

2010 Sugaring Season Survey

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In mid-April 2010, an invitation to participate in a survey was sent to subscribers of two maple forums, MapleTrader.com (www.mapletrader.com) and the Maple Chatterbox (www.maplechat.com). The survey was designed to get some basic information about the operations of the respondents, to describe various maple-related practices involved with sanitation practices (changing tubing, spouts, etc.) and to get feedback from users about the Leader Check-valve adapter. The survey questions and responses follow. In many cases where numerical responses are given, the numbers following the response are the number of respondents giving that answer followed by the percentage of respondents answering in that category. In some cases, the percentage of responses does not total to 100% due to rounding error. Comments from the author on various parts of the survey are provided in *italics*.

SURVEY INVITATIONS

Total Responses Received: **94**

RESULTS FILTERING

Select No Filtering

Questions 1-7 provide a basic description of the respondents and their maple operations. In general, operations spanned a wide range of sizes and geographic locations, with an average # of taps of 2,388. Respondents came from a variety of places, but New England and New York were most heavily represented. Most producers felt that the season had sap with a lower sugar content, producing syrup with more niter, and that the season was somewhat below average in terms of syrup yield. Slightly over half of the survey respondents used reverse osmosis with the majority of those concentrating to 8-10 deg Brix.

QUESTION 1

Approximately how many taps did you have during the 2010 sugaring season?

Range: 14,365 (35 to 14,400)
Average: 2,388
Median: 1,150
Total responses: 93
Mode: 2000

The total number of taps represented in this survey is slightly over 222,000.

QUESTION 2

Where are you from (State or Province)?

New Brunswick	1	1%
Quebec	1	1%
Ontario	7	7%
West Virginia	2	2%
Connecticut	3	3%
Michigan	3	3%
Wisconsin	3	3%
Ohio	4	4%
Pennsylvania	4	4%
Massachusetts	5	5%
Maine	5	5%
New Hampshire	12	13%
New York	15	16%
Vermont	25	27%
Not reported	4	4%

QUESTION 3

What was your approximate yield in SAP (gallons) per tap this year?

0.1 - 4.9 gal sap/tap	17	18%
5.0 - 9.9 gal sap/tap	21	23%
10.0 - 14.9 gal sap/tap	22	24%
15.0 - 19.9 gal sap/tap	10	11%
20.0 - 24.9 gal sap/tap	14	15%
25.0 - 29.9 gal sap/tap	5	5%
30.0 or more gal sap/tap	4	4%

QUESTION 4

How would you describe your sap yield this year?

Way less than average	27	29%
Less than average	29	31%
Average	24	26%
More than average	10	11%
Way more than average	4	4%

QUESTION 5

How would you describe your sap sugar content (Brix) this year?

Way lower than average	9	10%
Lower than average	40	43%
Average	41	44%
Higher than average	4	4%
Way higher than average	0	0%

QUESTION 6

How would you describe the amount of sugar sand (niter) this year?

Way lower than average	4	4%
Lower than average	14	15%
Average	45	48%
Higher than average	26	28%
Way higher than average	4	4%

QUESTION 7

Do you use Reverse Osmosis? If yes, how high do you concentrate to?

Don't use RO	42	46%
Concentrate to 5-7 Brix	9	10%
Concentrate to 8-10 Brix	22	24%
Concentrate to 11-15 Brix	13	14%
Concentrate to 16-20 Brix	5	5%
Concentrate above 20 Brix	0	0%

The following set of questions describes the sap collection systems of the survey respondents in more detail. The vast majority of producers (90-91%) are now using small spouts (5/16" or 19/64"). None of the respondents reported using microspouts. A variety of spout configurations are being used. Nearly three-quarters of producers who use the clear straight-through spouts or two-part spouts (stubby and adapter) replace their spouts each year.

QUESTION 8

What was the size of the majority of the spouts you used?

7/16"	9	10%
5/16"	73	78%
19/64"	12	13%
Other	0	0%

QUESTION 9

Were the majority of your spouts –

Clear-straight-through spouts (CST)	3	3%
Metal (stainless)	4	4%
One-piece plastic with a 90 deg bend	31	33%
Two-piece plastic Stubby & Adapter with a 90 deg bend	20	21%
Two-piece plastic (Stubby & Adapter) straight through	1	1%
7/16" Spout with a new adapter	1	1%
Check-valve spouts	34	36%

QUESTION 10

If you use Clear-straight-through spouts or replaceable spout adapters, do you –

Replace them each year	40	73%
Clean them in the woods and reuse them each year	2	4%
Bring them out of the woods and clean/reuse them each yr	8	15%
Replace them after 1-2 years of use	3	5%
Replace them after 3-4 yrs of use	1	2%
Replace them after 5+ yrs of use	0	0%
Not replace them	1	2%

Questions 11-15 are aimed at describing the age of the various components of the sap collecting systems. In general, mainlines are slightly older than lateral lines, and droplines are a little newer than the rest of the tubing system. Relatively few producers regularly change out droplines. Spouts are by far the newest component of the entire tubing system, reinforcing the responses provided in Question 10.

QUESTION 11

How old are the majority of your mainlines?

New this year	12	13%
1-2 Yrs Old	18	20%
3-5 Yrs Old	31	34%
6-10 Yrs Old	23	25%
Over 10 Yrs Old	8	9%

QUESTION 12

How old are the majority of your lateral lines?

New this year	14	15%
1-2 Yrs Old	16	17%
3-5 Yrs Old	37	40%
6-10 Yrs Old	22	24%
Over 10 Yrs Old	3	3%

QUESTION 13

How old are the majority of your droplines?

New this year	22	24%
1-2 Yrs Old	25	27%
3-5 Yrs Old	28	30%
6-10 Yrs Old	15	16%
Over 10 Yrs Old	2	2%

QUESTION 14

Did you replace any droplines this year? If so, in what percentage of your operation did you replace droplines?

Did not replace any droplines (except some repairs)	39	43%
Less than 10%	17	19%
10-25%	9	10%
26-50%	10	11%
51-75%	4	4%
76-100%	11	12%

QUESTION 15

How old are the majority of your spouts?

New this year	45	49%
1-2 Yrs Old	18	20%
3-5 Yrs Old	14	15%
6-10 Yrs Old	13	14%
Over 10 Yrs Old	2	2%

Relatively few bucket producers answered the survey. The majority of producers using tubing were also using vacuum. Over 57% of respondents achieved vacuum levels between 20-25+ Hg.

QUESTION 16

Gravity or vacuum?

Buckets	3	3%
Gravity Tubing	18	19%
Vacuum-Less than 15" Hg	1	1%
Vacuum 15-19" Hg	18	19%
Vacuum 20-24" Hg	38	40%
Vacuum 25+" Hg	16	17%

Respondents indicated that the most common improvement planned for next season (2011) is to add Leader Check-valve spout adapters. One-quarter of producers planned to add more taps. A variety of other approaches are also planned to increase sap yields.

QUESTION 17

What improvements to your sap collection system do you plan to make for next season? (Check all that apply)

Add more taps	56	25%
Add vacuum to a system currently without vacuum	16	7%
Increase vacuum level above what I had this year	23	10%
Reduce # taps on lateral lines (on vacuum system)	23	10%
Use new spout adapters	14	6%
Use Clear-straight-through spouts	2	1%
Use Check-valve spouts	38	17%
Replace some old droplines with new droplines	23	10%
Replace some old lateral line with new lateral line	21	9%
Other	11	5%

The average minimum tree size tapped is about 10" diameter, although the range is very high (it is possible that some respondents in Canada answered in cm). The average diameter producers chose to put in a second tap is 21".

QUESTION 18

What is the minimum size tree you tap (diameter in inches)?

Range:	33 (5 to 38)
Average:	9.7
Median:	10
Total responses:	91
Mode:	10

QUESTION 19

What is the minimum size tree you put a second tap in (diameter in inches, if you only use one tap, put 0)?

Range:	58 (12 to 70)
Average:	21.1
Median:	20
Total responses:	77
Mode:	18

Only 5% of producers reamed tapholes in 2010. About half of those that did ream felt that it helped.

QUESTION 20

Did you ream tapholes this year? If so, did it help?

Didn't ream	89	95%
Reamed didn't help	2	2%
Reamed helped a little	1	1%
Reamed helped a lot	2	2%

The remaining questions deal specifically with the Leader Check-valve (CV) spout adapter. Over 2/3 of respondents tried them. Most of them that did try the CV adapter put them in half or more of their operations. They were tried with both new and old drops.

QUESTION 21

Did you try the Leader Check-Valve Spout this season?

Yes	63	67%
No	31	33%
No Answer	0	0%

QUESTION 22

If you tried the Leader Check-Valve Spouts, what % of your taps did you put these on?

Didn't try them	29	32%
Just a couple	3	3%
5-10%	3	3%
11-25%	7	8%
26-50%	9	10%
51-75%	10	11%
76-100%	30	33%

QUESTION 23

If you tried the Leader Check-Valve Spouts, did you put them on new or used drops?

Didn't try them	29	32%
All on new drops	21	23%
All on used drops (1-5 Yrs old)	15	16%
All on used drops (6+ Yrs old)	9	10%
Some on new some on old drops (drops 1-5 Yrs Old)	11	12%
Some on new some on old drops (drops 6+ Yrs Old)	6	7%

Some producers reported various issues with the usage of the CV adapter. Note that multiple responses were allowed for this question. In particular, some producers had breakage related problems. Leader Evaporator Co. has addressed these issues by a slight modification to the CV adapter design and made a change in the formulation (adding an "impact modifier") for 2011 to reduce breakage.

QUESTION 24

Did you experience any of the following issues with the Leader Check-Valve Spout Adapters? (Multiple responses are allowed for this question)

Didn't try them	30	29%
Spout adapters broke more than usual when tapping	13	12%
Cage broke and ball came out when tapping	23	22%
Ball got sucked down lateral line	10	10%
Balls found in releaser	3	3%
Had to reseat them more than other types of spouts	13	12%
Other	13	12%

The next several questions pertain to any observed changes in sap flow and yield by producers using the CV spout adapter. In general, most producers felt that the CV adapter flowed longer in the season and produced higher yields of sap. Most producers reported that they will continue to use the CV adapter, and increase the percentage of them in their woods. Producers felt the CV adapter provided a variety of advantages, with

increased sap yield being the most common response. 89% of producers felt they broke even or better in terms of increased syrup production with CV adapters. 95% of those producers who tried CV adapters would recommend them to a friend or neighbor who makes syrup.

QUESTION 25

Compared to other spouts in my woods or neighbors wood, in terms of sap yield, do you feel the Check-Valve Spout Adapter –

Didn't use	30	34%
Yielded a lot less than a regular spout	0	0%
Yielded less than a regular spout	1	1%
Yielded about the same as a regular spout	10	11%
Yielded a little more sap (up to 10%)	13	15%
Yielded a good amount more sap (11-25%)	17	19%
Yielded a lot more sap (26-50%)	15	17%
I was drowning in sap (51%+)	3	3%

QUESTION 26

Do you feel that the Check-Valve Spout Adapter –

Didn't use	30	33%
Flowed for a lot shorter time than my other spouts or my neighbors spouts	1	1%
Flowed for a shorter time than my other spouts or my neighbors spouts	1	1%
Flowed about the same amount of time as my other spouts or my neighbors spouts	9	10%
Flowed a little longer (1-2 days) than my other spouts or my neighbors spouts	15	16%
Flowed a lot longer (3-7 days) than my other spouts or my neighbors spouts	14	15%
Flowed after all other spouts had stopped	17	18%
They're still running	5	5%

QUESTION 27

Next season I'll –

Not consider trying the Check-Valve Spout	15	16%
Try the Check-Valve Spout for the first time	16	17%
Stop using Check-Valve Spout Adapters	2	2%
Use them in about the same percentage as this year	7	8%
Increase the percentage of Check-Valve Spouts in my operation	17	18%
Put Check-Valve Spouts throughout my operation	14	15%
I had Check-Valve Spouts in all my operation this year and will again next year	22	24%

QUESTION 28

This year I tapped –

Way too early (more than 2 wks before the sap ran)	1	1%
Very early (about 2 wks before the sap ran)	3	3%
Early (a week before the sap ran)	13	14%
Right on time	43	46%
A bit late (1-7 days after the sap ran)	29	31%
Really late (more than a week after the sap ran)	5	5%
Still haven't finished tapping	0	0%

QUESTION 29

For me, the advantages of Check-Valve Spouts are –

I didn't use Check-Valve Spout Adapters	30	19%
Allows me to tap earlier without losing yield	23	14%
Takes away the uncertainty of when I should tap	20	12%
Provides me more sap	37	23%
Provides a higher income for same number of trees	28	17%
Keeps me from having to change drops or lateral lines	17	11%
Other	6	4%

2011 SAP PRICES

QUESTION 30

In terms of sap yield, did you feel you –

Didn't get your \$ worth out of the		
Check-Valve Adapters	7	11%
About broke even	12	19%
Got my \$ worth	18	29%
Got more than what I paid for them	15	24%
Got way more than what I paid for them	11	17%

QUESTION 31

If a Clear-Straight Through Spout (CST) were available with a Check-Valve, would you –

Prefer the original version that fits a Stubby	23	29%
Prefer a Clear-Straight-Through version Check-Valve	17	21%
No preference	36	45%
Won't try either type	4	5%

QUESTION 32

Would you recommend to your friends who are sugarmakers that they try the Check-Valve Spouts?

Yes	68	72%
No	8	9%
No Answer	18	19%

Several respondents provided specific recommendations for research projects or made other comments. These are not listed here.

QUESTION 33

Do you have any suggestions for research projects we should consider? Be specific. **Text Answers (15)**

QUESTION 34

Do you have any other comments?
Text Answers (15)

Thank you to all the producers from MapleTrader and Maple Chatterbox who responded to the 2010 survey. We hope more of you will consider answering the 2011 survey.

A lot of people have requested that we publish sap prices. What I have found is that sap prices vary greatly depending upon the retail price of syrup.

The retail price of syrup in the Northeast is higher than in the Midwest, hence the price paid for sap is higher in the Northeast. Listed below are sap prices being paid by SOME producers.

Remember these prices are for sap delivered to the sugarhouse.

These prices are intended to be used only as a guide for buying sap and no way intends that they dictate the price for the entire industry.

sugar	\$/gal.	sugar	\$/gal.
1.00	.050	3.40	.665
1.10	.080	3.50	.685
1.20	.110	3.60	.705
1.30	.140	3.70	.725
1.40	.170	3.80	.745
1.50	.200	3.90	.765
1.60	.225	4.00	.785
1.70	.250	4.10	.805
1.80	.275	4.20	.825
1.90	.300	4.30	.845
2.00	.325	4.40	.865
2.10	.350	4.50	.885
2.20	.375	4.60	.905
2.30	.400	4.70	.925
2.40	.425	4.80	.945
2.50	.450	4.90	.965
2.60	.475	5.00	.985
2.70	.500	5.10	1.005
2.80	.525	5.20	1.025
2.90	.550	5.30	1.045
3.00	.575	5.40	1.065
3.10	.600	5.50	1.085
3.20	.625		
3.30	.645		