Maine Apple Newsletter
Tuesday, **September 4** , 2012 Vol. 20 No. 11

**Apple Maturity Update**

Spur-type Macs in orchards near Highmoor Farm are ready to pick for long-term storage.

**2012 McIntosh Starch index, Monmouth & Turner ME**
Fruit NOT treated with ReTain or other growth regulators

Starch Index interpretation for McIntosh

- **3.0 — 4.0**: McIntosh maturity becoming suitable for long term CA storage.
- **4.0 — 5.0**: Optimum McIntosh maturity for long-term CA storage (> 4 months).
- **5.0 — 6.0**: McIntosh suitable for short-term CA storage, (2 – 4 months).
- **6.0 — 8.0**: McIntosh are ripe and should be marketed immediately, or stored for less than 2 months.

* Honeycrisp at Highmoor Farm in Monmouth had Starch Index 1.8 on Tuesday, September 4.
# Maine Apple Price Survey Results

## 5-lb. tote (half-peck) of McIntosh or comparable variety

<table>
<thead>
<tr>
<th></th>
<th>Price</th>
<th>Number of orchards reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fancy grades - state average</td>
<td>$5.25</td>
<td>22</td>
</tr>
<tr>
<td>Aroostook County</td>
<td>$4.63</td>
<td>2</td>
</tr>
<tr>
<td>Penobscot county</td>
<td>$4.38</td>
<td>2</td>
</tr>
<tr>
<td>Androscoggin, Franklin &amp; Oxford County</td>
<td>$5.37</td>
<td>8</td>
</tr>
<tr>
<td>Kennebec, Knox &amp; Lincoln County</td>
<td>$4.75</td>
<td>5</td>
</tr>
<tr>
<td>Cumberland, Sagadahoc &amp; York County*</td>
<td>$6.20</td>
<td>2</td>
</tr>
<tr>
<td>Lower grades – state average</td>
<td>$4.30</td>
<td>9</td>
</tr>
</tbody>
</table>

* Several orchards in York and Cumberland counties did not report prices for pre-picked apples since they have only PYO.

## 5-lb. tote (half-peck) of Honeycrisp or comparable higher value variety

<table>
<thead>
<tr>
<th></th>
<th>Price</th>
<th>Number of orchards reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fancy grades - state average</td>
<td>$8.56</td>
<td>13</td>
</tr>
<tr>
<td>Aroostook County</td>
<td>$7.13</td>
<td>2</td>
</tr>
<tr>
<td>Penobscot county</td>
<td>---</td>
<td>1</td>
</tr>
<tr>
<td>Androscoggin, Franklin &amp; Oxford County</td>
<td>$9.10</td>
<td>5</td>
</tr>
<tr>
<td>Kennebec, Knox &amp; Lincoln County</td>
<td>$7.58</td>
<td>3</td>
</tr>
<tr>
<td>Cumberland, Sagadahoc &amp; York County</td>
<td>$9.75</td>
<td>3</td>
</tr>
<tr>
<td>Lower grades – state average</td>
<td>$5.86</td>
<td>4</td>
</tr>
</tbody>
</table>

## Pick-Your-Own Price per Pound, All Varieties

<table>
<thead>
<tr>
<th></th>
<th>Price</th>
<th>Number of orchards reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average of all farms</td>
<td>$0.85</td>
<td>22</td>
</tr>
<tr>
<td>Farms offering only apples</td>
<td>$0.77</td>
<td>15</td>
</tr>
<tr>
<td>Farms offering apples &amp; other activities</td>
<td>$1.03</td>
<td>7</td>
</tr>
<tr>
<td>Aroostook County</td>
<td>$0.70</td>
<td>2</td>
</tr>
<tr>
<td>Penobscot county</td>
<td>$0.54</td>
<td>2</td>
</tr>
<tr>
<td>Androscoggin, Franklin &amp; Oxford County</td>
<td>$0.93</td>
<td>7</td>
</tr>
<tr>
<td>Kennebec, Knox &amp; Lincoln County</td>
<td>$0.70</td>
<td>4</td>
</tr>
<tr>
<td>Cumberland, Sagadahoc &amp; York County</td>
<td>$0.99</td>
<td>7</td>
</tr>
</tbody>
</table>

## State-wide Average Price per Pound for Stone Fruit

<table>
<thead>
<tr>
<th></th>
<th>Price</th>
<th>Number of orchards reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peaches</td>
<td>$2.34</td>
<td>10</td>
</tr>
<tr>
<td>Plums</td>
<td>$1.97</td>
<td>6</td>
</tr>
<tr>
<td>Cherries</td>
<td>$4.26</td>
<td>3</td>
</tr>
</tbody>
</table>
Maine Apple Sunday

Sunday, September 9 is Maine Apple Sunday, when apple orchards in Maine collectively offer specials or events to attract more customers. If you get a chance, let the public know via websites, Facebook etc., about special offers or activities occurring in your orchard this Sunday.

Spotted Wing Drosophila

SWD are being found throughout southern, central, and eastern Maine in increasing numbers. Until harvest is complete, peaches should be protected with weekly insecticide application of either a malathion (organophosphate), pyrethroid, or spinosyn (Delegate, Entrust) insecticide product with a short enough preharvest interval.

While SWD are extremely destructive to raspberries, highbush blueberries, strawberries and other soft fruit, and even though apples are listed as one of their host plants, SWD are not thought to pose a risk to intact apples. Drops and other apples with split skin from hail, birds or other causes would be susceptible to SWD infestation.

Apple maggot

Apple maggot fly populations were higher this summer than in previous recent years. However, AM caught on traps are not indication of need for control because female flies either deplete their stock of eggs, or if they do lay eggs, the eggs are not likely to hatch and tunnel into fruit.

Flyspeck update

The estimates below are based on forecast weather out through September 12. The outlook for Sept. 12–18 is for normal chance of rain and slightly above normal chance for warm temperature. The blue dates in parentheses and italic are a rough worst-case scenario if weather after September 12 turns out to be in both the warmest 20% and the wettest 20% of previous record for those dates at that location. The chances of that happening are roughly 1 in 25 years, so it is a rather cautious and unlikely estimate.

Of course, in addition to spray coverage and timing, the actual flyspeck show date for an orchard is controlled by site-specific factors such as air drainage, wind and sun exposure, block history, and proximity and density of alternate host plant sources of flyspeck spores, color of the fruit, and eye of the beholder.
### Scab Index for Spring 2013

As apple leaves age in the fall, they lose natural resistance to late season scab infections. Active scab infections on leaves in the autumn exchange genes (i.e. mate) with other scab lesions on the same leaf to make the scab ascospores that will release next spring.

Removing those leaves from the orchard before next spring is ideal, but is only feasible in a small planting. Treating fallen leaves on the ground with urea (42 lbs. urea per 100 gallons of water per acre) in the fall, or chopping them with a mower (flail mower is best, but rotary mower also helps) accelerates leaf decay.
But apple leaves often do not fall until there is snow cover and it is too late to run a boom sprayer or mower. Once leaves freeze to the ground mowing is not as effective. The ground urea application and mowing can be done in early spring but in early spring, soil is often either snow covered or too wet for tractor use.

One option to deal with these constraints is to apply the urea as a foliar application to leaves on the tree before they fall. Research indicates that late season application of urea to the foliage does not interfere with hardening off to resist cold winter temperatures, and in fact may strengthen buds.

To get an estimate of how much overwintering scab inoculum will be available next spring, check 100 shoots randomly around the orchard. On each shoot glance at roughly 15 leaves, tops and bottoms. You do not have to examine each leaf individually, which would take far too long. Check branches from both the inner and outer canopy, and include branches from the as high in the canopy as you can see. Save every leaf you find that has any spots that look like they could be an active scab lesion. Dead dry spots with a flat dead surface do not count, but any spots with a velvety or textured surface or surrounded by a ring of yellowing but not dried up tissue should be counted.

It is best to do the scab index in September before leaves start to senesce and develop purple and brown spots, which makes it too difficult to quickly scan for scab lesions. Of course, September is the busiest month of the year for apple growers, but it can take as little as 30 minutes to do a scab index for a low scab 10 acre block, and less than that for a block with scab. Investing that time will repay you with better information about how effective scab control was in 2012, help you plan for 2013, can save you the expense of a scab control problems next year, and in a low scab block combined with scab sanitation, you can save the expense and labor for early season scab sprays next spring.

If you find only 5 or fewer leaves with scab spots on 100 shoots, the block will have a low inoculum level next spring. In that case, you can be a little more relaxed about needing to protect against the earliest infection periods at Green Tip and Half Inch Green next spring, especially if you use urea and/or leaf shredding sanitation to reduce the scab threat further.

If you find 20 or more infected leaves on 100 shoots, this indicates high inoculum potential, and incentive to use sanitation measures to reduce the scab ascospore population, reduce pressure on fungicide protection, and thus increase the chance of successful scab control next spring.

Lack of fruit scab is NOT a reliable indicator of scab inoculum level.

**Signs of the Times**

1) The Maine Department of Labor has a website that lists required State and Federal posters for display where hired workers are employed, telephone numbers for federal and state agencies, and copies of the posters. The site is at [http://www.maine.gov/labor/publications/index.html](http://www.maine.gov/labor/publications/index.html)
The phone contact for Department of Labor 623-7900.
2) Agritourism – Limited Liability signs.

The Maine Farm Bureau has warning signs available for meeting standards specified in the new Limited Liability Law. The cost is $15 per sign for Farm Bureau members, and $50 per sign for non-members, plus postage. To order a sign call the Farm Bureau at 800-639-2126.

According to a Maine sign maker, the type of plastic used to make the signs becomes brittle with cold weather, will expand in hot weather and shatter if you drop it on its corner. He suggests mounting the sign on a piece of plywood by drilling holes in the corners that are larger than the mounting screws (to allow for expansion) and using large washers to hold it in place.

3) The new normal.

Orchard Radar uses ‘climatic normal’ values used in to make long-range estimates beyond the range of weather forecasts. Climatic normal for a location has traditionally been calculated as the average values from the past 30 years at the location, updated every decade. Some notable comments came up in the process of getting the recently released 1981-2010 new normals.

* A Maine climate researcher opined that climate of the last decade was fundamentally different from preceding decades because of the severe decline of Arctic sea ice; and that the decline of sea ice has had an enormous impact on New England winter climate, especially since the major collapse that occurred during the 2007 melt (surpassed by the summer 2012 melt).

* The following excerpts from the NOAA (National Oceanic and Atmospheric Admin.) and NCDC (National Climate Data Center) website:

“In response to observed climate change, NOAA's NCDC has been investigating a suite of experimental products that attempt to provide a better estimate of "normal" than the traditional 30-year average Normals of temperature and precipitation. This project is known as Alternative Normals. This project is parallel to the computation of NOAA's official 1981 - 2010 Normals and is ongoing.”

“...the new Normals include the decade of the 2000s and lose the decade of the 1970s. As the 2000s were warmer than the 1970s, this has had a warming influence on the Normals. Comparing these decades using our best data set for climate change analysis, we find that the decade of the 2000s was about 1.5F warmer than the 1970s. For maximum, minimum and mean temperature the difference, respectively, was 1.37F, 1.55F and 1.46F. As the Normals are an average of three decades, this warms the new Normals by approximately 0.5F.”

* And these excerpts are from a report titled “The Heat Is On: U.S. Temperature Trends” by Claudia Tebaldi, Dennis Adams-Smith, and Nicole Heller for Climate Central, online at http://www.climatecentral.org/news/the-heat-is-on/

“Global warming isn’t uniform. The continental U.S. has warmed by about 1.3°F over the past 100 years, but the temperature increase hasn’t been the same everywhere: some places have warmed more than others, some less, and some not much at all. Natural variability explains some of the differences, and air pollution with fine aerosols screening incoming solar radiation could also be a factor.”

“We looked at average daily temperatures for the continental 48 states from 1912 to the present, and also from1970 to the present and found:
Over the past 100 years, the top 10 states on average warmed 60 times faster than the bottom 10 (0.26°F per decade vs. 0.004°F per decade), when looking at average mean temperatures. During this timeframe, 45 states showed warming trends, although 21 were not statistically significant. Three states experienced a slight cooling trend.

Since 1970, warming began accelerating everywhere. The speed of warming across the lower 48 more than tripled, from 0.127°F per decade over the 100-year period, to 0.435°F per decade since 1970.”

“The states that have warmed the most — whether you look at the past 100 years or just the past 40 — include northern-tier states from Minnesota to Maine and the Southwest, particularly Arizona and New Mexico.”

**Rates of Warming, Annual Average Temperature**

Maine Average Minimum daily temperature trend, from 1970-2011:
+ 0.741 degree F per decade. Rank of change rate among 48 continental U.S. states, #2.

Maine Average Maximum daily temperature trend, from 1970-2011:
+ 0.433 degree F per decade. Rank of change rate among 48 continental U.S. states, #25.

**Free Pesticide Disposal**

The Maine’s Board of Pesticides Control (BPC) has announced a free opportunity this fall to dispose of pesticides that have become caked, frozen, or otherwise unusable, including those that are banned in the state.

Preregistration is required by September 28. There will be four sites throughout Maine where preregistered participants will be able to bring their obsolete pesticides and dispose of them conveniently and at no cost. BPC will contact registrants several weeks prior to the drop off date with details about the local collection date and location. To register, or learn important information about the temporary storage and transportation of obsolete pesticides, go to [http://www.thinkfirstspraylast.org](http://www.thinkfirstspraylast.org) or call BPC director Henry Jennings at 287-2731.
Horticultural Marketing Webinar

There will be a free webinar on Thursday, September 13 at 2pm titled “Retail Layout and Design Principles and Practices for Horticultural Businesses”. The discussion will cover what customers care about when visiting retail horticultural businesses, tangible and intangible cues that encourage or discourage customers, and techniques to design and enhance a space consumers find appealing.

The webinar will be online at https://connect.extension.iastate.edu/etc-cop. For more information, contact Mary Peabody at Mary.Peabody@uvm.edu

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Closing Words

“The methodology used to create the 'Dirty Dozen' list does not appear to follow any established scientific procedures... The results from this study strongly suggest that consumer exposures to the ten most common pesticides found on the 'Dirty Dozen' commodities are several orders of magnitude below levels required to cause any biological effect.” Dr. Carl Winter, Professor of Toxicology, University of California, Davis. 2011

“The 2010 Pesticide Data Program report confirms that food does not pose a safety concern based upon pesticide residues.”

“The amount of pesticide residues that an average person ingests throughout an entire year is even less than the amount of those 'harmful' substances in one cup of coffee...”
Dr. Bruce Ames, Professor Emeritus of Biochemistry and Molecular Biology, University of California, Berkeley. Member, National Academy of Sciences. Recipient, National Medal of Science

“A focus on nutrition in general would be much more beneficial to human health than this misguided focus on extraordinarily small contamination levels of pesticides. Every chemical has toxicity, but it’s all in the dose. The amount of pesticides present as residues on food is miniscule” Samuel Cohen, University of Nebraska Medical Center. 2011.

“You don’t have to eat organic to eat healthily. Eating real food, whether it’s organic or not, is going to do a lot for your health. Any apple is good for you.”
Michael Pollan, Professor of Science and Environmental Journalism, University of California, Berkeley. 2012.

“For all of us involved in promoting better consumer health, increasing consumption of fruits and vegetables is among our main objectives. The benefits of consuming plenty of fruits and vegetables are absolutely indisputable.”
Dr. Carl Keen, Professor of Nutrition and Internal Medicine at University of California, Davis
Glen W. Koehler
Associate Scientist IPM
Email: glen.koehler@maine.edu
Voice: 207-581-3882 (within Maine: 800-287-0279)
Pest Management Office, 491 College Avenue
Orono, ME 04473-1295
http://pmo.umext.maine.edu/apple/

Dr. Renae Moran
Extension Tree Fruit Specialist
Email: rmoran@maine.edu
Voice: 207-933-2100 ext 105
Highmoor Farm Ag. Exp. Station, P.O. Box 179
Monmouth ME 04259-0179
http://extension.umaine.edu/agriculture/programs/tree-fruits/

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If you are a person with a disability and will need an accommodations to participate in this program, please call Highmoor Farm at 933-2100 to discuss your needs. Receiving requests for accommodations at least 7 days before the program provides a reasonable amount of time to meet the request, however all requests will be accepted.