

EAST MICHIGAN APPLE HARVEST REPORT

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APPLE HARVEST SUMMARY

When I asked growers earlier this week how far they were along in apple harvest this season, there was quite a spread of answers. The answers ranged from just over half completed to 85% or 90% complete. With the large crop that most apple growers have this year, many are finding it difficult to work their way through varieties on a timely basis. There are blocks at several farms that growers have decided shell pick or even not to harvest, this is due to the large apple crop. Many growers are scrambling to find bins and adequate storage space. Two of the growers that I asked how far along they are with apple harvest responded that they may be lucky to finish apple harvest by the start of deer season this year. I think that they were half joking but trying to still make a point that they have a long way to go in terms of apple harvest.

Most growers have finished Golden Delicious, Empire and have started on Crispin, Idared, Northern Spy, Law Rome, and Fuji. Many growers have started to slowly chip away at Red Delicious, particularly earlier maturing strains. Red Delicious continue to mature very slowly this year.

Many parts of the region experienced a hard freeze last Saturday night/Sunday morning. Temperatures at most fruit farms were 28 degrees around midnight or so, and then stayed cold through the night to sunrise. We had a few weather stations with low temperatures that night of 25 degrees. This cold event will tend to advance apple maturity and secondly growers will tend to see an increase in fruit drop about a week after the hard freeze event.

It appears at this time that I will have at least one more apple harvest report next week, October 21st. I believe that will be my last report for the apple harvest season.

Variety	Color (Range)	Firmness (Range)	Starch (Range)	Brix
Empire	89% (75-95%)	14.1 lbs (12.4-16.5)	6.4 (6.0-7.0)	13.2%
Jonagold	77% (72-82%)	14.4 lbs (11.6-18.1)	7.4 (7.0-7.8)	14.1%
Golden Delicious	16% (5-30%)	13.9 lbs (13.3-14.5)	7.2 (6.9-7.5)	14.1%
Red Delicious	95% (92-97%)	15.3 lbs (15.0-15.8)	2.6 (2.0-3.5)	11.4%
Crispin	21% (13-28%)	15.6 lbs (14.9-16.5)	5.0 (4.7-5.5)	12.0%
Northern Spy	55% (36-69%)	17.2 lbs (16.8-17.5)	3.5 (3.2-4.0)	12.9%
Idared	82% (69-94%)	14.4 lbs (13.9-15.4)	4.2 (3.3-5.3)	12.4%
Winesap	49% (30-70%)	17.2 lbs (14.4-19.6)	2.2 (1.0-4.0)	11.9%
Rome-Law	88% (70-95%)	18.4 lbs (16.1-20.2)	4.8 (2.0-7.0)	12.5%
Fuji	77% (67-88%)	16.5 lbs (16.3-16.8)	6.3 (5.2-6.8)	12.7%
Braeburn	73% (63-82%)	19.0 lbs (18.1-19.5)	2.4 (1.9-2.8)	11.5%
Granny Smith	13% (5-20%)	16.9 lbs (13.0-20.2)	3.1 (2.0-4.0)	11.5%
Goldrush	16% (5-25%)	17.9 lbs (16.0-20.5)	2.9 (2.0-3.0)	12.7%

INDIVIDUAL VARIETY RESULTS

Empire were sampled for the sixth week of the season, and only one block was sampled because most blocks have been harvested. The results of last week's test indicated that Empire were mature, and ready for harvest. This week's sample indicates that they are on the over mature side, however pressure is still fairly good at 14.1 lbs. Close to 80% of the fruit are showing internal ethylene levels greater than 0.2 parts per million (ppm). This is up from last week's figure of 40%. The color is still good at 89%, with a background color of 1.2. The starch index has moved from an average of 5.7 last week to 6.4 this week. The brix has increased from 12.0% last week to 13.2% this week.

Jonagold have been harvested for the most part across the region. There were just two blocks that I could find on Monday that had not been harvested. Most growers began to pick Jonagold two weeks ago. Close to 60% of the fruit are showing internal ethylene levels greater than 0.2 ppm, this is up from 20% last week. The color is 77%, unchanged from last week. The background color is 2.1 and the pressure is 14.4 lbs, down from 14.8 lbs last week. The starch removal has jumped over a point from 6.8 last week to 7.4 this week. The brix is very good at 14.1%. Several growers have waited for the brix to improve on Jonagold, intending those apples to be used in cider.

Golden Delicious were sampled for the sixth week of the season, and many growers have now wrapped up Golden Delicious harvest. While I still saw a fair amount of them this week in the orchards, I only did two samples. Some growers are harvesting only the larger fruit and leaving the remainder. Just over 70% of the fruit are showing internal ethylene levels greater than 0.2 ppm, this is up from 37% last week. The color is relatively unchanged at 16%, however the background color has improved to 1.6. The fruit that were tested this week have dropped almost two pounds of pressure, down from 15.7 lbs to 13.9 lbs this week. The starch index has also jumped from 6.0 last week to 7.2 this week. The brix is unchanged at 14.1% this week. Again I would say that Golden's are over mature and need to be harvested immediately.

Red Delicious were sampled for the sixth week of the season with a good number of blocks continued to be tested. I continue to select the Red Chief strain of Red Delicious for analysis. Other strains may be mature earlier than Red Chief. The internal ethylene levels of greater than 0.2 ppm has jumped from 28% last week to 58% this week. The color remains very good on Red Delicious, averaging 95%. The background color continues to improve now at 1.4. The pressure has dropped from 16.2 lbs last week to 15.3 lbs this week. The starch removal index however has moved very little, from 2.4 for the last weeks to 2.6 this week. The brix is finally moving along quite well, up from 10.7% last week to 11.4% this week. The Red Chief strain of Red Delicious continue to eat a bit on the woody side. Most growers have picked a few Red Delicious for fresh sales, but have been holding off for better flavor development.

Crispin were sampled for the fourth week of the season, with a good number of samples continued to be taken this week. The internal ethylene levels of greater than 0.2 ppm have moved from 13% last week to 27% this week. The color is about the same at 21%. The background has dropped from 3.9 last week to 3.6 this week. The pressure has also dropped from 16.4 lbs last week to 15.6 lbs this week. The starch index has also moved from 4.5 last week to 5.0 this week, the brix is also improved to 12%. Most blocks of Crispin are mature and are ready for harvest at this time.

Northern Spy were sampled for the third week of the season. Close to 100% of fruit are showing internal ethylene levels greater than 0.2 ppm, this is up from 76% last week and 48% the week before. Spy's will produce a lot of ethylene as they mature. Color remains about the same on Northern Spy, at 55% with a background color of 3.5. The pressure has dropped from 18.3 lbs last week to 17.2 lbs this week. The starch removal is about the same, at 3.5 this week, with a brix of 12.9%. On most farms Spy's are nearly ready for harvest, although I would say that there are other varieties that are more mature at this time than Northern Spy, including Crispin, Idared, Law Rome and Fuji.

Idared were sampled for the third week of the season, with a good number of samples continued to be taken. The internal ethylene levels greater than 0.2 ppm have moved from 47% last week to 70% this week. The color remains good at 82%, with the background color at 2.6. The pressure has dropped a half a pound over the last week, now standing at 14.4 lbs. The starch removal has moved along from 3.9 last week to 4.2 this week. The brix has also improved to 12.4%. Idared's are ready for harvest at some farms, and need a few more days to mature at other farms.

Law Rome were sampled for the second week of the season. The internal ethylene levels greater than 0.2 ppm have moved from none last week to 20% this week. The color remains very good at 88%, and the background color has now dropped to 2.4. The fruit remains firm at 18.4 lbs. The starch has moved from 4.0 last week to 4.8 this week, with a brix of 12.5%. Law Rome's have quite a spread of maturity between farms. I suspect that on some farms they are ready for harvest at this time, while at others they may need another few days to ripen.

Fuji were sampled for the third week of the season with a broad spread of samples being taken this week. The number of fruit with internal ethylene levels greater than 0.2 ppm has jumped from 55% last week to 76% this week. The color is still very good at 77% and the background color has now dropped from 3.6 last week to 2.3 this week. The pressure remains firm at 16.5 lbs. The starch has jumped dramatically from 4.9 last week to 6.3 this week, and the brix has moved to 12.7%. Fuji are ready for harvest at all farms.

Winesap were sampled for the third week of the season. The percent of fruit with internal ethylene levels greater than 0.2 ppm remains about the same at 40%. The fruit has fairly good color at 49% and the background color has dropped from 3.5 last week to 3.0 this week. The fruit are still very firm at 17.2 lbs. The starch removal has moved slightly this week to 2.2. The brix is 11.9%. Winesap are not ready for harvest at this time and most likely need another week to 10 days before they are ready.

Braeburn were sampled for the third week of the season with a broad spectrum of samples being taken this week. The percent of fruit with internal ethylene levels greater than 0.2 ppm has jumped a bit, now standing at 20%. The color is relatively unchanged at 73%, and the background color has dropped a point to 2.4 this week. The fruit is still very firm at 19.0 lbs, down from 19.6 lbs last week. The starch removal has slowly moved from 1.7 last week to 2.4 this week, with a brix of 11.5%. Braeburn are not ready for harvest at this time and need most likely nearly two weeks before they are mature.

Granny Smith were harvested for the second week of the season. Nearly 10% of the fruit are showing internal ethylene levels greater than 0.2 ppm. The color is 13% and background color is 5.0. The fruit is still firm at 16.9 lbs, and starch removal has moved from 2.2 last week to 3.1 this week, with a brix of 11.5%. Granny Smith are still a couple of weeks away from being ready for harvest.

Goldrush were sampled for the first time of the season. This late maturing variety is showing little internal ethylene development as of yet, with no fruit above the 0.2 ppm threshold. The color on the fruit is averaging 16% with background color of 2.0. The fruit is still firm at 17.9 lbs, with a starch index of 2.9. The brix is 12.7%. Goldrush are most likely close to two weeks away from being ready for harvest, but 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).

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