

MSU Fruit Team Apple Maturity Report 2010
Grand Rapids Area Report Number 5
September 27, 2010

General Comments:

The weather over the past 10 days continued to rollercoaster from unusually cool to unusually high temperatures. Cool weather has seemed to move in to stay and the forecast for this last week of September is calling for highs in the upper 60's to near 70 and lows in the mid 40's. Rainfall has been plentiful. Some recent storms and high winds have caused more fruit drop. We are better than half way through the harvest process at this time.

Summary of Grand Rapids apple maturity samples taken September 23, 2010:

Variety	Ethylene (ppm)	Color % (range)	Firmness lbs pressure (range)	Starch (range)	Brix (range)
Golden Delicious	0.085	0%	14.2 (12.4 – 16.2)	5.4 (5-6)	11.6 (11 - 12.5)
Jonagold	0.823	67% (30 - 95)	15.1 (12.9 – 18.3)	6.5 (6-8)	12.7 (12 - 13.5)
Red Delicious	162	90%	16.7 (14 – 20.2)	2	12.6 (12 – 13.5)
Ida Red	0.7	74% (50 - 95)	15.3 (13.3 – 18.5)	3 (2-4)	11.1 (11 – 11.5)
Northern Spy	95.5	27% (0 – 60)	18.1 (14.1 – 21.2)	2.8 (2 – 3)	12.5 (11.5 – 13.5)
Law Rome	0.049	93% (80 – 100)	20.2 (17.6 – 21.9)	3	11.8 (11.5 – 12)

Jonagold

Have moved into the moderate term CA storage window in the past few days. There are very few Jonagolds left to harvest on the Ridge. Where color is good, they are being stripped – this is common in most blocks and is very different than normal multi-pick type of harvest for Jonagold. Most fruits are showing internal ethylene levels greater than 0.2 ppm indicating maturity. Color is excellent with a range of 30 to 95% which depends on the strain. Firmness dropped from 17.1 pounds last week to 15.1 pounds. Starch readings have improved from 3.6 last week to 6.5 this week. Brix readings are still good, but not excellent at an average of 12.7 this week. Jonagold are expected to move to a short term CA storage window by the end of this week.

Golden Delicious

Have moved into the long-term CA storage window and are being harvested in the area now. It looks like many Golden Delicious have already been removed. Internal ethylene readings are still quite low at an average of 0.08 ppm with still no fruits over the threshold of 0.2 ppm. Pressure is excellent in Golden Delicious at 14.2 pounds compared to 15.9 pounds last week. Starch readings are indicating maturity at 5.4. Brix have not improved very much at 11.6 this week compared to 11.2% last week. Surprisingly, Golden Delicious don't taste too bad, despite the poor maturity test readings.

Red Delicious

Some harvest of Reds is ongoing and growers are working on them as they can and where color is good. There continues to be a wide variability in the internal ethylene readings with all samples now showing readings over the 0.2 ppm ethylene threshold that indicates maturity. Firmness readings are still excellent for Reds at 16.7 pounds pressure with is actually up from last week's samples. Starch clearing is still on the low side at 2 across the board. The minimum recommendation for starch clearing for Reds is 2.5. Brix have made an improvement from 11.4 last week to 12.6 this week. Growers need to test their own blocks to determine the best harvest window for their own Red Delicious, but they are just about there for long term CA storage overall.

Ida Red

The predicted date for Ida Red harvest for 2010 was September 28th and that date is likely to be right on target when looking at the samples from this week. Internal ethylene readings have increased with 50% of samples reading over 0.2 ppm. Color has improved greatly over the last 10 days in Ida Red at 74% red color recently compared to 56% 10 days ago. Pressure readings have dropped from 16.7 pounds to 15.3 pounds, which indicates the move to maturity. Starch clearing increased from 2 to 3 and the brix readings are about the same at 11.1. The long term CA storage window is just peaking open for Ida Reds and growers should look closely at their own blocks so that they don't miss the ideal harvest window.

Northern Spy

Spies were tested for the first time late last week and they are immature. However, the internal ethylene readings were quite high. Color is OK, but not great at 27%, but this is not unusual for spies. The firmness readings are very high at 18.1 pounds on average with a range of 14.1 to 21.2 pounds across the fruits sampled. Starch clearing is 2.8, which indicates immaturity, but they are close. Brix readings were surprisingly good at 12.5. Spies are immature, but as color develops, growers will start to look at them.

Law Rome

Were tested for the first time and they are still immature, but close. The predicted harvest date for Romes was determined to be October 3rd and it's looking as if that date will be close to the right time for the start of Rome harvest. The internal ethylene in the Law Romes tested was still very low with no fruits over 0.2 ppm. Pressure readings are very high for Romes at an average of 20.2 pounds. Starch clearing is a steady 3 which indicates the maturity window is just opening. Brix readings are 11.8% which is rather low, but should improve in the next 7 days.

More detailed reports from other district MSU Extension Fruit Educators will be posted on www.apples.msu.edu – under the Apple Maturity section.

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