

MSU Fruit Team Apple Maturity Report 2007
Grand Rapids Area Report # 3
September 19, 2007

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Apple maturity continues to be about 10 to 14 days ahead of normal, depending on site and variety/strain. Gala harvest is over for the most part. McIntosh harvest is complete. Honeycrisp continue to be harvested as they gain color, but are mostly off the trees now. Empire & Golden Delicious harvest is underway. Growers are looking at Jonagolds, Jonathans, and Red Delicious, but none have been picked to any extent yet. Early harvested varieties have been picking out a bit shorter than expected. We have adequate labor resources at this time.

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

Variety	Normal date	2007 predicted date
Jonathan	9-28	9-19
Jonagold	9-28	9-19
Golden Delicious	10-2	9-21
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 September 17, 2007

Variety	Ethylene (ppm)	Color % (range)	Firmness (range)	Starch (range)	Brix
Jonee	0.4599	65% (30 – 90%)	15.65 (12.8 – 17.2)	5.1 (4 – 7)	13.4
Jonagold	0.1815	61.8% (20 – 90)	15.8 (12.8 – 23)	4.35 (2 – 8)	13.2
Golden Delicious	0.0347	3% (0 – 15)	17.57 (13.5 – 23)	2.6 (1 – 6)	14
Red Delicious	0.1	80.5% (60 – 90)	16.48 (14.3 – 20)	3.2 (2 – 5)	12.6
Ida Red	0.106	56.3% (25 – 90)	16 (11.8 – 21)	2.1 (1 – 5)	12.55

Empire

Readings last week showed Empire to still be immature, but movement towards maturity indicates that Empire should be harvested at any time for long-term storage. Internal ethylene is increasing as is starch readings. Firmness and brix are excellent.

Jonee

Color is OK, but could be better in some blocks. Starch removal readings are showing fruit to be mature. Firmness is good at between 15 and 16 pounds for most samples, putting Jonees in the excellent range for long-term CA. Brix are good at 13.4. The long-term storage window is now open for Jonathans but few are being harvested.

Cortland

Readings a week ago and late last week still indicated immaturity. Samples were not taken this week. Optimal harvest will most likely be this week or into the coming weekend. Color is an issue for Cortlands, but has improved over the last week quite a bit really.

Jonagolds

Our first samples were last week and they were already showing fruits in the early long-term storage window. That continues to be the case. Readings this week show similar ethylene readings without a dramatic increase yet. Firmness is still good at an average of 15.8, but down from 18.29 last week; starch readings are indicating maturity at an average of 4.35 – up from last week’s 3.5. Brix are excellent at 13.2

Golden Delicious

Our first Golden samples were taken a week ago and showed fruit to be immature. That is still the case with this week’s samples, but we are seeing some movement towards maturity. Firmness is averaging 17.5. Starch index has moved from 1 last week to 2.6 this week. Brix have improved from 12 to 14 this week. There are some Golden strains are being harvested, but the majority of Golden harvest will probably get underway this week or next if size is an issue. The window for long-term storage is opening for Golden.

Red Delicious

Reds were sampled for the first time last week and we were surprised to see internal ethylene readings were getting close to 0.2 on average indicating that Reds might reach maturity fairly early this season. This week, the ethylene readings are similar and still indicating immaturity. Starch index readings are still indicating immature fruits, but have moved from 1.5 last week to 3.2 this week. Brix levels are adequate at 12.6, but haven’t increased much from last week. We expect that to change over the next two or three weeks. In some blocks, Reds might be ready for early harvest in about a week or two for long-term storage.

Ida Red

The first samples were taken this week and they are still immature. Internal ethylene is an average of 0.1; firmness is right at 16 pounds pressure for an average, but ranges from just under 12 pounds to 21 pounds. Starch index readings are mostly 1’s and 2’s and brix levels are a bit low at 12.55. Ida Reds are probably 10 days to 2 weeks away from early harvest for long-term storage.

If you have an Email address, we would prefer to deliver this to you by Email. Please fax or send your email address to us at: irisha@msu.edu Fax: 616-693-2317

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