

MSU Fruit Team Apple Maturity Report 2007
Grand Rapids Area Report # 6
October 3, 2007

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Golden Delicious harvest continues, but is nearly complete for this area. Jonathan and Jonagold harvest is nearly complete as well. Red Delicious are being harvested, and over the next week or so, there will be a big push to harvest Reds. A few Ida Reds and Law Romes are being harvested for processing. Growers are still reporting picking out shorter than expected even in Red Delicious blocks that looked heavy. Fruit size overall for mid and later season varieties is excellent. The common thing to hear is that growers would like to see a bit more color. Unfortunately, the weather forecast for the next week will not be conducive to color development. Growers need to weigh how much they might gain by leaving fruit hang, versus the risk of losing them in a wind event. Start with your earliest sites and move to those that usually harvest later or that have Retain applied.

See the table below for more predicted harvest dates for the Grand Rapids area:

Variety	Normal date	2007 predicted date
Red Delicious	10-5	9-26
Idared	10-10	10-2
Rome	10-15	10-7
Fuji	10-25	10-18
Braeburn	10-25	10-18
Goldrush	11-1	10-22

Summary of Grand Rapids apple maturity samples taken October 1, 2007

Variety	Ethylene (ppm)	Color % (range)	Firmness (range)	Starch (range)	Brix
Jonagold	2.925	76.5% (65 – 90)	16.73 (14 – 19.2)	5.2 (4 – 7)	14.1
Golden Delicious	0.131	1% (0 – 3)	17.72 (14 – 22.6)	4.4 (2 – 7)	14.7
Red Delicious	4.97	72.25% (50 – 90)	16.82 (12.7 – 19.6)	4.6 (2 – 8)	13.2
Ida Red	0.832	67% (60 – 80)	15.6 (13.2 – 18.4)	2.5 (1 – 5)	12.2
Fuji	0.676	49% (30 – 60)	18.58 (15.2 – 21)	2.7 (2 – 3)	14
Law Rome	0.014	85% (60 – 100)	21.33 (17.7–26.3.1)	3.5 (2 – 8)	13.2

Jonathan and Jonagolds

All readings indicate Jonathan and Jonagolds are moving quickly out of even the short-term storage window. There are some left to harvest for fresh sales, but most are off the trees.

Golden Delicious

Readings for this weeks sampling show Goldens still slightly immature, but very close to the minimum levels to indicate maturity is close. Firmness is averaging about 17 pounds, up a bit from last week, but sampled in a different block too. Starch index has moved from 3.6 last week to 4.4 this week, which is really indicating Goldens are ready for long-term storage. Brix have increased from 13.65 to 14.7 on average. Harvest of Goldens started last week and according the readings from this weeks sampling, the window for long-term storage is still open for Goldens – they will probably move into the mid-storage range by the end of this week. Goldens seem to be moving very slowly in maturity this year.

Red Delicious

Reds have made a definite move forward in maturity much from last week, but they are later than the predicted harvest date listed above. Internal ethylene readings were up considerably at 4.97 ppm compared to last week's 0.138 ppm. Starch index readings have also moved from 2.5 last week to 4.6 this week, which also indicates mature fruits. Brix levels are up from 10.45 last week to 13.2 this week. Pressure has stayed about the same at 16.8 pounds, but there are reports from around the state of rather low pressures in Reds for this time of year, which isn't all that unusual. We expect to see significant changes in Red Delicious maturity levels from this week to next and harvest is recommended now for long-tern storage. Some growers would like to see better color on Reds, but be sure to check your blocks often because they seem to be getting looser on the trees.

Ida Red

The third week of sampling shows some additional movement toward maturity, but Ida Reds are right on the edge of being mature. Internal ethylene is an average of 0.83, up from 0.126 last week – a definite change indicating maturity; firmness is still good at 15.6 pounds. Starch index readings averaged 2.5, but range from 1 to 5. Brix levels are still a bit low at 12.2, but hopefully will improve. Ida Reds are probably a week away from early harvest for long-term storage, but some harvest is underway for processing

Fuji

We sampled Fuji for the second time this season. Ethylene was at an average of 0.68 – up from 0.137 last week. As stated last week, a bit of a surprise to see internal ethylene readings that high in Fuji. Firmness is excellent at 18.58. Starch readings were more uniform with this week's sample, averaging 2.7. Brix are better at 14. Some Fuji blocks could be ready this weekend for long-term storage, but numbers a bit strange this year, so growers should be checking their own individual blocks if they can.

Law Rome

Readings have shown movement towards maturity, but internal ethylene readings are still very low at 0.014; firmness is still great at nearly 21.3 pounds; starch reading average 3.5, up from last week's 2.5. Some Law Romes are being harvested to avoid bleeding into the flesh, but they are immature at this time. Law Romes are slightly ahead in maturity than regular Romes this year.

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