

Predicted CA Cutoff Model for McIntosh

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This prediction model was originally used to estimate the latest dates by which McIntosh should be harvested if they are going to be stored under CA conditions. Averaging the last dates for CA cutoff from the earliest inland sites to the latest lake sites is also called the centering date. These equations are in Information Bulletin 221, Cornell Cooperative Extension, *Predicting Harvest Date Windows for Apples*, by David Blanpied & Ken Silsby, http://rvpadmin.cce.cornell.edu/pdf/submission/pdf198_pdf.pdf. The model is based on the temperatures from 3-33 days following full bloom. In 2017, cool and wet weather during bloom created poor pollination

conditions and an extended bloom that make it difficult to predict actual full bloom (FB) dates. The estimates are "best guess" for bee activity with blossoms still open and anthers shedding pollen on the north side of trees. The average FB date for this season is May 10, a full 8 days earlier than last season. Despite a record wet spring, and cooler than normal temperatures overall, the model is predicting a slightly earlier season than usual. The model is predicting a September 20 CA McIntosh cutoff date averaged across 19 NEWA weather stations in the apple belt in Western and Central NY, which is three days earlier than last year, and 2 days earlier than the average from 1986-2015.

Table 1. Predicted Mac CA Cutoff Dates

NEWA Station	17 FB	17 CA Cutoff	FB 'Diff to '16	16 FB	16 CA Cutoff	CA 'Diff to '16	Location	County
Albion	11-May	20-Sep	+1	12-May	20-Sep	0	Inland	Orleans
Appleton N	13-May	22-Sep	+8	21-May	25-Sep	+3	Lake	Niagara
Ashwood	12-May	21-Sep	+8	20-May	25-Sep	+4	Intermediate	Orleans
Baldwinsville (Abbott)	28-Apr	16-Sep	NA	NA	NA	NA	Inland	Onondaga
Butler (Tree Crisp)	3-May	18-Sep	+9	12-May	19-Sep	+1	Inland	Wayne
Fairville (Apple Shed)	4-May	21-Sep	+8	12-May	21-Sep	0	Inland	Wayne
Geneva (NYSAES)	3-May	19-Sep	NA	NA	NA	NA	Inland	Ontario
Kendall (Zingler)	12-May	21-Sep	+9	21-May	24-Sep	+3	Intermediate	Orleans
Knowlesville	10-May	20-Sep	+2	12-May	20-Sep	0	Inland	Orleans
LaFayette	28-Apr	16-Sep	NA	NA	NA	NA	Inland	Onondaga
Lyndonville	8-May	20-Sep	+4	12-May	21-Sep	+1	Intermediate	Orleans
Medina	10-May	19-Sep	+2	12-May	20-Sep	+1	Inland	Orleans
Pt. Breeze	12-May	19-Sep	+10	22-May	23-Sep	+4	Lake	Orleans
Sodus (Lake)	14-May	22-Sep	+8	22-May	25-Sep	+3	Intermediate	Wayne
Somerset	10-May	20-Sep	+11	21-May	24-Sep	+4	Intermediate	Niagara
Williamson (Bear Swamp)	14-May	23-Sep	+7	21-May	26-Sep	+3	Intermediate	Wayne
Williamson (DeMarree)	15-May	23-Sep	+7	22-May	25-Sep	+2	Lake	Wayne
Williamson (Orbaker)	15-May	24-Sep	+8	23-May	28-Sep	+4	Lake	Wayne
Wolcott	14-May	22-Sep	-1	21-Sep	24-Sep	+2	Intermediate	Wayne
AVERAGE	10-May	20-Sep	+8	18-May	23-Sep	+3		

I have given up trying to compare any of the last several years to an average year, as the last few years were certainly not average. In addition, we are getting into more extremes in swings in drought, rain, heat, etc. from year to year and even within the same growing seasons. At this point, I would venture to say we are very close to average maturity on early-season apples. If the cooler and wetter weather patterns continue predominate as we approach harvest, maturity could be delayed. Conversely, if hot and drier patterns predominate, maturity could be advanced. It's worth noting that overly stressed trees do not respond as predicted. For instance, orchards with extreme drought stress in 2016 had delayed maturity. Other stressors may advance maturity. It should be cautioned that this is only a model, a prediction to the overall maturity timing so far. It was done with seedling McIntosh trees over 20 years ago. The proper way of interpreting these dates is to use them to decide the time frame to start bringing in harvest labor if McIntosh is your first high acreage variety. The LOFP harvest maturity program will again start sometime in August and continue until near the end of the fresh fruit harvest season. The reports will include current apple maturity indices, anticipated harvest windows for principle varieties, and weekly internal ethylene analysis for determining preharvest drop of susceptible varieties.

