

# EAST MICHIGAN APPLE HARVEST REPORT

## REPORT #8 – October 21, 2009

Bob Tritten and Debbie Clark  
Michigan State University Extension

### APPLE HARVEST SUMMARY

Most growers are seeing the “end of the tunnel” for their 2009 apple harvest. Growers shared with me in the last few days that their harvest is 80% to 95% completed, and by the end of this week or early next week they will be “wrapping things up”.

This week I took 21 samples for analysis, with 10 varieties tested. This is highly unusual for me to be sampling this large number of blocks and varieties this late in the season. In the last five years I have not had this many samples to analyze this late in the season. This is all an indication of how late the season is running this year.

Apple growers are harvesting Crispin, Idared and Fuji's. Braeburn's are getting closer to being mature, but are not quite ripe yet, and growers are also waiting on Granny Smith and Goldrush. As I talked about in the last several reports, Red Delicious continue to be slow to mature this year. Many growers have started picking Red Delicious, knowing that they are not quite where they want them to be, but that they need to get them harvested. More details on Red Delicious follow in this week's report.

Due to the large apple crop this year, in the last two weeks or so many growers have adjusted their picking to do shell picking or just pick the largest fruit on the tree and keep moving along with harvest. So, some apples are being left in the orchard. Some growers have had to bring apples harvested earlier this season out of storage and to compost those apples to free up more bins.

The sugar or brix level in fruit has been slow to develop this year. In the last 2 ½ to 3 weeks it has improved, but we are not at our normal brix level at anytime this season.

This is the last report of the 2009 growing season. I hope that you have found these reports to be helpful in harvesting apples on a timely basis throughout the fall. That is the goal of this entire project. In the next few weeks I will be sending an email message to my email list asking for feedback on my report. If you receive this report in another way (online or fax) and would like to provide feedback, I certainly would appreciate it. You can share your thoughts by contacting my secretary, Debbie Clark, at [clarde@msu.edu](mailto:clarde@msu.edu) or 810-732-2177. She will forward on a copy of the survey that I will be developing. The feedback is greatly appreciated.

Variety	Color (Range)	Firmness (Range)	Starch (Range)	Brix
Red Delicious	94% (93-95%)	15.9 lbs (15.5-17.1)	3.9 (3.2-4.0)	12.3%
Crispin	11% (0-20%)	16.8 lbs (13.5-20.2)	6.5 (6.0-8.0)	12.0%
Northern Spy	61% (44-80%)	17.0 lbs (16.6-17.9)	3.8 (3.0-4.3)	12.7%
Idared	77% (65-88%)	15.2 lbs (15.1-15.4)	4.0 (4.0-4.0)	12.1%
Rome Law	89% (75-95%)	18.8 lbs (12.5-20.5)	6.0 (6.0-6.0)	12.3%
Fuji	89% (80-95%)	16.8 lbs (13.8-20.2)	7.4 (7.0-8.0)	13.5%
Braeburn	79% (77-82%)	19.5 lbs (19.3-19.7)	3.2 (2.7-3.0)	11.6%
Granny Smith	27% (5-40%)	16.9 lbs (14.8-19.8)	4.0 (4.0-4.0)	12.0%
Goldrush	13% (5-30%)	20.1 lbs (18.2-22.5)	2.7 (2.0-3.0)	13.0%
Fuji	77% (67-88%)	16.5 lbs (16.3-16.8)	6.3 (5.2-6.8)	12.7%

## INDIVIDUAL VARIETY RESULTS

**Red Delicious** were sampled for the seventh week of the season, longer than I have ever sampled this variety. I did expand the sample size this week to include other strains of Red Delicious. The percent of fruit with ethylene levels greater than 0.2 parts per million (ppm) has increased from 58% last week to 85% this week. The color remains excellent at 94%. The background color is at 1.8, and the pressure is about the same as last week at 15.9 lbs. The starch removal has jumped significantly from 2.6 last week to 3.9 this week. The brix has also jumped almost a percentage from 11.4 last week to 12.3 this week. All of these figures are indications that Red Delicious are indeed ready for long term CA storage at this time. Most strains of Red Delicious are also ready for short term storage harvest and for fruit for immediate sales. In my 30 plus years of experience I have never seen Red Delicious mature so slowly in the fall. Some believe that the slowness of this ripening was due to the heavy crop load this year. Others have said that it was related to the lack of degree days or heating in the 2009 growing season that is caused Red Delicious to mature so slowly. I will say that Red Delicious are finally beginning to eat better than they have in the last few weeks. The skin on Red Delicious seems to be tougher this year than in most years.

**Crispin** were sampled for the fifth week of the season with just one sample being taken this week as most Crispin's have already been harvested. In the one block that was sampled, 100% of the fruit were showing internal ethylene levels greater than 0.2 ppm. Color has dropped back to 11%, however remember that most blocks have been harvested. The pressure tested at 16.8 lbs, and a starch index of 6.5. The brix is 12.0%. Crispin are ready for harvest at this time and are even a bit on the over mature side.

**Northern Spy** were sampled for the fourth week of the season, with a few less samples being taken this week than last week. Also, some of the fruit that I was able to collect for samples this week were from blocks that had already been shell picked for color. The internal ethylene levels greater than 0.2 ppm still remains high on Northern Spy, now at 90%. The color has improved to 61% and background color dropped to 3.1. The pressure has dropped just a bit to 17.0 lbs. The starch removal is 3.8 and a brix of 12.7%. Northern Spy indeed are ready for harvest at this time, although they have been slow to mature this year.

**Idared** were sampled for the fourth week of the season with a few less samples being taken this week than last, as a number of blocks have been harvested. Idared are still showing high levels of internal ethylene development, now at 100%. The color is unchanged, at 77%. The fruit firmness is at 15.2 lbs, and the starch index is 4.0. The brix remains unchanged at 12.1%. Idared's indeed are ready for harvest at all farms across the region.

**Law Rome** were sampled for the third week of the season. The percent of fruit with internal ethylene levels greater than 0.2 ppm has jumped from 20% last week to 90% this week. The color is unchanged at 89%. The background color is averaging 2.2. The pressure remains unchanged at 18.8 lbs, and the starch index has dropped from 4.8 last week to 6.0 this week. The brix remains unchanged at 12.3%. Many Law Rome's were harvested last week, and those that remain are ready for harvest at this time.

**Fuji** were sampled for the fourth week of the season with far fewer samples of Fuji being taken this week than last week. Most blocks of Fuji's have already been harvested, as I indicated in last week's report that they were ready. All of the fruit sampled this week are showing internal ethylene levels greater than 0.2 ppm. The fruit color is 89%. The fruit are still firm at 16.8 lbs and the starch index has jumped from 6.3 last week to 7.4 this week. The brix has improved to 13.5%. The blocks of Fuji that were sampled this week are now on the over mature side.

**Braeburn** were sampled for the fourth week of the season, a good number of samples were taken this week. Close to 40% of the fruit are showing internal ethylene levels greater than 0.2 ppm. The color has improved to 79% and background color is now started to break. The fruit remains firm at 19.5 lbs. The starch removal index has moved from 2.4 last week to 3.2 this week, and the brix is about the same at 11.6%. Braeburn are maturing fairly slow this year, and I estimate that they still need another 5 to 7 days before they are mature. Braeburn are eating a bit on the green side.

**Granny Smith** were harvested for the third week of the season, with only one sample being taken this week. Close to 80% of the fruit are showing internal ethylene levels greater than 0.2 ppm. The color has improved to 27%. The fruit remains firm at 16.9 lbs and the starch removal index has moved from 3.1 last week to 4.0 this week. The brix in Granny's has improved from 11.5% last week to 12.0% this week. Granny Smith's are moving along in maturity, but I don't feel that they are ready for harvest at this time. I would estimate that they are about 5 to 7 days away from being mature. I am surprised to see the maturity on Granny Smith this year be so far along with such a cold growing season this year.

**Goldrush** were sampled for the second week of the season. There is no internal ethylene development as of yet. The color remains about the same at 13%. The fruit is still very firm at 20.1 lbs and the starch is relatively unchanged at 2.7. The brix has improved a little to 13.0%. Based on data over the last two weeks, Goldrush are about 2 weeks away from being ready for harvest.

I 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*  
*This report and project is made possible by the support of our sponsors which include Gerber Products Company, Michigan Apple Shippers Association, Valent USA, MSU Project GREEN, Michigan Apple Research Subcommittee, Michigan State Horticultural Society, Michigan Agricultural Experiment Station, and Michigan State University Extension. The growers cooperating by supplying apples on a weekly basis in Southeast Michigan include AlMar Orchards in Flushing, Erwin Orchards in South Lyon, Hy's Cider Mill in Romeo, Spicer Orchards in Hartland, Westview Orchards in Romeo, and several others as well.*