Agri-Innovations Program, there will be apple storage research projects conducted at the lab for the next five years. The OAG extends their thanks to Dr. Jennifer DeEll, OMAF/MRA Post-harvest Lead, and the Norfolk Fruit Growers' Association for their continued support and assistance.

The OAG continues to work closely with Foodland Ontario to promote 'Buy Local' and Ontario apples. We extend a special thank you to the staff at OMAF/MRA and Foodland Ontario for recognizing the challenges that Ontario apples face at the retail level following our 2012 crop failure. Getting back on the store shelves after such a long absence was our goal this year and we designed promotions to address this with the assistance of the Foodland staff. We would also like to thank Horticultural Crops Ontario for their grant towards our promotional activities.

In conclusion, my sincere thanks go to all the directors and committee members for their support and participation again this year. We also appreciate the efforts of those growers who, while not Directors, provide the apple perspective to various organizations – they include John Ardiel (FARMS and CanAg) and Steve Versteegh (FARMS). The Board participated in Strategic Planning earlier this year and I would ask that you review the related summary contained in this annual report.

I would like to thank our staff, Kelly Ciceran and Larissa Osborne, for all their efforts on our behalf. Their commitment and hard work are invaluable to the OAG. Thank you also to the staff at Grape and Tender Fruit (Ontario) Ltd. including Sylvana Lagrotteria, Maureen Connell and Morag Tait for their contributions in running our organization.

My term as Chair has come to an end and I would like to thank you for the opportunity to be your representative. May the "Force" be with you!

Respectfully submitted,



Brian Gilroy
Chair

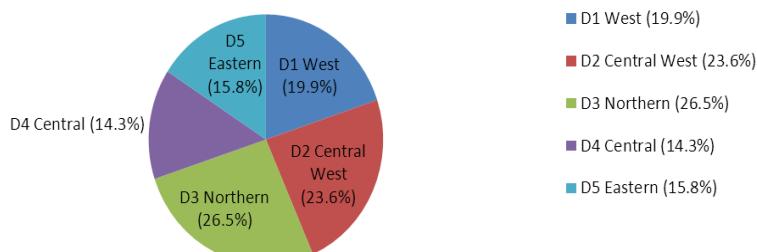
TENTH ANNUAL REPORT OF THE ONTARIO APPLE GROWERS

CROP AND MARKET REVIEW

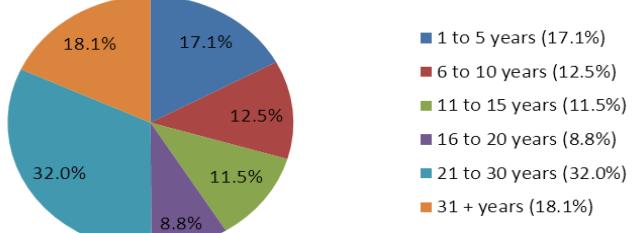
Tree Census

Tree census information (as of December 31st, 2012) is included on pages 10 and 11. This information is based on Agricorp's GPS mapping and information on total acreage provided by Statistics Canada. Agricorp continues to manage the ADaMS system for the OAG. The system provides reports on plantings by age, by variety and by district for all OAG members. Statistics Canada estimated that there are a total of 15,650 acres in Ontario. The assumption has been made that the variety mix for the remaining acres were about the same as for those that were mapped.

**2012 Ontario Apple Tree Acreage
by District**



**2012 Ontario Apple Tree Acreage
by Tree Age**

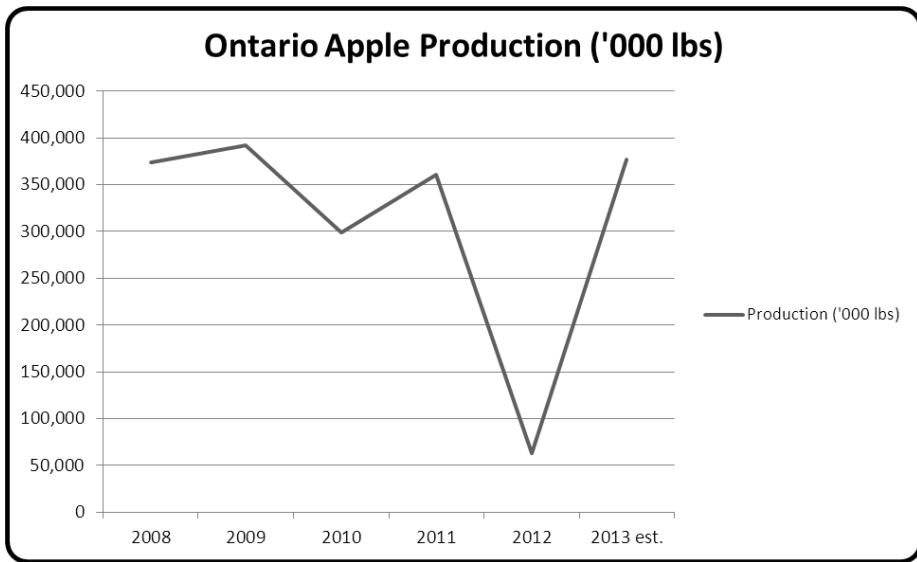


Crop Estimate

Due to the crop failure in 2012 it is more representative to compare the 2013 preliminary crop estimate with the 2011 estimate figures. The preliminary November 2013 apple crop estimate is up 4% over 2011.

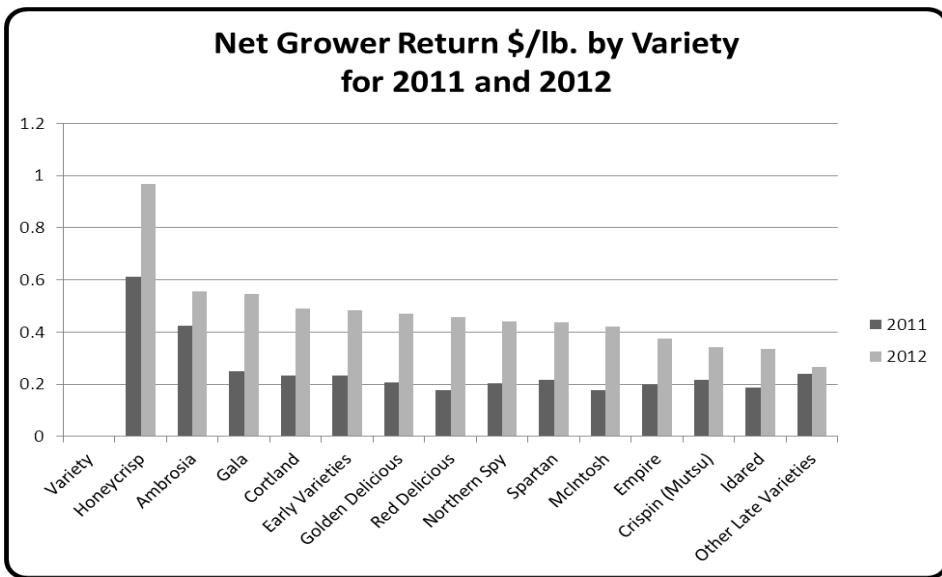
Ontario Apple Production (2008 – 2013)

	Production ('000 lbs)	% Change From Previous Year
2008	373,244	-24.6%
2009	392,384	5.1%
2010	299,168	-23.8%
2011	361,048	20.7%
2012	63,143	-82.5%
2013 est.	377,063	497.2%
5 Yr Avg ('07 – '11)	297,797	-



Marketing Survey

The results of the 2011 and 2012 marketing surveys are included and begin on page 6. The survey provides the industry average returns per pound and per bin (820 lbs.) by variety and represents the prices for 100% of the apples in the bin, not just those for the fresh market pack out. With this information, growers and packers can compare their results with the average. This information also provides valuable information for government programming.



Flyer Ad Tracking

The OAG tracks apple flyer ad activity at major retail. We record retail chain, variety, pack (bulk or bag), price/lb. and country of origin. This information is shared with the apple packers on a weekly basis.

Storage Holdings

The OAG continues to collect storage holdings for the industry. As always, individual storage holder data is kept confidential. Similar information is collected in other apple producing provinces. This information is entered into AAFC's InfoHort system and published on their website. The OAG summarizes the Canadian data and combines it with similar statistics on the U.S. crop and provides it to the marketers, storage holders and our grower members. The OAG thanks all the storage cooperators for their excellent participation.

DISTRICT APPLE PRODUCERS' COMMITTEES

Each District has a District Apple Producers' Committee and each District may elect one committee person for each 20 growers. If the District is not a multiple of 20, then there shall be one grower representative for each 20 growers plus one additional representative. On or before December 31st of each year, each District Apple Producers' Committee will elect two members to the board of directors of the Ontario Apple Growers. Based on the current membership, the number of growers to be elected to the District Committees is as follows:

<u>District</u>	<u>Grower Numbers</u>	<u>Committee Numbers</u>
District 1	42	3
District 2	38	3
District 3	47	3
District 4	34	3
District 5	<u>32</u>	<u>3</u>
Members	193	<u>15</u>
Voluntary Members	<u>35</u>	
TOTAL MEMBERS	229	

APPLE INDUSTRY STATISTICS

2013 APPLE CROP ESTIMATE

Varieties	November 2011 Production ('000 lbs.)	November 2012 Production ('000 lbs.)	November 2013 Production ('000 lbs.)	% Change 2013 vs. 2012	% Change 2013 vs. 2011
Other Early Varieties	5,136	1,484	5,290	256.4%	3%
Ambrosia	1,609	737	4,048	449.4%	152%
Cortland	6,512	2,566	7,679	199.3%	18%
Crispin/Mutsu	5,481	543	5,519	917.0%	1%
Empire	54,054	2,378	51,543	2067.1%	-5%
Fuji	1,284	139	1,703	1128.3%	33%
Gala	12,963	4,277	19,755	361.8%	52%
Golden Delicious	11,568	2,973	10,804	263.4%	-7%
Honeycrisp	10,884	3,080	22,328	624.9%	105%
Idared	18,372	3,031	18,612	514.0%	1%
Jonagold	3,547	1,398	4,593	228.6%	29%
McIntosh	81,530	12,556	73,701	487.0%	-10%
Northern Spy	50,024	12,806	70,967	454.2%	42%
Red Delicious	27,902	4,213	27,861	561.3%	0%
Spartan	7,475	2,631	7,182	173.0%	-4%
Other Late Varieties	6,100	2,220	6,240	181.0%	2%
Total Fresh	304,440	57,033	337,826	492.3%	11%
Juice	56,608	6,110			
All Varieties	361,048	63,143	337,826		

2012 ONTARIO APPLE MARKETING SURVEY RESULTS

Production (Lbs.)		Fresh		Orchard Juice		Non-Juice		Total	
Variety		2012	2011	2012	2011	2012	2011	2012	2011
Ambrosia		736,920	1,604,547			-	4,293	736,920	1,608,840
Cortland		2,504,704	6,375,029			61,026	137,102	2,565,730	6,512,131
Crispin (Mutsu)		461,571	5,295,094			81,049	186,336	542,620	5,481,430
Early Varieties		1,409,996	4,883,617			74,304	252,035	1,484,300	5,135,652
Empire		1,704,566	49,955,914			673,814	4,097,772	2,378,380	54,053,686
Gala		4,261,839	12,828,248			15,621	134,507	4,277,460	12,962,755
Golden Delicious		2,852,988	9,830,533			119,992	1,737,891	2,972,980	11,568,424
Honeycrisp		3,065,934	10,846,007			14,236	37,993	3,080,170	10,884,000
Idared		1,070,477	15,251,998			1,960,903	3,120,002	3,031,380	18,372,000
McIntosh		9,941,458	72,671,344			2,614,162	8,858,656	12,555,620	81,530,000
Northern Spy		8,302,143	29,484,558			4,503,997	20,539,234	12,806,140	50,023,792
Red Delicious		3,889,123	27,532,199			324,077	369,801	4,213,200	27,902,000
Spartan		2,296,352	7,111,486			334,848	363,209	2,631,200	7,474,695
Other Late Varieties		3,093,984	9,365,643			662,606	1,565,402	3,756,590	10,931,045
Total		45,592,055	263,036,217	6,110,253	56,607,910	11,440,635	41,404,233	63,142,943	361,048,360

GROWER PRICE (\$/LB)									
Variety	Fresh (\$)		Orchard Juice (\$)		Non-Juice (\$)		Average Fresh and Non-Juice (\$)		
	2012	2011	2012	2011	2012	2011	2012	2011	
Ambrosia	0.556	0.424			0.163	0.104	0.556	0.423	
Cortland	0.499	0.235			0.120	0.103	0.490	0.232	
Crispin (Mutsu)	0.373	0.220			0.170	0.103	0.343	0.216	
Early Varieties	0.498	0.242			0.220	0.103	0.484	0.235	
Empire	0.445	0.209			0.198	0.104	0.375	0.201	
Gala	0.548	0.252			0.143	0.103	0.546	0.251	
Golden Delicious	0.476	0.225			0.295	0.103	0.469	0.207	
Honeycrisp	0.971	0.614			0.156	0.103	0.967	0.612	
Idared	0.468	0.191			0.265	0.161	0.336	0.186	
McIntosh	0.486	0.187			0.165	0.103	0.420	0.177	
Northern Spy	0.525	0.220			0.288	0.178	0.442	0.203	
Red Delicious	0.479	0.180			0.192	0.103	0.457	0.179	
Spartan	0.472	0.223			0.200	0.103	0.437	0.217	
Other Late Varieties	0.285	0.262			0.193	0.106	0.268	0.240	
Avg. Grower Price - All Utilization (\$/lb)	0.515	0.224	0.100	0.058	0.237	0.145	0.425	0.189	
Avg. Transaction - All Utilization (\$/lb)	0.571	0.295	0.100	0.058	0.255	0.163	0.468	0.243	

GROWER VALUE \$								
Variety	Fresh (\$)		Orchard Juice (\$)		Non-Juice (\$)		Total (\$)	
	2012	2011	2012	2011	2012	2011	2012	2011
Ambrosia	409,513	680,253			-	448	409,513	680,700
Cortland	1,249,855	1,495,953			7,323	14,053	1,257,178	1,510,006
Crispin (Mutsu)	172,061	1,166,224			13,813	19,118	185,873	1,185,342
Early Varieties	701,785	1,181,842			16,347	25,834	718,132	1,207,676
Empire	758,512	10,453,198			133,313	424,575	891,825	10,877,773
Gala	2,335,127	3,238,557			2,230	13,787	2,337,357	3,252,344
Golden Delicious	1,358,378	2,213,598			35,395	178,134	1,393,774	2,391,732
Honeycrisp	2,977,445	6,661,185			2,225	3,894	2,979,670	6,665,079
Idared	500,864	2,914,447			518,757	501,444	1,019,620	3,415,890
McIntosh	4,836,500	13,554,268			431,435	909,928	5,267,935	14,464,196
Northern Spy	4,360,259	6,484,695			1,298,918	3,654,952	5,659,177	10,139,647
Red Delicious	1,862,857	4,946,603			62,127	38,005	1,924,983	4,984,608
Spartan	1,082,749	1,588,396			66,887	37,229	1,149,637	1,625,625
Other Late Varieties	880,590	2,298,101			127,687	166,613	1,008,277	2,464,715
Total Grower Value	23,486,494	58,877,319	611,025	3,254,955	2,716,457	5,988,013	26,813,977	68,120,287
Total Transaction Value	26,036,406	77,652,153	611,025	3,254,955	2,922,388	6,733,289	29,569,820	87,640,397

Notes:

1. The above marketing data is based on a survey of six major Ontario apple marketers.
2. Juice production is estimated and reported as a total of the crop versus by variety as there is no way to determine the actual volume by variety.
3. Orchard juice price per lb. does not include sort outs (pack line culls) or handpicked apples for juice.
4. Transaction price for non-juice uses an historical factor of 1.8 cents added to the grower non-juice price.
5. Based on the survey results, variety mix for the entire crop may vary from the sample.
6. Total transaction value for fresh is determined using the combined bag and tray net return (before grower deductions) and takes into consideration the total pack out percentage from the 2012 marketer's survey.

APPLE MARKETING SURVEY 2012 CROP – SUMMARY

						2012	2012	2011	2010
	2012			Combined (Bag+Tray)	INDUSTRY AVG.	INDUSTRY AVG.	INDUSTRY AVG.	INDUSTRY AVG.	
Variety	Total lbs Graded	Total lbs Packed Fresh	Total Pack Out %	Return /lb.	Net Return /lb. Total Fruit Delivered For Fresh	Net Return /820 lb Bin Total Fruit in the Bin	Net Return /820 lb Bin Total Fruit in the Bin	Net Return /820 lb Bin Total Fruit in the Bin	
	1	2	5	16	22	22	22	22	
Ambrosia	1,631,202	1,432,741	88%	\$0.706	\$0.556	\$456	\$348	\$298	
Cortland	1,839,075	1,401,165	76%	\$0.713	\$0.499	\$409	\$192	\$181	
Crispin (Mutsu)	476,370	252,833	53%	\$0.724	\$0.373	\$306	\$181	\$126	
Early Varieties	1,580,678	1,222,112	77%	\$0.706	\$0.498	\$408	\$198	\$174	
Empire	4,278,631	3,140,231	73%	\$0.668	\$0.445	\$365	\$172	\$154	
Gala	14,153,459	12,602,122	89%	\$0.695	\$0.548	\$449	\$207	\$190	
Golden Delicious	2,014,826	1,550,172	77%	\$0.683	\$0.476	\$390	\$185	\$159	
Honeycrisp	2,479,730	2,019,794	81%	\$1.257	\$0.971	\$796	\$504	\$386	
Idared	1,635,536	1,244,420	76%	\$0.679	\$0.468	\$384	\$157	\$119	
McIntosh	16,883,061	13,550,404	80%	\$0.677	\$0.486	\$399	\$153	\$135	
Northern Spy	90,602	76,114	84%	\$0.670	\$0.525	\$431	\$180	\$210	
Red Delicious	8,352,105	7,466,507	89%	\$0.609	\$0.479	\$393	\$147	\$158	
Spartan	1,841,739	1,531,605	83%	\$0.637	\$0.472	\$387	\$183	\$175	
Other Late Varieties	760,745	26,791	4%	\$0.647	\$0.285	\$233	\$215	\$207	
Total(s)	58,017,759	47,517,011	82%	\$0.697	\$0.516	\$423	\$190	\$164	

2012 Ontario Apple Tree Acreage By Variety, By District

Variety Name	1 Western	2 Central West	3 Northern	4 Central	5 Eastern	Total Acreage	% of Total Crop
McIntosh	258	635	1,569	294	710	3,466	22.1%
Empire	343	672	231	149	229	1,623	10.4%
Gala	402	468	78	312	338	1,597	10.2%
Northern Spy	86	360	906	63	59	1,474	9.4%
Red Delicious	383	399	83	335	215	1,415	9.0%
Honeycrisp	195	262	216	150	248	1,070	6.8%
Golden Delicious	406	105	7	174	48	740	4.7%
Idared	136	164	261	63	81	705	4.5%
Ambrosia	226	138	92	102	93	650	4.2%
Crispin/Mutsu	167	103	22	153	43	487	3.1%
Cortland	46	101	124	82	81	435	2.8%
Spartan	18	48	170	22	65	324	2.1%
Jonagold	50	22	203	32	3	310	2.0%
Other ⁶	53	79	28	64	51	276	1.8%
Mixed	40	24	5	127	69	264	1.7%
Paulared	41	28	23	27	92	211	1.3%
Fuji	102	26	5	36	5	174	1.1%
Ginger Gold	66	39	6	18	14	143	0.9%
Jerseymac	20	2	71	4	2	98	0.6%
Golden Russet	15	8	15	18	27	84	0.5%
Jonamac	53	1	4	4	0	62	0.4%
Earligold	7	3	23	0	8	42	0.3%
TOTAL	3,112	3,686	4,143	2,231	2,479	15,650	100%

Notes:

1. District 1 Western is comprised of the upper-tier municipalities of Essex, Lambton and Middlesex and the single-tier municipality of Chatham-Kent.
2. District 2 Central West is comprised of the upper-tier municipalities of Huron, Perth, Oxford and Elgin and the single-tier municipalities of Haldimand and Norfolk.
3. District 3 Northern is comprised of the upper-tier municipalities of Bruce, Grey, Simcoe and Dufferin.
4. District 4 Central is comprised of the upper-tier municipalities of Wellington, Peel, York, Halton, Waterloo and Niagara and the single-tier municipalities of Brant, Toronto and Hamilton.
5. District 5 Eastern is comprised of the upper-tier municipalities of Durham, Northumberland, Peterborough, Frontenac, Hastings, Lanark, Lennox and Addington, Leeds and Grenville, Renfrew and Stormont, Dundas and Glengarry and Prescott and Russell and the single-tier municipalities of Kawartha Lakes, Ottawa and Prince Edward.
6. Other includes: Aurora Golden Gala, Braeburn, Cox's Orange Pippin, Creston, Elstar, Fortune, Goldrush, Granny Smith, Liberty, Lobo, Lodi, Macoun, Marshall Mac, Melba, Novaspny, Quinte, Rome, Shizuka, Silken, Sunrise, Transparent, Tydeman Red, Viking, Vista Bella, Wealthy, Winesap and Zestar.

2012 Ontario Apple Tree Acreage By Variety, By Tree Age

Variety Name	1 To 5 Years (2008-2012)	6 To 10 Years (2003-2007)	11 To 15 Years (1998-2002)	16 To 20 Years (1993-1997)	21 To 30 Years (1983-1992)	31 Years and Over (Pre-1983)	Total Acreage	% of Total Crop
McIntosh	223	276	288	227	1,502	950	3,466	22.1%
Empire	67	61	124	165	978	227	1,623	10.4%
Gala	729	315	277	170	100	10	1,600	10.2%
Northern Spy	152	68	193	119	537	405	1,474	9.4%
Red Delicious	117	33	171	179	572	342	1,415	9.0%
Honeycrisp	526	375	161	3	4	1	1,069	6.8%
Golden Delicious	121	87	123	102	210	97	740	4.7%
Idared	3	12	20	33	331	306	705	4.5%
Ambrosia	330	294	25	0	0	-	650	4.2%
Crispin/Mutsu	33	59	126	54	141	74	487	3.1%
Cortland	99	34	69	36	123	73	434	2.8%
Spartan	19	4	17	55	130	99	324	2.1%
Jonagold	12	196	15	33	44	11	310	2.0%
Other ¹	104	71	23	9	37	30	276	1.8%
Mixed	13	26	24	66	68	66	264	1.7%
Paulared	37	5	14	7	84	62	211	1.3%
Fuji	42	25	19	62	25	1	174	1.1%
Ginger Gold	33	14	74	19	3	0	143	0.9%
Jerseymac	-	2	2	7	54	33	98	0.6%
Golden Russet	4	2	27	8	26	18	84	0.5%
Jonamac	4	-	0	4	29	25	62	0.4%
Earligold	3	3	14	12	9	1	42	0.3%
TOTAL	2,672	1,963	1,806	1,371	5,007	2,831	15,650	100%

Notes:

▪ Acreage for both reports is based on the Dec. 31st, 2012 tree inventories as reported by growers to Agricorp and the 2012 Fall Harvest Survey (Statistics Canada).

¹ Other includes: Aurora Golden Gala, Braeburn, Cox's Orange Pippin, Creston, Elstar, Fortune, Goldrush, Granny Smith, Liberty, Lobo, Lodi, Macoun, Marshall Mac, Melba, Novaspay, Quinte, Rome, Shizuka, Silken, Sunrise, Transparent, Tydeman Red, Viking, Vista Bella, Wealthy, Winesap and Zestar.

IMPORTS OF FRESH APPLES 2012 (LBS)

PROVINCE	EMPIRE	GALA	GOLDEN DELICIOUS	GRANNY SMITH	IDA RED	MCINTOSH	RED DELICIOUS	UNSPECIFIED	TOTAL
Alberta		1,093,875	38,047	371,604		19,789	130,044	488,647	2,142,007
British Columbia		47,472,656	19,878,986	21,556,175	4,193	150,483	19,698,934	43,715,064	152,476,491
Manitoba		786,723	20,540	41,652		193,894	50,761	326,363	1,419,934
New Brunswick		646,994	282,870	711,230		2,163	475,171	1,235,848	3,354,276
Nova Scotia		728,323		95,927				588,283	1,412,533
Ontario	854,976	94,070,084	13,102,409	35,060,568	387,299	434,751	20,187,990	62,282,283	226,380,360
Québec	385,720	27,130,578	3,768,641	7,518,535	6,688,698	652,034	2,899,084	14,772,835	63,816,125
Saskatchewan		222,503	13,572	64,406		84,000	36,652	56,343	477,477
Total By Variety	1,240,696	172,151,736	37,105,066	65,420,097	7,080,190	1,537,114	43,478,636	123,465,667	451,479,202

Ontario - 2011	710,359	74,317,429	12,940,892	28,240,009	147,359	31,308	16,294,970	32,993,574	165,675,901
Ontario - 2012 vs. 2011	20%	27%	1%	24%	163%	1289%	24%	89%	37%
Total By Variety - 2011	897,219	127,169,960	22,622,267	53,878,569	166,380	689,704	33,326,480	68,098,628	306,849,208
Total By Variety - 2012 vs. 2011	38%	35%	64%	21%	4155%	123%	30%	81%	47%

IMPORTS OF FRESH APPLES - 5 YEAR AVERAGE 2008-2012 (LBS)

PROVINCE	EMPIRE	GALA	GOLDEN DELICIOUS	GRANNY SMITH	IDA RED	MCINTOSH	RED DELICIOUS	UNSPECIFIED	TOTAL
Alberta		2,421,271	195,553	657,666		9,019	374,883	513,588	4,171,981
British Columbia	11,719	39,073,138	10,818,063	19,106,125		77,144	16,172,476	30,441,149	115,699,814
Manitoba		246,436	30,426	67,676		331,737	58,665	189,462	924,401
New Brunswick		954,652	381,655	721,568		647	490,119	713,931	3,262,572
Nova Scotia		320,849		158,617				166,274	645,741
Ontario	921,994	71,432,611	14,282,430	31,179,480	349,188	166,630	20,112,523	38,472,687	176,917,544
Québec	370,798	16,204,143	2,461,441	8,224,543		363,712	2,470,967	6,442,554	36,538,158
Saskatchewan		96,537	13,502	25,239		152,919	23,689	32,620	344,504
Total by Variety	1,304,511	130,749,636	28,183,072	60,140,914	349,188	1,101,806	39,703,321	76,972,266	338,504,715

Ontario - 2012 vs. 5 Year Average	-7%	32%	-8%	12%	11%	161%	0%	62%	28%
Total By Variety - 2012 vs. 5 Year Average	-5%	32%	32%	9%	1928%	40%	10%	60%	33%

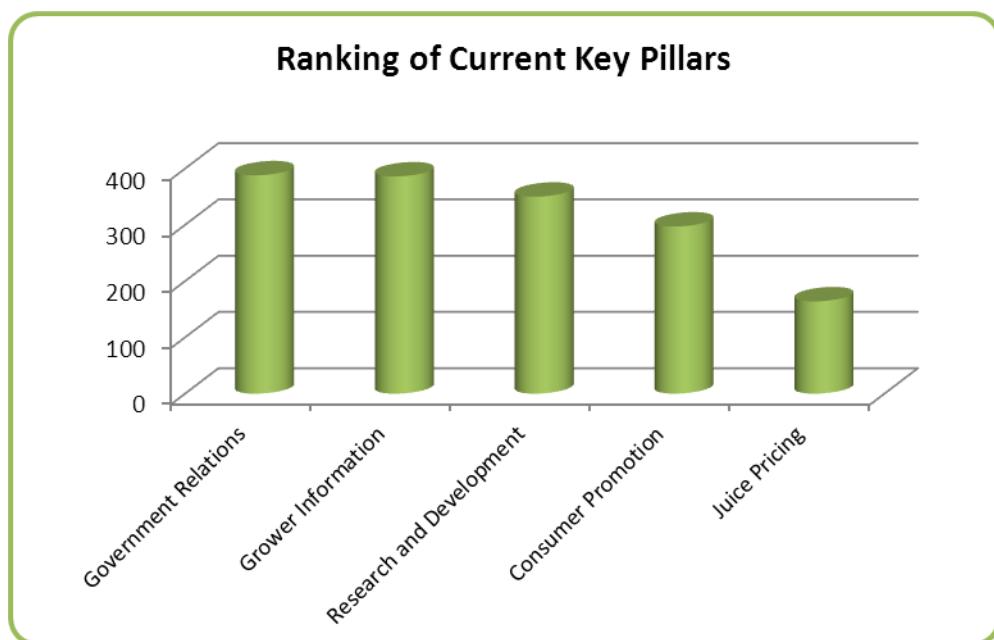
OAG STRATEGIC PLAN

In early 2013, the Ontario Apple Growers engaged Fitzgerald & Co. to assist the Board of Directors complete a new Strategic Plan; the current plan was written in 2007. The first step in this process was to determine if the five key pillars from the existing plan are still relevant and to gather input from growers on priority areas on which to focus for the coming five years.

The survey was posted on-line, mailed in hard copy to all apple growers, and an electronic version was also e-mailed to all growers. We received 102 completed surveys which represents 41.6% of the membership base.

Of the 102 surveys received, 83 provided acres grown which totaled 6,278 acres (52% of provincial acreage). Extrapolating that number to the full survey sample would give us 7,715 acres of apples grown by the survey respondents or 64% of the Ontario acreage.

Members were asked to rank the current five pillars of the OAG's mandate in order of importance. The top two priorities remain government relations and grower information followed by research, promotion and juice apple pricing. Members were given the opportunity to suggest additional mandates, however, the suggested topics could all be assigned to one of the existing topic areas.

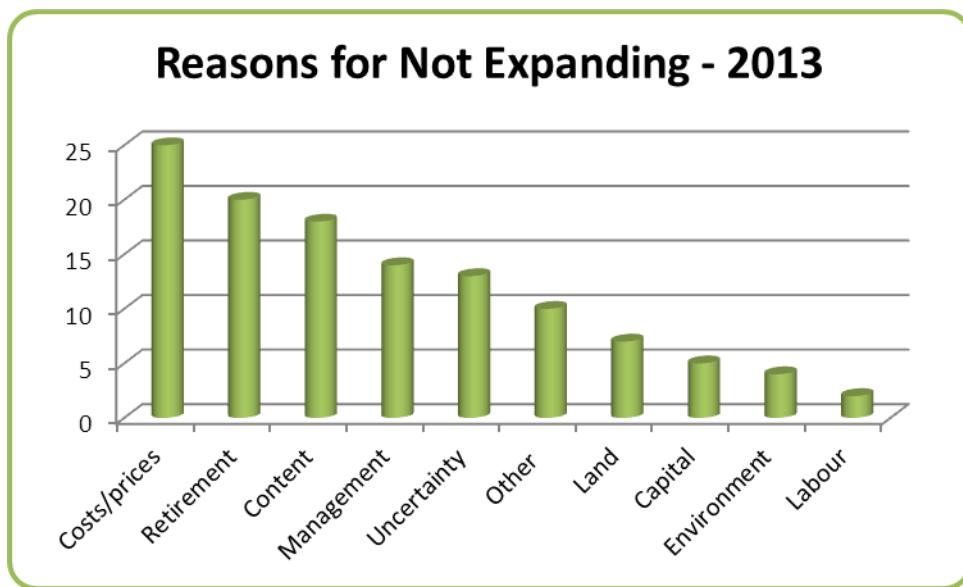
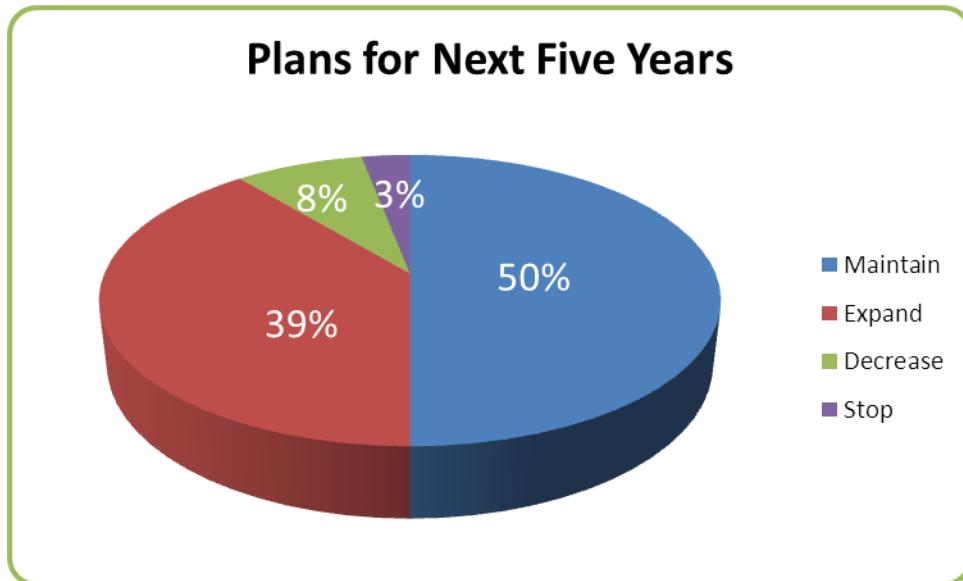


The survey results also indicated the following:

- 62% of respondents felt that the existing number of meetings/educational sessions is sufficient. However, 32% wanted more or different types of programs.
- The top three priority areas for research and development are: disease, insects and breeding.
- Only 5% of respondents felt that there should be fewer resources put towards consumer promotion. Maintaining the existing level was supported by 43% but a very close 40% felt more was required.

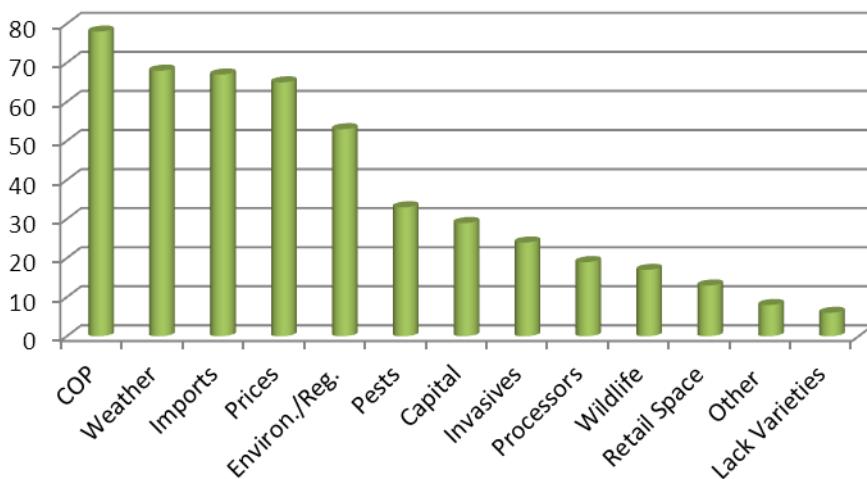
In an effort to gauge the optimism within the industry, respondents were asked whether their farming operation in general was better or worse off than five years ago (2008). We also asked if they thought it was going to be better or worse off in 2018 (five years hence) as compared to current. Ontario apple growers are a fairly positive group. As compared to 2008, 52% felt they were better off, 26% saw no change but 22% felt they were worse off. The outlook is even more positive with a very strong 71% indicating they felt their farms would be better off in 2018 and only 9% selecting worse off.

In an attempt to determine what the Ontario apple sector might look like in five years' time, we asked growers about their production plans for the next five years. Half are going to maintain their current acreage, however, a significant 39% plan to expand. Only 11% are going to decrease their acreage or stop growing apples entirely. Not surprisingly, the growers indicating they intended to expand were in the "better off" categories for the previous question on optimism except for two growers who felt their operation was going to be worse off in the next five years but plan to expand anyway. The only direct correlations we found with age were that those in the 65+ category age were significantly less likely to be planning an expansion and more likely to cite retirement as the reason why.



Looking ahead over the next five years, respondents were asked what they perceived to be the greatest challenges for apple growers. They were asked to not select more than five. The top four challenges cited were: rising cost of production; weather extremes; increased competition from imports; and low prices/profitability.

Challenges for Apple Growers over Next Five Years



Using the information learned in the member survey, we have streamlined the OAG mandate to include the following priority areas and corresponding key strategies:

Government Relations

- Represent the interests of Ontario apple growers at all government levels
- Work closely with government and other agricultural groups on new regulations and government policy issues
- Maintain existing alliances and forge new partnerships where appropriate

Grower Information

- Keep all grower members informed on issues affecting the apple industry
- Transfer knowledge from leading-edge experts and companies to grower members

Industry Competitiveness, Research & Development

- Continuously broaden our market share by obtaining new information on consumer/customer characteristics and needs
- Facilitate the introduction of new varieties and new apple products to new and existing markets
- Maintain existing alliances and forge new partnerships where appropriate

Consumer Promotion

- Increase consumption of Ontario apples by educating consumers to the taste attributes of Ontario apples and the health benefits from eating apples
- Develop and implement a generic apple promotion plan to drive increased demand for Ontario apples
- Continuously broaden our market share by obtaining new information on consumer/customer characteristics and needs
- Seek out opportunities to build on the buy local trend
- Maintain existing alliances and forge new partnerships where appropriate

COMMITTEE REPORTS

RISK MANAGEMENT COMMITTEE REPORT

The Risk Management Committee met three times this past year. The Committee members are: Brett Schuyler (Chair), Chris Hedges, Pete Geerts, Rich Feenstra, Brian Gilroy, Art Moyer, Charles Stevens, and Mike Versteegh. The Committee provides input and deals with issues pertaining to the following Growing Forward suite of programs to farmers:

- Agri-Insurance
- Agri-Invest
- Agri-Stability
- Agri-Recovery

Given the crop situation for 2012, the OAG requested to Minister Ritz and Minister McMeekin that grower's 2012 yield be removed from their FAY calculation and that premium rates remain at 2012 levels. There was no decision made in time for the 2013 apple production plan year. However, following several meetings, the federal and provincial governments have agreed that 2012 was an infrequent occurrence and will be implementing an adjustment to growers 2012 Final Average Yield (FAY). They will replace the grower 2012 actual yield with 60% of the grower 2012 FAY (average of the 2011 to 2006 yields).

The Risk Management Committee has developed a list of crop insurance priorities and the OAG will continue to work with Agricorp on these items in the coming year.

Following is a review of the current programming.

Agri-Insurance - The following table provides a summary of the Agri-Insurance results for 2008 to 2013:

Apple Crop Insurance, 2008 - 2013

Year	Accounts	Liability ,000's	Total Premiums ,000's	Grower Share of Premiums ,000's (a)	Claims ,000's (b)	Net Benefit to Growers ,000's (b) - (a)
2013	145	\$ 33,905	\$ 7,065	\$ 3,682	unknown	unknown
2012	140	\$ 34,866	\$ 3,504	\$ 1,546	\$ 26,858	\$ 25,330
2011	139	\$ 28,473	\$ 3,657	\$ 1,916	\$ 3,036	\$ 1,120
2010	139	\$ 27,912	\$ 3,823	\$ 2,001	\$ 2,428	\$ 427
2009	143	\$ 28,242	\$ 4,317	\$ 2,266	\$ 3,694	\$ 1,427
2008	148	\$ 26,233	\$ 3,960	\$ 2,066	\$ 8,190	\$ 6,124
5 Year Average ('08 - '12)	142	\$ 29,145	\$ 3,852	\$ 1,959	\$ 8,841	\$ 6,886

AgriStability - AgriStability covers margin declines caused by any combination of production losses, adverse market conditions or increased costs. If a producer's margin falls below 70 per cent of their recent average, AgriStability helps to offset the difference. The following table shows apple AgriStability Program participation and payments. Reporting is done by sector and can fluctuate year to year, as the annual sector determination is based on program-year reported income. Sector determination (apple, G&O, cattle, etc.) is based on income at or greater than 50% of total reported income in the program year. This means that an "apple" producer could be reported as a grain and oilseed producer (for

example) if their apple traditional, predominant apple income drops in a given year, due to a disaster circumstance.

AgriStability Apple Statistics

(as of October 28th, 2013)

Year	Processed	Payments	Total \$	Average
2010	217	71	\$2,626,015	\$36,986
2011	210	41	\$1,041,944	\$25,413
2012	187	76	\$1,325,409	\$17,440

AgrilInvest - AgrilInvest is a savings account that producers can use to either cover small income declines or support other investments. Each year, producers can deposit up to 1.0 percent of their ANS into a bank account and receive a matching government contribution. Producers can withdraw funds at any time.

Self-Directed Risk Management Program (SDRM) – The self-directed risk management (SDRM) plan for edible horticulture allows participants to deposit funds into an SDRM account, receive government contributions and withdraw funds to cover risk to their farm business. To be eligible, farmers must grow at least one of the more than 100 eligible commodities for a minimum of six consecutive months in the 2012 taxation year, file a T1163 to Canada Revenue Agency or submit a statement A to Agricorp for 2012. Farmers must also have a minimum of \$5,000 in allowable net sales in 2012 and participate in AgriStability to receive a participant package.

As of Oct 20th, 2013:

- Under the 2011 SDRM: Edible Horticulture plan, governments funds of \$22.11 million were deposited in SDRM accounts
- Under the 2012 SDRM: Edible Horticulture plan, governments funds of \$23.10 million were deposited in SDRM accounts

FRESH APPLE ADVISORY COMMITTEE (FAAC)

The Fresh Apple Advisory Committee met twice and dealt with such issues as generic promotion, crop estimates, research requirements, food safety, and information requirements. The OAG and marketers have also had several conference calls to discuss crop and market conditions at the start of the harvest season. The make-up of FAAC is as follows:

Ontario Farm Products Marketing Commission

Anna Andres / Bette Jean Crews – Committee Chair (Farm Products Marketing Commission Director)

Grower Representatives

Bob Hepburn – Director, District 2

Keith Wright – Director, District 1

Art Moyer – Director, District 4

Apple Marketer Representatives

Mike Gibson – Algoma Orchards

Jim Dolmer – Bay Growers Inc.

Ken Martin – Martin's Family Fruit Farms

David Knight – Knight's Appleden (Alternate)

JUICE APPLE ADVISORY COMMITTEE (JAAC)

The Juice Apple Advisory Committee deals with issues relating to crop estimating, quality issues, recording and dissemination of information. The Juice Apple Advisory Committee members are:

Farm Products Marketing Commission

Anna Andres / Bette Jean Crews – Committee Chair (Farm Products Marketing Commission Director)

Grower Representatives

Pete Geerts – Director, District 1

Brett Schuyler – Committee Member, District 2

Art Moyer – Director, District 4

Juice Processor Representatives

Jay Johnson – Golden Town Apple Products

Vincent Giasson – A. Lassonde

JUICE APPLE NEGOTIATING AGENCY

In August 2013, a price agreement on orchard juice apples was established at 5.5 cents/lb. FOB the farm. In early October, following a conference call with A. Lassonde representatives, the minimum price for grounder juice apples was increased by \$0.005/lb. (half a cent) on the first 12.5 million lbs. of grounder apples purchased by A. Lassonde.

The marketing and pricing of packing line sort outs are outside of the authority of the OAG and are subject to supply and demand factors.

Grower Representatives

Brian Gilroy – Chair, District 3

Brett Schulyer – Director, District 2

John Deleeuw – Committee Member, District 5

Juice Processor Representatives

Jay Johnson – Golden Town Apple Products

Jean Gattuso – A. Lassonde

Sylvain Mayrand – A. Lassonde

GROWER INFORMATION AND COMMUNICATIONS

The OAG utilizes several means to reach our membership. All newsletters are currently distributed by mail with nine OAG newsletters sent between December 2012 and September 2013. There were four Orchard Network Newsletters mailed as well (December 2012, February, April, and September 2013). Also included in the mailings were several fact sheets provided by OMAF. The OAG staff also send out as required 'e-blasts' to the membership. These are often news articles or reminders and usually on a singular topic.

New this year was an "Ontario Apple Summer Tour" held on July 23rd in Simcoe and organized in partnership with OMAF and Norfolk Fruit Growers' Association. Just less than 200 apple farmers and industry representatives toured six locations in this apple growing area. The tour took us to:

- Spycrest Orchards
- Chris Hedges' Orchard
- Schuyler Orchards
- Lingwood Farms
- University of Guelph's Simcoe Research Station
- Norfolk Fruit Growers' Association



The OAG thanks our tour hosts for being so welcoming and sharing what works and what doesn't. Several stops had multiple speakers and we thank the many industry extension experts who shared their research and activities.

The OAG would like to recognize the tremendous financial support received from industry. This enabled us to offer the tour and meals free. Thanks to:

- Lakeview Vineyard Equipment
- AgroFresh
- Dupont
- EngageAgro and BASF
- Van Brenk Nursery
- Mori Essex Nurseries
- Vineland Research and Innovation Centre
- Ontario Orchard Supply
- Don Arthur Equipment
- PICO
- Kraus Nurseries
- Max Underhill Farm Supply
- NuFarm
- Cargill

PROMOTION REPORT

2012 Crop Year Promotional Activities Review

The Ontario Apple Growers work in collaboration with Foodland Ontario and the Apple Marketers' Association of Ontario (AMAO) on promotional programs to entice consumers to purchase Ontario apples. Given the greatly reduced crop in 2012 promotions were focused on the fall.

Foodland Ontario Fall 2012 Promotions:

- **Foodland Public Relations** – Year long Public Relations activities include monthly Press Releases featuring Ontario apples and communicates and encourages Ontario's food/lifestyle media (print and broadcast) to research, write and book Foodland Ontario recipe segments. These releases generated 109 articles with an editorial value of over \$500,000. They also generated 31 television appearances with an editorial value of over \$477,000.
- **Foodland Billboard** – Ontario Apples "Crunch the Good" was featured from mid-September 2012 to December 2012
- **Foodland TV Commercials** – 30 and 15 second commercials "The Good" with fresh Ontario apples. Commercials aired in heavy rotation for the month of September and the first week of October 2012.
- **Foodland Radio Tags** – Foodland Ontario Radio Tags for "Fresh Ontario Apples" were in rotation during September 2012.
- **2013 Foodland Calendar** – Foodland Ontario produced and distributed 500,000 calendars in November 2012. Apples were featured in October and November recipes as well as on the producer page.
- **Foodland Retailer Display Contest** – The 2012 apple contest ran from September 24th to November 30th. There were 195 entries (versus 82 in 2011). Partnering with Foodland, the OAG sponsors an apple display contest to encourage retailers to build eye-catching displays to entice shoppers to purchase Ontario apples. As part of their contest entry, individual stores report any lift in sales and product movement. All stores who participated in the contest saw an increase in sales.



Winter & Spring 2013 Promotions:

- **Spring Foodland Recipe Booklet** – featured three apple recipes and distributed 335,000 at retail stores and farmer's markets.

Ongoing Foodland Activities:

- **Website** – www.foodland.gov.on.ca is always a great source of information for recipes, care and handling tips and a section for children. They have an average of 1,700 visitors daily and 15 million page views per year.
- **Social Media** –
 - Facebook – Foodland Ontario has over 136,000 fans. There were 8 Ontario apple posts between October 2012 and February 2013 with 104,000 views, over 600 likes, 85 shares and over 250 comments.
 - Twitter – over 20,000 twitter followers since August 2008. Tweets about apples from September 2012 – February 2013 encouraging consumers to try recipes with Ontario apples.
 - Pinterest is the newest edition to Foodland's social media tools and has over 700 followers and has 12 apple recipes pinned.

2012 / 2013 OAG Initiatives

- **Ontario Produce Marketing Association (OPMA) Apple Months** – A portion of Ontario apple sales in October and November 2012 supports the OPMA's promotional program, Heart and Stroke Foundation and Canadian Cancer Society. This year, \$53,771 was raised by the Ontario apple industry and our retail partners.
- **OPMA's Learn Live Love Local Promotion** – is the OPMA's most recent promotional campaign and we are fortunate to be partners. The campaign includes website (www.learnlivelovelocal.com), recipe development and cooking videos, 24-month recipe calendar (2013 & 2014), commodity info booklets, billboards, retail flyer ads, and Facebook.



- **OPMA's Flavours of Freshness Calendar** – OAG participated in OPMA's the 24-month calendar (2013 & 2014) and had an Ontario apple recipe for October of each year.
- **Royal Winter Fair Promotion** – November 2nd – 11th, 2012 – Ontario Apples were showcased on the 3rd and 4th at the OFVGA Booth. The Royal Apple Competition again took place with a reduced number of entries from Ontario.

- **Ontario Produce Marketing Association Promotion** – OAG sponsored the Golf Tournament and Gala Dinner.
- **Breakfast on the Farm with Farm & Food Care** - The OAG was pleased to participate in Farm & Food Care's inaugural Breakfast on the Farm event June 22nd in New Dundee. Heritage Hill Farms opened their dairy farm to 2,000 people for an all-Ontario breakfast and to learn



more about Ontario agriculture. Premier Kathleen Wynne and other local politicians also attended the event. The OAG donated apple cider and had booth.

- **Farm & Food Care Culinary Student Tours** – An apple farm was toured as part of the educational culinary college tours coordinated by Farm & Food Care. The tours aim to educate future chefs on Ontario grown food. St. Clair College, Windsor were the visitors to the Harrow area apple orchard.
- **OAG Social Media** – OAG's Twitter (@ontarioapples) and Pinterest (Ontarioapples) are growing in followers and are an excellent way to connect with consumers, growers and media. OAG also launched on Facebook in 2013 (/OntarioAppleGrowers).

The OAG would like to thank Foodland Ontario for their invaluable assistance in promoting Ontario apples and “*all the good things that grow in Ontario*”! As well, the OAG sincerely thanks Hort Crops Ontario (HCO) for providing funding towards our promotional activities in 2012/2013.



Foodland Ontario Queen's Park Event, May 2013
(l to r: OAG Chair Brian Gilroy, Manager Kelly Ciceran,
Vice Chair Charles Stevens & Apple Marketers' Association Co-Chair Tom O'Neill)



Breakfast on the Farm Event, June 2012
(l to r: (OAG) Larissa Osborne, Brian Gilroy, Kelly Ciceran
& Jeff O'Donnell (Foodland Ontario)

RESEARCH AND DEVELOPMENT REPORT

The Research Committee is made up of the following members: Cathy McKay (Chair), Harold Schooley, Spencer Johnson, Pete Geerts and Art Moyer. Research priorities (see page 27) are established by the committee each November.

Research Projects

Apple Scab and Powdery Mildew Resistance Project – Margaret Appleby, Leslie Huffman and Kristy Grigg-McGuffin, OMAF/MRA

The OAG was very fortunate to have secured funding from Pest Management Centre (PMC) and through AAFC's Canadian Agricultural Adaptation Program (CAAP) to conduct a national apple scab and powdery mildew survey to identify the extent of systemic fungicide resistance in Canadian orchards and communicate the findings to the grower community. Results indicate there is a significant shift from susceptible to resistant apple scab populations throughout Canada for Nova (myclobutanil), while most orchards across Canada are susceptible to the newly registered Group 3 fungicide, Inspire (difenoconazole). However, there is some indication that scab populations are beginning to shift towards resistance for this product. There is a wide sensitivity distribution in orchards across Canada for the Group 11, Flint (trifloxystrobin), ranging from susceptible to resistant apple scab populations. Similarly, preliminary results indicate powdery mildew populations may be shifting or resistant to the same fungicides, as well as Funginex (triforine) (Group 3), Fontelis (penthiopyrad) (Group 7), Luna Tranquility (fluopyram + pyrimethanil) (Group 7+9), Pristin (boscalid + pyraclostrobin) (Group 7+11), and Sovran (kresoxim-methyl) (Group 11) fungicides in some Canadian orchards. Final results will be available by December 2013.

Physiological and Pomological Studies of Newer Apple Cultivars for the Ontario Apple Industry. – Dr. John Cline, University of Guelph

This project will focus on the following key industry-identified problems: a) increased production efficiency through the development of new high-density precocious orchard systems that produce a greater percentage of target fruit with the goal of reducing grower cost using labour saving technologies; b) develop pre-harvest cultural practices for the management of postharvest disorders of pome fruit, and; c) develop new recommendations for thinning and plant growth regulators to address issues such as early cropping, crop load management, and enhanced fruit colour development. This project is funded in part by the University of Guelph and OMAFRA Research Program.

Agri-Science Cluster Funded Projects (completed March 31st, 2013)

Investigations into the following industry-driven issues have been completed, with funding from the Canadian Agri-Science Cluster for Horticulture (which is within the Growing Canadian Agri-Innovations Program administered by AAFC):

- 1. Advanced Postharvest Handling and Storage Technology for Canadian Apples – Dr. Jennifer DeEll, OMAF/MRA**
 - 1) Determining the time frame of flesh browning development in 'McIntosh' and 'Empire' apples throughout the storage season, in relation to growing season and weather data.
 - 2) Evaluating the effects of postharvest handling, 1-MCP technology, and storage regimes on the physical and sensory quality of new cultivars ('Honeycrisp', 'Nicola', 'Creston').
 - 3) Assessing the application of diphenylamine (DPA, antioxidant, Stop Scald) using thermo-fogging technology.
- 2. Identifying genetic markers to enhance apple breeding in Canada - Dr. Sean Myles, Nova Scotia Agricultural College**

The objective of this project is to lay the foundation for a large-scale marker assisted apple breeding program by collecting genomic data from over 1,000 diverse apple cultivars.

Agri-Science Cluster 2 Funded Projects

The following industry-driven issues, which were common throughout the collaborating provinces, are being investigated with funding from the Canadian Agri-Science Cluster for Horticulture 2 (within the Growing Forward 2 program) with total funding of \$1.5 million over 5 years (2013 to 2018).

- 1. Optimizing Storage Technologies to Improve Efficiency, Reduce Energy Consumption, and Extend the Availability of Canadian Apples – Dr. Jennifer DeEll, OMAF/MRA**
 - 1) Methods to control CO₂ injury without the use of diphenylamine (DPA).
 - 2) Determination of DPA residues throughout storage facilities.
 - 3) Optimizing storage regimes for ‘Honeycrisp’ and ‘Gala’.
 - 4) Effects of cooling rate on apple quality after storage.
- 2. Improving tree fruit storage management using weather based predictions of fruit quality at harvest – Dr. Gaetan Bourgeois, AAFC**

Bioclimatic models of apple quality at harvest and in storage will be updated or developed based on the available historical data and on the new information obtained in this project. All models will be integrated in the CIPRA (Computer Centre for Agricultural Pest Forecasting) software and made freely available to the Canadian apple industry.
- 3. Performance of Honeycrisp on New Size-Controlling Rootstocks – Dr. John Cline, University of Guelph**
 - 1) Measure the precocity and performance of new size-controlling rootstocks and to compare these against industry standard M.9 and M.26.
 - 2) Determine rootstock effects on calcium disorders, whole tree physiology, and fruit storage potential.
 - 3) Assess the productivity of more vigorous rootstocks M.106 and M.7 against M.26 – with a close examination of graft union compatibility.
- 4. New biological control agents for postharvest diseases of pome fruit – Dr. Louise Nelson, University of BC**
 - 1) Test several bacterial antagonists of postharvest fungal pathogens to determine their potential for development as a commercial biological control product.
 - 2) The proposed research is necessary to develop a comprehensive data package showing their ability to control postharvest disease under varying conditions in two major apple growing regions of Canada. This information will help us determine if their efficacy is sufficiently broad in scope to warrant further development.
 - 3) Determination of the optimal concentrations, application mode and timing are essential pieces of information for registration and commercialization.

Apple Variety Testing Projects

The OAG has partnered with two leading organizations to maximize our work in the area of apple variety testing. Details are as follows:

DIAP Project – Plant Improvement Corporation of the Okanagan (PICO)

The OAG is a contributing partner to a Developing Innovative Agri-Products Initiative (DIAP) project with Okanagan Plant Improvement Corporation (PICO) and REPUCOM (Quebec). This three-year project provided funding for testing of AAFC Summerland varieties in Ontario’s growing conditions. Currently we have planted over 1000 trees (7 varieties) at 10 locations across Ontario. DIAP project funding ended March 31, 2013. Funding has been secured to continue this project through the Growing Forward 2 (GF2) Agri-Innovation Program (AIP).

Varietal Testing at Vineland Research and Innovation Centre (VRIC) – Daryl Somers, Vineland Research and Innovation Centre (VRIC)

Vineland's primary objectives for apple variety introduction and breeding in Ontario are market acceptability and adaptation. An integrated team including the Consumer Insights group, Vineland's Business Office and Applied Genomics Program have joined forces to identify which fruit quality traits are of the utmost value to the apple buying market.

The apple sensory research from Dr. Amy Bowen's group is used in different ways within the scouting and apple breeding programs. Based on consumer preference scores, Vineland's Horticulture Technology Scout Michael Kauzlaric has selected a number of apple varieties from various breeding programs around the world to test on site at Vineland. The test apples will be evaluated over the next several years for adaptation to the Southern Ontario growing environment and for the quality of fruit produced. If the scouted apples do well locally, then Ontario growers will be in an excellent position to compete with the top selling apples on the market today.

The second important application of the apple sensory-consumer preference research lies in the identification of excellent parent varieties for Vineland's apple breeding program. Dr. Daryl Somers, Vineland's Director of Applied Genomics and Ms. Beatrice Amyotte, PhD candidate, cross varieties with complimentary texture and flavour properties to be evaluated on the Vineland Research Farm. Seedlings raised in this environment will naturally be selected for winter hardiness and adaptation to the Southern Ontario climate. As well, seedlings will be scored for field resistance to common apple diseases such as scab and fire blight; along with fruit quality, disease resistance is a top priority for parent variety selection in Vineland's apple breeding program.

The final application of this work is the integration of plant genomics with the sensory and consumer preference results. Currently, Vineland Bioinformatician Travis Banks is in the process of taking DNA sequences from seventy of the varieties evaluated by the Vineland Sensory Panel and matching this genetic information to the apple sensory profiles. By building the association between fruit quality and DNA sequence, Banks will determine which natural differences in the apple genetic code can predict fruit quality scores in texture, taste and flavour far before juvenile trees bear fruit.

The Vineland research team is building genetic associations with consumer preference for horticulture products which is a novel approach in plant breeding, and truly makes this Ontario apple program a leader in agriculture innovation. In contrast to traditional apple breeding which can take upwards of twenty years from crossing to naming, Ontario's Apple growers should expect to test and sell new apple varieties from Vineland, both scouted and locally bred, within the next decade.

Assessment of the Distribution and Natural Enemies of the Brown Marmorated Stink Bug in Southern Ontario – Hannah Fraser, OMAF/MRA



Brown marmorated stink bug (BMSB) is an invasive pest native to East Asia. First identified in Pennsylvania in 2001, it has now been detected in 40 states and is of economic importance throughout the Mid-Atlantic US. There are more than 170 North American plant hosts, including important fruit, vegetable and field crops, as well as landscape trees and shrubs. In August 2012, an established breeding population was confirmed in Hamilton, ON. In addition, there have been confirmed homeowner finds in Burlington, Cedar Springs, Milton, Newboro, Toronto, Vaughan, Windsor and most recently, Niagara-on-the Lake (September 2013) and London (October 2013). These finds have been the result of outreach efforts and submissions to the Ontario Ministry of Agriculture and Food and Ministry of Rural Affairs. Early detection is critical in mitigating economic injury to crops.

Based on year one of a two-year survey, BMSB is established in Hamilton, and is likely established in Newboro, ON as indicated by pheromone trap captures and visual observations. Detections in traps and

new homeowner finds indicate the distribution is potentially widespread, though at low population levels. Continued monitoring and surveillance are necessary to document population density and spread from infested areas. With the occurrence of both overwintered and new generation adults in the field in mid-July, there is the potential for a partial 2nd generation of BMSB in southwestern ON. A better understanding of the phenology, occurrence, and spread of BMSB in Ontario is necessary to develop an IPM strategy to limit the impact of this pest in economically important agricultural crops. Pheromone trapping systems may be useful as early detection tools, although a full season (May-October) is required for assessment. Additional survey work in 2014 will be required to confirm BMSB in other parts of Ontario, including those areas associated with new homeowner finds.

Funding for the project "Assessment of the Distribution and Natural Enemies of the Brown Marmorated Stink Bug in Southern Ontario" was obtained through the OMAF and MRA / University of Guelph Partnership program with the financial support of the Grain Farmers of Ontario, the Grape Growers of Ontario, the Niagara Peninsula Fruit and Vegetable Growers' Association, Ontario Apple Growers, and the Tender Fruit Producers' Marketing Board.

Pest genomics and plant breeding in sustainable agricultural pest management – Dr. Miodrag Grbic, Western University

A locally-led international team, with funding from the Ontario Research Fund Global Leadership Round in Genomics & Life Sciences, is studying the spider mite, a major pest of greenhouse, horticulture and field crops. The team has uncovered many interesting facts related to spider mites' feeding preferences, physiology and the genetic-based mechanisms behind their ability to feed on over 150 plant types worldwide and capability to adapt to chemicals such as miticides. After sequencing the genome of the two-spotted spider mite, the team's research goals are to use the spider mite as a model for cell-content feeding insects (includes thrips and aphids) in order to develop sustainable pest control strategies to reduce crop damage and increase yield, with a focus on Ontario crops. The team is also surveying miticide-resistance in a second spider mite species (European red mite), a common pest in many Ontario apple orchards. This research involves scientists at Western, Agriculture and Agri-Food Canada, the Ontario Ministry of Agriculture, and Vineland Research and Innovation Centre, in combination with interested growers and industry partners (including the Ontario Apple Growers). For more information, visit www.spidermite.org.

Improving Efficiencies in Ontario Apple Orchards – John Zandstra, University of Guelph, Ridgetown

John Zandstra is the lead researcher on the CAAP funded project "*Management of Bitterpit in Honeycrisp Apple*" which is examining the influence of rootstock on bitterpit incidence (using nine different rootstocks). Stoller is also providing funding towards this project to determine if some of their products can reduce bitterpit in Honeycrisp.

Cedar Springs' location has a high density planting of Honeycrisp and Ambrosia on B9, at densities of 907, 1210 and 1815 trees/acre (2', 3' and 4' between trees on 12' row spacing) and are working with Leslie Huffman on some different pruning techniques to try and find the proper spacing/pruning approach to allow Ambrosia to fill in allotted space. Additionally, Cedar Springs is one of the 10 field locations for the OAG's cultivar trial.

Defining, Targeting and Mapping Apple Sensory Preference of Ontario Consumers – Dr. Amy Bowen, Vineland Research and Innovation Centre

The ultimate objective of the CAAP project "*Defining, targeting and mapping apple sensory preference of Ontario consumers*" is to combine sensory and consumer science with applied genomics to identify unique sensory traits that will inform growers and breeders of the most desirable attributes for the selection of new apple cultivars in Ontario which meet consumer acceptance.

A total of 63 apples varieties, heritage and commercial, were profiled from 15 August to 21 November, 2012 by the Vineland Sensory Panel to determine their sensory characteristics. A subset of 19 apples

(based on their sensory diversity) was assessed by 219 consumers (1/3 each Canadian descent, Chinese descent, South Asian descent) from the Greater Toronto Area for sensory preference.

The sensory and consumer objectives of this study were:

- 1) Determine the sensory profiles of heritage and commercial apple varieties;
- 2) Identify the sensory attributes of heritage and commercial apple varieties that are liked/disliked by consumers; and,
- 3) Determine whether consumer preference for apples is influenced by demographic and ethno-cultural heritage.

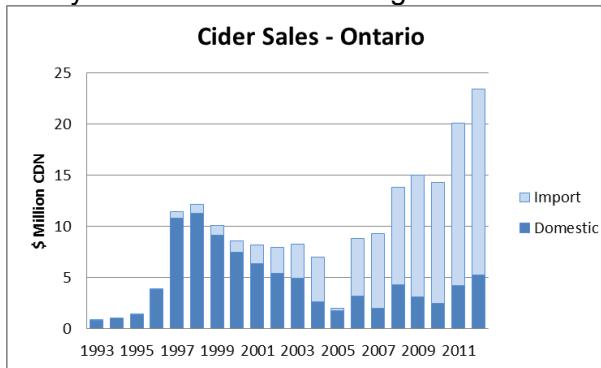
Results:

- 1) There exist two main groups of consumers who like different sensory traits in fresh apples. The first group represents approximately 89% of the population and prefers apple which are *sweet*, *juicy*, and *crisp*, with the flavor of *fresh red apple*. The second group of consumers represents approximately 11% of the population. This group prefers apple which are *crisp* and *juicy*, with the flavor of *fresh green apple*.
- 2) Any observed differences or similarities in consumer apple preference have no basis in demographic affiliation such as a consumer's ethnicity, place of birth, age, or gender. It was determined that there was no significant difference(s) in apple preference between consumers of Canadians, South Asian, and Chinese descents; those who are born in Canada and those who are not born in Canada; those between the ages of 18 to 59; and, males and females. When labels are removed and only taste and texture are a factor, any differences in preference among consumers are the result of varying *personal* preference.

The goal of this project is to investigate and address the rapid demographic change of the apple consumer in Ontario and to gain an understanding of their apple purchase and consumption habits along with their sensory preferences. Information learned will assist with breeding and cultivar evaluations for Ontario. Investment in this project has been provided by Agriculture and Agri-Food Canada (AAFC) through the Canadian Agricultural Adaptation Program (CAAP). In Ontario, this program is delivered by the Agricultural Adaptation Council.

Ontario Craft Cider Economic Impact Study

The Ontario Apple Growers (OAG) and the Ontario Craft Cider Association (OCCA) engaged the George Morris Centre to conduct an economic impact study and develop a strategic road map for the hard apple cider industry in Ontario. The study indicates that this is "a good time" to be in the cider industry.



Cider consumption is growing globally and domestically and the consumption of hard apple cider in Ontario is on the rise as well. This growth creates a significant opportunity for Ontario craft cider makers and entrepreneurs to expand their presence in the marketplace.

Based on the projected sales of \$35 million by 2018 the following could be the overall economic impact:

- Overall economic activity of \$60 million. That is, in addition to the \$35 million in sales, the supplier industries would generate a further \$25 million in added sales as a result of the activities of the craft cider industry.

- Total added gross domestic product is \$30 million. This means that due to the activities of the Ontario cider industry, the Ontario and Canadian economy would generate added income and wealth of \$30 million.
- 220 jobs would be created in the industry and its suppliers.
- Total payroll including benefits would total \$12 million for the cider industry and its suppliers.
- Taxes of over \$2 million would be paid to local, provincial and federal governments, not including income taxes.

Investment in the above three projects has been provided by Agriculture and Agri-Food Canada through the Canadian Agricultural Adaptation Program (CAAP). In Ontario, this program is delivered by the Agricultural Adaptation Council.



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada

Other Research and Services

AppleTracker.com – The web-based system ‘AppleTracker.com’ is maintained by the Ontario Apple Growers as an online system providing a comprehensive tool for growers to record their spray records, harvest data as well as shipping and storage information. This program also provides growers with the reports needed for CanadaGAP food safety program.

Horticultural Products Lab – The remote storage lab located at Norfolk Fruit Growers in Simcoe continues to pay benefits for the Canadian apple industry. The lab was supported by the Apple Working Group members of Canadian Horticultural Council with cost-shared funding from the CanAdvance Program. The funding ended December 31, 2011. The Lab was fully utilized again this year. The industry very much appreciates the cooperation of the Norfolk Fruit Growers’ Association and the efforts of OMAFRA research, Dr. Jennifer DeEll.

Orchard Network News - The Orchard Network News publication continues to be a useful vehicle for technology transfer to apple growers. We greatly appreciate the efforts of the Ontario Ministry of Agriculture and Food “Apple Team”, research and extension community for delivering this publication to our members. We also thank our advertisers and sponsors who provide support for printing and mailing of the newsletter.

OAG APPLE RESEARCH AND SERVICES PRIORITIES

November 2013

Sustainable IPM Systems

INTEGRATING NEW PESTICIDES INTO OUR CURRENT PRODUCTION SYSTEMS. HOW ARE THE NEW PESTICIDES CHANGING THE PEST/BENEFICIAL DYNAMICS AND AFFECTING FRUIT QUALITY & STORABILITY?

Emerging Pest Issues: Apple leaf curling midge, Apple maggot, San Jose scale, Plum curculio, European apple sawfly, Woolly apple aphid, Brown marmorated stink bug, Cankers, Mites, Bitter rot, borers, viruses, and phytoplasms.

Insect management including pesticide efficacy testing, pesticide timing using degree day predictive models and evaluation of biological controls.

Strategies for management of Fire Blight on pome fruit including nursery tree health, plant growth regulators, cultural methods, biopesticides, predictive models and non-chemical alternatives.

Development of an integrated approach for difficult diseases and disorders such as Glomerella, Black and Bitter rot (including cankers), Calyx end rot, Russetting, Root and Crown rot (e.g. replant disease).

Evaluate late season reduced risk insecticides for apple maggot, OBLR, Codling moth and OFM including the efficacy of border sprays.

Invasive species/pest issues (for example Brown marmorated stink bug).

Characterizations of resistance in Apple scab, Powdery mildew, Codling moth and Mites and ongoing sustainable resistance testing service for growers.

Development of sustainable IPM practices and resistance management for internal Lepidoptera pests (including OFM and CM) and the development of mating disruption strategies for apple insect pests such as Codling moth, Dogwood borer, and Apple clearwing moth and OFM.

Optimizing sprayer performance for improved coverage and product efficacy while controlling input costs by eliminating wasted spray and investigate new application technology techniques such as fixed sprayer systems or storage fogging.

Postharvest Strategies for Apple Quality

Storage Technology:

- 1-MCP/SmartFresh and new application techniques
- Cultivar storage recommendations especially for new varieties
- Investigate new storage technology, energy efficient systems and innovative packaging

Control and Management of Storage Disease and Disorders:

- Fungicide resistance
- Investigating new products for control
- Optimizing storage regimes to reduce disorders

Marketing Strategies

Consumer preference testing and taste profiling.

New product development.

Research on the healthy attributes of apples and apple products including research on Nutraceuticals, Functional Foods (for example antioxidants, bioflavonoids and other functional components).

Crop Cultural Management

In-field maturity assessments.

New variety/cultivar (development and evaluation).

Rootstocks evaluation.

Cultural practices for optimum yield and marketability to ensure maximum return for the grower without compromising storability (listed in order of priority):

1. Early cropping (plant growth regulators and quality nursery stock)
2. Precision crop load management (thinning)
3. Fruit firmness and Brix levels
4. Irrigation
5. Crop Nutrition
6. Harvest dates
7. Fruit finish
8. Colour development
9. Light interception

Evaluation of frost and other risk management protection methods and weather monitoring equipment.

New recommendations for plant growth regulators including thinning, stop drop, early cropping and canopy development. Research and development on thinning options as consistent and effective as carbaryl with a wide application window.

Orchard system efficiencies with the goal of reducing grower cost of production (for example robotics, platforms, high density systems, mechanical thinners, fixed application systems, new mechanized pruning, thinning and harvest options).

Enhancing natural pollinators to augment use of honeybees.



Canadian
Horticultural
Council

Conseil
canadien de
l'horticulture

APPLE WORKING GROUP UPDATE

The Apple Working Group (AWG) met formally twice in 2013: at the CHC AGM in March and the Mid-Summer meeting in July. A number of conference calls have taken place as well.

The direction and workplan of the AWG includes, but is not limited to:

- AgriMarketing Program
- Canadian Agri-Science Cluster for Horticulture (Growing Forward - Cluster 1 and Growing Forward 2 - Cluster 2)
- National Promotion and Research Agency
- Royal Winter Fair

The annual Mid-Summer Apple Industry Meeting and Orchard Tour were held in St. Catharines, Ontario, July 22 and 23, 2013. In addition to having a productive working group meeting on July 22nd discussing challenges and opportunities facing the industry, the event provided an opportunity for growers to explore the Vineland Research and Innovation Centre and tour some of the major apple producing operations in Simcoe, Ontario.

Things to watch

The Canadian apple industry is closely watching the potato sector's efforts to establish a National Promotion and Research Agency under the authority of the Farm Products Council of Canada. As a result of the recommendations of the apple benchmarking study of 2012, which included the need for a national marketing and industry development/research body, the National Apple Promotion & Research Agency Steering Committee was formed. The steering committee's mandate is to:

- 1) Develop an Action Plan towards the establishment of a National Promotion & Research agency for the Canadian apple industry;
- 2) Facilitate and promote discussions on the subject among industry stakeholders;
- 3) Engage key national and provincial industry associations that could contribute to or may be impacted by this initiative, and
- 4) Develop advice and recommendations on the feasibility of this initiative to be taken to the CHC Apple and Fruit Committee.

The steering committee is composed of growers, marketers and other interested industry representatives. A face to face meeting of the steering committee is planned for late November 2013.

Agri-Science Cluster for Horticulture

The AWG participated in the Agri-Science Cluster for Horticulture through the following two projects, which concluded March 31, 2013:

- *Advanced Postharvest Handling and Storage Technology for Canadian Apples*
Dr. Jennifer DeEll, OMAFRA
- *Identifying genetic markers to enhance apple breeding in Canada*
Dr. Sean Myles, Nova Scotia Agricultural College

Agri-Science Cluster for Horticulture 2

The following industry-driven issues, which were common throughout the collaborating provinces, are being investigated with funding from the Canadian Agri-Science Cluster for Horticulture 2 (within the Growing Forward 2 program) with total funding of \$1.5 million over 5 years (2013 to 2018).

Optimizing Storage Technologies to Improve Efficiency, Reduce Energy Consumption, and Extend the Availability of Canadian Apples – Dr. Jennifer DeEll

- 1) Methods to control CO₂ injury without the use of diphenylamine (DPA)
- 2) Determination of DPA residues throughout storage facilities
- 3) Optimizing storage regimes for 'Honeycrisp' and 'Gala'
- 4) Effects of cooling rate on apple quality after storage

Improving tree fruit storage management using weather based predictions of fruit quality at harvest – Dr. Gaetan Bourgeois, AAFC

Bioclimatic models of apple quality at harvest and in storage will be updated or developed based on the available historical data and on the new information obtained in this project. All models will be integrated in the CIPRA (Computer Centre for Agricultural Pest Forecasting) software and made freely available to the Canadian apple industry.

Performance of Honeycrisp on New Size-Controlling Rootstocks – Dr. John Cline, University of Guelph

- 1) Measure the precocity and performance of new size-controlling rootstocks and to compare these against industry standard M.9 and M.26
- 2) Determine rootstock effects on calcium disorders, whole tree physiology, and fruit storage potential
- 3) Assess the productivity of more vigorous rootstocks M.106 and M.7 against M.26 – with a close examination of graft union compatibility

New biological control agents for postharvest diseases of pome fruit – Dr. Louise Nelson, University of BC

- 1) Test several bacterial antagonists of postharvest fungal pathogens to determine their potential for development as a commercial biological control product.
- 2) The proposed research is necessary to develop a comprehensive data package showing their ability to control postharvest disease under varying conditions in two major apple growing regions of Canada. This information will help us determine if their efficacy is sufficiently broad in scope to warrant further development.
- 3) Determination of the optimal concentrations, application mode and timing are essential pieces of information for registration and commercialization



CANADAGAP REPORT

CanadaGAP™ is a food safety program for companies that produce, pack and store fruits and vegetables. It is designed to help implement effective food safety procedures within fresh produce operations. The program have been benchmarked and officially recognized by the Global Food Safety Initiative (GFSI). Audit and certification services for the program are delivered by third party, accredited Certification Bodies. Apple farmers and packers across Canada have been active participants in the program. In Ontario, it is estimated that 100+ apple farmers are not CanadaGAP-certified.

Operation of the CanadaGAP program has seen a few changes over the last year. The program was incorporated as a standalone, not-for-profit corporation in September 2012, and governance is now structured through members (program participants) who will directly elect the Board of Directors. The first AGM is scheduled for November 2013 where the first election of directors will be held. This past summer, the CanadaGAP office relocated to Ottawa's west end, although there have been no changes in program staff and services. On the technical side, work on expanding the scope of the CanadaGAP program to include requirements for repackers and wholesalers is nearly complete; further details will follow early in 2014 when an updated version of the manuals will be released.

DIRECTORS AND STAFF
ONTARIO APPLE GROWERS
2012/2013

CHAIR
VICE CHAIR
DIRECTORS

Brian Gilroy	District 3
Charles Stevens	District 5
Keith Wright	District 1
Peter Geerts	District 1
Brett Schuyler	District 2
Bob Hepburn	District 2
Shane Ardiel	District 3
Art Moyer	District 4
Richard Feenstra	District 4
Cathy McKay	District 5

DISTRICT GROWER COMMITTEE

Steve Versteegh	District 1
Joe Van de Gevel	District 2
Brad Johnston	District 3
Spencer Johnson	District 4
John Deleeuw	District 5

GENERAL MANAGER
PRODUCTION & MARKET ANALYST⁺
TREASURER^{}**
ACCOUNTING ASSISTANT^{}**

⁺ Shared staff with Tender Fruit Board

^{**} Shared staff with GTFOL

Kelly Ciceran (kciceran@onapples.com)
Larissa Osborne (larissa@ontariotenderfruit.ca)
Maureen Connell
Sylvana Lagrotteria

ASSOCIATION DELEGATES

Agricultural Commodity Corporation	Brad Oakley
Canadian Horticultural Council	Brian Gilroy (Charles Stevens – Alternate)
CHC Apple Working Group	Brian Gilroy, Brett Schuyler (Charles Stevens – Alternate)
Ontario Federation of Agriculture	Bob Hepburn
FARMS	John Ardiel (Steve Versteegh – Alternate)
Hort Crops Ontario	Kelly Ciceran
Ontario Fruit & Vegetable Growers' Assoc.	Brian Gilroy (Charles Stevens – Alternate)
Ontario Agricultural Commodity Council	Brett Schuyler (Brian Gilroy – Alternate)
Presidents' Council	Brian Gilroy
Okanagan Plant Improvement Corporation	Cathy McKay
Fruit Technical Working Group	Charles Stevens, Art Moyer

Brad Oakley
Brian Gilroy (Charles Stevens – Alternate)
Brian Gilroy, Brett Schuyler (Charles Stevens – Alternate)
Bob Hepburn
John Ardiel (Steve Versteegh – Alternate)
Kelly Ciceran
Brian Gilroy (Charles Stevens – Alternate)
Brett Schuyler (Brian Gilroy – Alternate)
Brian Gilroy
Cathy McKay
Charles Stevens, Art Moyer

COMMITTEE DELEGATES

Fresh Apple Advisory Committee	Keith Wright, Bob Hepburn, Art Moyer
Juice Apple Advisory Committee	Brian Gilroy, Brett Schuyler, Pete Geerts
Juice Apple Negotiating Agency	Brian Gilroy, Brett Schuyler, John Deleeuw
Risk Management Committee	Brett Schuyler (Chair), Pete Geerts, Brian Gilroy, Art Moyer, Charles Stevens, Chris Hedges, Michael Versteegh

Cathy McKay (Chair), Harold Schooley, Art Moyer, Spencer Johnson, Pete Geerts, Rich Feenstra
Charles Stevens, Chris Hedges, Paul Frankis, Shane Ardiel, Rich Feenstra, Tom O'Neill, Kirk Kemp
Committee of the Whole
Committee of the Whole

Research Committee

Revitalization Committee

Political Action Committee

Cost of Production Committee

Notes



PO Box 100, Vineland Station, Ontario L0R 2E0
P 905.688.0990
F 905.688.5915
kceran@onapples.com
www.onapples.com