

EAST MICHIGAN APPLE HARVEST REPORT

REPORT #6 – October 7, 2009

Bob Tritten and Debbie Clark
Michigan State University Extension

APPLE HARVEST SUMMARY

Many growers report that they feel that they are over the hump of apple harvest for the year, and are just over half completed at this time. Some growers are talking about hoping to finish in two weeks, but many also have commented this week that they think it may be more like 2 ½ or 3 weeks to get apple harvest wrapped up.

Most growers have finished Jonagold and are now harvesting on Golden Delicious, and also doing some spot picking on Empire. Red Delicious are very slow to ripen this year, and I will talk more about the details of this slow ripening in the individual variety results section of this report. Crispin, Northern Spy, Idared maybe even Law Rome's and Fuji could be picked ahead of some strains of Red Delicious.

Again I want to reiterate that varieties are not maturing in the same sequence or order as they do in a typical year. So be prepared to jump ahead and start some varieties earlier than what you normally would, and on the converse side delay harvest on varieties that you feel are not ready.

I will have a least one more Apple Harvest Report next Wednesday, October 14th. Whether or not I will have a report the following week is still yet to be determined, and depends greatly on where growers are at in their harvest of fruit to tell.

Most growers continue to be scrambling to locate additional bins due to our heavy crop size. Labor supplies continue to be abundant this year.

Our brix levels continue to rise for varieties as they are approaching maturity. This has been particularly true in the last week for Empire, Jonagold and Golden Delicious.

Variety	Color (Range)	Firmness (Range)	Starch (Range)	Brix
Empire	87% (81-92%)	15.3 lbs (14.9-15.6)	5.7 (5.5-5.8)	12.0%
Jonagold	80% (76-84%)	14.8 lbs (14.6-14.9)	6.8 (6.6-6.9)	13.3%
Golden Delicious	27% (25-31%)	15.7 lbs (15.3-16.5)	6.0 (5.7-6.3)	14.1%
Red Delicious	96% (95-98%)	16.2 lbs (15.5-16.7)	2.4 (2.0-3.0)	10.7%
Crispin	31% (23-46%)	16.4 lbs (15.8-16.8)	4.5 (4.2-4.8)	11.7%
Crimpsom Crisp	94% (90-95%)	18.9 lbs (16.4-22.3)	6.8 (6.0-7.0)	14.2%
Northern Spy	61% (36-74%)	18.3 lbs (17.1-19.5)	3.7 (3.3-4.2)	12.1%
Idared	81% (65-91%)	14.8 lbs (14.2-16.0)	3.9 (3.6-4.3)	11.5%
Winesap	75% (58-92%)	17.0 lbs (16.3-17.7)	1.6 (1.3-1.9)	10.8%
Rome-Law	88% (70-95%)	18.7 lbs (16.0-21.2)	4.0 (3.0-6.0)	11.4%
Fuji	80% (73-86%)	16.9 lbs (16.5-17.3)	4.9 (4.2-5.5)	12.1%
Braeburn	78% (71-88%)	19.6 lbs (19.1-20.1)	1.7 (1.1-2.1)	10.7%
Granny Smith	33% (5-50%)	17.6 lbs (15.2-21.2)	2.2 (2.0-3.0)	10.5%

INDIVIDUAL VARIETY RESULTS

Empire were sampled for the fifth week of the season with a few less samples taken this week than last because many blocks have been harvested or were being harvested. Overall I would say that Empire have been rather slow to mature this year. In the last week color has improved dramatically and the starch has now moved into the mature range. Empire are eating very well right now. More specifically about 40% of the fruit are showing internal ethylene levels greater than 0.2 parts per million (ppm). Color has improved again dramatically to 87%. The pressure has dropped a bit from 15.8 lbs last week to 15.3 lbs this week. The starch removal index has jumped from 5.1 last week to 5.7 this week, with an improved brix of 12.0%. As I said earlier, many blocks of Empire are ready for harvest at this time.

Jonagold were sampled for the fifth week of the season as well, with just a few blocks being sampled this week because many have already been harvested. Most growers were working away at Jonagold harvest last week. In the data from the two samples that I took this week Jonagold are definitely mature to a bit over mature for long term storage. However they are eating really well right now for immediate sales. The fruit color has also improved dramatically from 63% last week to 80% this week. The flesh firmness has dropped from 15.2 lbs last week to 14.8 lbs this week and the starch removal has moved from 6.3 last week to 6.8 this week. The brix has also improved to 13.3%. Again Jonagold are definitely ready for harvest if they haven't already been picked.

Golden Delicious were sampled for the fourth week of the season, and many growers are currently harvesting Golden Delicious. This week they are beginning to develop more internal ethylene, now at 37% of fruit showing levels greater than 0.2 ppm. The fruit color including cheek and background, has improved dramatically and now they look very nice. The color this week is 27%, and pressure is about the same at 15.7 lbs. The starch removal has moved slightly from 5.7 last week to 6.0 this week. The brix has also jumped one full percentage point to 14.1%. Golden Delicious are eating very good right now and are definitely ready for short term storage, and are on the over mature side for long term storage.

Red Delicious were sampled for the fourth week of the season with a good number of blocks being sampled this week. I selected the Red Chief strain of Red Delicious for analysis. A few of the earlier maturing strains have been spot picked. Internal ethylene has started to develop in Red Delicious, with 20% of fruit showing levels greater than 0.2 ppm. The color is wonderful this year, and has even improved now to 96%. The pressure has dropped from 16.9 lbs last week to 16.2 lbs this week. The starch removal has literally sat still over the last week, averaging 2.4. The brix has changed slightly to 10.7%. The Red Chief strain of Red Delicious are still eating fairly poorly, even though the eating quality is improving a bit from last week. They still have a woody taste. On our conference call this morning we had a long discussion as to why Red Delicious were maturing so slowly this year. There was a consensus developed amongst our fruit staff that the primary reason that they are maturing so slowly this season is that there is a heavy crop load in most blocks. A heavy crop load tends to slow maturity. At this time this strain of Red Delicious are not ready for harvest, and still may be a week or more away from harvest.

Crispin were sampled for the third week of the season with five samples taken this week for analysis. The color has improved greatly on Crispin in the last week, moving from 12% last week to 31% this week. The background color has improved a bit, and the

pressure has dropped almost a pound to 16.4 lbs. The starch removal has jumped dramatically from 2.8 last week to 4.5 this week. The brix is also up a bit, but still only 11.7%. Crispin are ready for harvest for long term and CA storage, but need a few more days to ripen for immediate sales. They still taste a bit green, but are improving quickly. I would keep a close eye on Crispin, as they need just a few more days to ripen a bit more.

Northern Spy were sampled for the second week of the season, with a good number of samples being taken this week. Northern Spy are producing a fair amount of ethylene, now with 76% of the fruit now showing levels of greater than 0.2 ppm. Northern Spy are typically high producers of ethylene. The color has improved to 61%. The pressure has dropped 0.7 of a pound to 18.3 lbs. The starch is averaging 3.7, with a brix of 12.1%. Northern Spy are maturing fairly quickly and appear to be well ahead of Red Delicious at this time. If growers need Spy's for immediate sales I would encourage you to spot pick a few. However I would wait another 4 or 5 days to begin harvest for the starch to come up a bit.

Idared were sampled for the third week of the season with a broad sample being taken this week. The internal ethylene levels have jumped to 47% of fruit showing levels greater than 0.2 ppm. The color has improved from 70% last week to 81% this week. The fruit firmness is relatively unchanged, averaging 14.8 lbs. The starch has jumped dramatically from 2.7 last week to 3.9 this week, with a brix of 11.5%. Idared are close to being ready for long term and CA storage harvest, however need another 4 or 5 days for more of the starch to convert for shorter term storage.

Law Rome were sampled for the first time of the season just to get an early look at it. There is no internal ethylene development at this time. The color is good at 88%, with a background color averaging 3.0. The fruit tested very firm at 18.7 lbs. I was surprised to see the starch removal index at 4.0, with a range of 3.0 to 6.0. The brix is only 11.4%. While Law Rome are not ready for harvest, they were much closer than what I thought they would be. Law Rome may be one of the next group of apples that are ready for harvest.

Fuji were sampled for the second week of the season with a broader range of samples being taken this week. Last week none of the fruit were showing internal ethylene levels greater than 0.2 ppm, this week this figure moved to 55%. The fruit color has improved quite nicely on Fuji, now averaging 80%. The background is still showing a little bit on the green side at 3.6, and the pressure has dropped from 18.8 lbs last week to 16.9 lbs this week. The starch removal has jumped well over a point from 3.6 last week to 4.9 this week. The brix is about the same at 12.1%. Earlier maturing strains of Fuji are ready for long term and CA storage harvest at this time. For immediate sales growers could start picking a few Fuji. Again Fuji is a variety that this year is going to jump ahead of Red Delicious.

Winesap were sampled for the second week of the season. There were two samples taken this week. The internal ethylene level on Winesap has moved from 5% of the fruit to 35% of the fruit showing internal ethylene levels greater than 0.2 ppm. The color has improved from 58% last week to 75% this week. The fruit is still firm at 17.0 lbs and the starch is relatively unchanged at 1.6. The brix have increased to 10.8%. Winesap are immature at this time and most likely will be ready for harvest in 7 to 10 days. Look for more details in next week's report.

Braeburn were sampled for the second week of the season with a broader spectrum of samples being taken this week than last. They are showing a bit more internal ethylene levels greater than 0.2 ppm, now averaging 13%. The color has improved from 65% last week to 78% this week. The pressure is still very firm at 19.6 lbs, unchanged from last week. The starch removal is also unchanged from last week, averaging 1.7. Braeburn are at least 2 weeks or more away from being ready for harvest. Again look for more details in next week's report.

Granny Smith were sampled for the first week of the season with only one sample being taken. Fruit showed internal ethylene levels greater than 0.2 ppm averaged 10%. Color averaged 33%, and background color was a solid 5.0. The fruit firmness averaged 17.6 lbs. The starch removal is 2.2, with a brix of 10.5%. Granny Smith are a difficult apple to mature in a normal Michigan season, and usually once harvested will taste better once they have been stored for a month or so. Granny Smith are a long ways away from being ready for harvest at this time, again look for more details in next week's report.

I will continue to put the predicted apple harvest dates table that was mailed to fruit growers in July. I put this in as a reminder, but I don't have as much confidence in the predicted harvest dates for east Michigan as I typically do. This lack of confidence is primarily due to the colder growing season that is still running close to two weeks behind normal in terms of degree day totals.

Table 1. 2009 predicted peak harvest dates

Full bloom date				Predicted harvest date			
Station	McIntosh	Jons	Reds	McIntosh	Jons	Reds	Observer
SWMREC	3-May	5-May	6-May	4-Sep	24-Sep	2-Oct	Shane
Deerfield	4-May	9-May	6-May	5-Sep	29-Sep	2-Oct	Tritten
Romeo	9-May	12-May	13-May	12-Sep	3-Oct	8-Oct	Tritten
Peach Ridge	9-May	12-May	12-May	12-Sep	4-Oct	10-Oct	Schwallier
Ludington	17-May	20-May	20-May	21-Sep	11-Oct	17-Oct	Danilovich
NWMHRS	18-May	21-May	22-May	24-Sep	8-Oct	15-Oct	Rothwell

If you have any questions regarding this Apple Maturity Report, don't hesitate to email me (tritten@msu.edu) or call (810-732-2177). If you would like this information sent to you via email instead of fax, please let me know and that can be accomplished very quickly. This same harvest information is also available on the East Michigan Fruit Pest Management Code-A-Phone (810-732-1005).

Project Researchers – Dr. Randy Beaudry MSU Horticulture Department, and Bob Tritten
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