FRUIT NOTES
Lake Ontario Fruit Program

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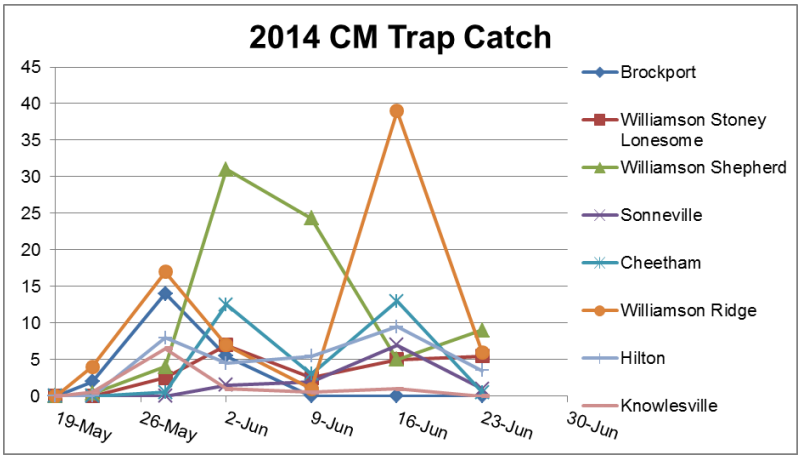
Predicted CA McIntosh Cutoff Dates

Craig Kahlke

This prediction model is used to estimate the latest dates by which McIntosh should be harvested if they are going to be stored under controlled atmosphere (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. According to the model, the season is shaping up to be at or near the last quarter-century average. This indicates a September 23 cutoff date or centering date averaged across all 18 NEWA weather stations in the apple belt in Western NY, which is the same exact date as the 26-yr average. Full bloom (FB) dates are available back to 1986, missing 2 years of data in 1995 and 2003. However, averaging the up and down season of the past five years, 2014 is about 3 days later than the 5-yr average. Remember, 2010 and 2012 were very early, while 2009, 2011 and 2013 were within 6 days of the average, with two being later than normal. Comparing the model with recent conversations with crop consultants from Niagara to Wayne, most think we are running close to a week (ranges from 3-7 days I'm hearing) behind a normal year. Blocks very close to the lake are running a good week behind most other sites as well.

It should be cautioned that this is only a model, a prediction to the overall maturity timing so far. As most of you are aware, strong, dominant weather patterns could significantly alter fruit maturity in either direction. 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 report will include current apple maturity indices, anticipated harvest windows for principle varieties, and weekly internal ethylene analysis for determining preharvest drop of susceptible varieties.

Table 1. Predicted Mac CA Cutoff Dates



2014 Codling moth trap catch.
Please see Insect Update article on page 2.

Cornell University Cooperative Extension

Lake Ontario Fruit Program
in Wayne, Orleans, Niagara, Monroe, and Oswego Counties
http://lof.cce.cornell.edu

Deborah Breth
Area Extension Educator
Team Leader, Pest Management
585-747-6039 dib1@cornell.edu

Alison De Marree
Area Extension Educator
Production Economics
315-573-8881 amd15@cornell.edu

Craig Kahlke - Newsletter Editor
Area Extension Educator
Fruit Quality Management
585-735-5448 cjk37@cornell.edu

Mario Miranda Sazo
Area Extension Educator
Cultural Practices
315-719-1318 mrm67@cornell.edu

NEWA Weather Station	FB Date 2014	CA Cutoff Date 2014	FB Date 2013	CA Cutoff Date 2013	FB Date Change from last year*	CA Cutoff Date Change from last year*
Albion	13-May	22-Sep	May 7	Sept 20	6	2
No. Appleton	19-May	1-Oct	May 10	Sept 23	9	8
So. Appleton	17-May	24-Sep	May 9	Sept 22	8	2
Ashwood	15-May	23-Sep	May 7	Sept 20	8	3
Baldwinsville-Abbott	12-May	19-Sep	May 7	Sept 19	5	0
Knowlesville	13-May	22-Sep	May 6	Sept 18	7	4
Lafayette	9-May	19-Sep	May 7	Sept 20	2	-1
Lockport	12-May	22-Sep	NA	NA	NA	NA
Lyndonville	15-May	23-Sep	May 7	Sept 19	8	4
Medina	12-May	21-Sep	May 9	Sept 20	3	1
Ransomville	13-May	23-Sep	May 7	Sept 20	6	3
Sodus (South)	12-May	21-Sep	May 6	Sept 20	6	1
Sodus (Lake)	20-May	23-Sep	May 11	Sept 22	9	1
Somerset	18-May	24-Sep	May 9	Sept 21	9	3
Will-Bear Swamp	19-May	26-Sep	NA	NA	NA	NA
Will- DeMarree	21-May	28-Sep	May 10	Sept 21	11	7
Will-Mason	18-May	24-Sep	May 9	Sept 22	9	2
Wolcott	19-May	26-Sep	NA	NA	NA	NA
AVG CA Cutoff 2014 & 2013	**15-May**	**23-Sept**	May 8	Sept 20	**7 days later**	**3 days later**
AVG. CA Cutoff (1986-2014)	**September 23**					
AVG. CA Cutoff (last 5 yr AVG)	**September 20**					

* = A positive number indicates days later in maturity than last year, while a negative number is earlier.
Example: Albion station, FB date is 6 days later this year than last, and the CA cutoff date for Macs is just 2 days later than last year.

Insect Update

A. Agnello and D. Breth

Codling moth status as of Jun 26: The figure on page 1 clearly shows that a second peak from the first flight of adult moths has occurred; and in some sights it is quite significant. Sights closer to the lake might be lagging behind due to the cooler temperatures so there may be an increase in flight this week in lake sites. Therefore this period is critical to maintain insecticide coverage -especially after all the rain we have had since you applied your first cover at 200-250 DD after first flight for CM. You cannot wait for OBLR sprays you anticipate in early July. The best insecticides for control of CM at this time include Calypso, Assail, Altacor, Voliam Xpress (12 oz./a), Delegate, and Belt. Calypso and Assail have no activity on leafroller so if you need an early egg hatch spray for leafroller, use one of the others listed.

Obliquebanded Leafroller. Assuming a biofix (1st adult catch) of OBLR this year from about June 8-16, sites around WNY have accumulated a total of 444 DD (base 43°F) in the most advanced sites, with perhaps 245 DD in later lakeshore sites. First egg hatch is generally expected at about 360 DD, which is well underway where biofix was set on Jun 8 in inland sites and high pressure sites along the lake; but in later sites where biofix was set at Jun 16, egg hatch should occur sometime between June 28-July 1. The 630 DD point in the insect's development roughly corresponds to 50% egg hatch, and at 720 DD, the earliest emerging larvae have reached the middle instars that are large enough to start doing noticeable damage to foliar terminals and, eventually, the young fruits. The earliest point at which scouting for the larvae is practical is 630 DD, so sampling for evidence of a treatable OBLR infestation would be recommended at that time in

orchards where pressure has not been high enough to justify a preventive spray.

Guidelines for sampling OBLR terminal infestations can be found on p. 71 in the Recommends, using a 3% action threshold that would lead to a recommended spray of an effective leafroller material. Delegate, Belt, Altacor and Proclaim are our preferred choices in most cases; Rimon, Intrepid, a B.t. material or a pyrethroid are also options, depending on block history and previous spray efficacy against specific populations. If the average percentage of terminals infested with live larvae is less than 3%, no treatment is required right away, but another sample should be taken three to five days (100 DD) later, to be sure populations were not underestimated.

Green Aphids. Although small numbers of green aphids (Spirea aphid, *Aphis spiraecola,* and Apple aphid, *Aphis pomi*) may have been present on trees early in the season, populations have been increasing regularly as the summer weather patterns gradually become established. Both species are common during the summer in most N.Y. orchards, although no extensive surveys have been done to compare their relative abundance in different production areas throughout the season. It's generally assumed that infestations in our area are mostly Spirea aphid.

Nymphs and adults suck sap from growing terminals and water sprouts causing leaves to curl and may stunt shoot growth on young trees. Aphids excrete large amounts of honeydew, which collects on fruit and foliage. Sooty mold fungi that develop on honeydew cause the fruit to turn black.

Aphids should be sampled several times throughout this season starting now. Inspect 10 rapidly growing terminals from each of 5 trees throughout the orchard, noting the percentage of infested terminals, including rosy aphid-infestations, since they tend to affect the foliage similarly to the green species at this time of the year. No formal studies have been done to develop an economic threshold for aphids in N.Y. orchards. Currently, treatment is recommended if 30% of the terminals are infested with either species of aphid, or at 50% terminal infestation and less than 20% of the terminals with predators (below). An alternative threshold is given as 10% of the fruits exhibiting either aphids or honeydew.

The larvae of syrphid (hoverflies) and cecidomyiid flies (midges) prey on aphids throughout the summer. These predators complete about three generations during this time. Most insecticides are somewhat toxic to these two predators, and they usually cannot build up sufficient numbers to control aphids adequately in regularly sprayed orchards. Check Tables 7.1.1 (p. 63) and 7.1.2 (p. 65) in the Recommends for ratings of efficacy and impact on beneficials for common spray materials. Both aphid species are resistant to most organophosphates, but materials in other chemical classes that control these pests effectively include: Admire, Asana, Assail, Aza-Direct, Beleaf, Calypso, Danitol, Lannate, Movento, Proaxis, Pyrenone, Thionex, Vydate and Warrior.

Woolly Apple Aphid. WAA colonizes both aboveground parts of the apple tree and the roots and commonly overwinters on the roots. In the spring, nymphs crawl up on apple trees from the roots to initiate aerial colonies. Colonies initially build up on the inside of the canopy on sites such as wounds or pruning scars and later become numerous in the outer portion of the tree canopy, usually during late July to early August, but you may already begin to notice these aerial colonies in high pressure orchards in the region. Refer to the June 9 issue of Scaffolds for an overview of some control recommendations.

Potato leafhopper. PLH is generally a more serious problem in the Hudson Valley than in western New York or the Champlain Valley; however, healthy populations can be found in WNY as well this season. Refer to the June 16 issue of Scaffolds for an overview of its biology and some control recommendations.

Japanese Beetle. This perennial pest overwinters as a partially grown grub in the soil below the frost line. In the spring the grub resumes feeding, primarily on the roots of grasses, and then pupates near the soil surface. Adults normally begin to emerge during the first week of July in upstate N.Y. The adults fly to any of 300 species of trees and shrubs to feed; upon emergence, they usually feed on the foliage and flowers of low-growing plants such as roses, grapes, and shrubs, and later on tree foliage. On tree leaves, beetles devour the tissue between the veins, leaving a lacelike skeleton. Severely injured leaves turn brown and often drop. Adults are most active during the warmest parts of

the day and prefer to feed on plants that are fully exposed to the sun.

Although damage to peaches is most commonly noted in our area, the fruits of apple, cherry, peach and plum trees may also be attacked, all of which have been suffering increasing damage from these insects in recent years. Fruits that mature before the beetles are abundant, such as cherries, may escape injury. Ripening or diseased fruit is particularly attractive to the beetles. Pheromone traps are available and can be hung in the orchard in early July to detect the beetles' presence; these products are generally NOT effective at trapping out the beetles. Fruit and foliage may be protected from damage by spraying an insecticide such as Assail, Calypso, Sevin or Voliam Xpress (in apple) or Admire, Assail, Sevin, Endigo, Leverage or Voliam Xpress (in cherries or peaches) when the first beetles appear.

(Information adapted from: Johnson, W.T. & H.H. Lyon. 1988. Insects that feed on trees and shrubs. Cornell Univ. Press.; and Howitt, A.H. 1993. Common tree fruit pests. Mich. State. Univ. Ext. NCR 63.)

What am I seeing?

D. Breth

I spent the day Tuesday looking at problems in orchards. I saw collapsing apple branches from Nectria fungal infection, trees dying from phytophthora infection from the rainy spring season and poor drainage, checked on some trees with reported black stem borer, peach trees dying from what appeared to be drift of glyphosate off a corn field into the outside rows of trees, checked on a San Jose scale problem to see if any were still active after an oil and Centaur application, and identified weed problems.

Trees with phytophthora root and crown rot: peach rootstocks are more susceptible to infection than apple rootstocks, so after wet falls and heavy rains in the spring, we are seeing dying trees. Ridomil Gold (2 qts./acre) is labeled for use in stone fruit and apples in the spring just before growth starts, but in stone fruit, it can be applied at 2-3 month intervals, with 3 seasonal applications. Not certain it will be as effective if the spring application was missed and it will not revitalize already weak trees. Or you can apply a phosphorous acid fungicide such as Phostrol on a 30 day interval at 2 pints per acre. But follow up in the fall before the fall rains begin with Ridomil Gold.

Trees with Nectria infections: wait for a couple of dry days when you can prune out the cankers and remove from the orchard. There are no fungicides registered for control of this fungus.

San Jose crawlers are emerging this week! In apples and peaches where the red rings on fruit were found last season-and now here are the steps for control to date: options include Esteem, Centaur (if not applied prebloom), Movento (if not applied at petal fall or first cover), Imidan or Admire Pro in apples at the early crawler stage. In plums, options include Esteem, Movento, Centaur, or Admire Pro.

Stone fruit: This is great weather for bacterial spot in peaches, plums and apricots. But oxytetracycline is only labeled for use on peaches and nectarines. Maintain brown rot fungicides in sweet cherries. Cherry fruit fly is active now. Do not stretch insecticide intervals for fruit flies in sweet cherries.

Controlling Summer Diseases On Apples

Dave Rosenberger

Summer diseases on apples include the fungal surface blemishes known as sooty blotch and flyspeck and also the fungal fruit decays known as black rot, white rot, and bitter rot. More than 60 different fungi can cause sooty blotch and flyspeck (SBFS), but most of the SBFS in sprayed orchards is attributable to just a few of those species. Black rot and white rot are caused by *Botryosphaeria obtusa* and *B. dothidea*, respectively. Bitter rot is caused by one or more species of the fungal genus *Colletotrichum*. Strategies for timing sprays for SBFS have changed and evolved over the past 25 years. Those not interested in the history of proposed control measures for SBFS that are presented below should skip to the last section for current recommendations.

Development of SBFS models

Determining optimum timing for fungicides needed to control SBFS has been complicated by the long

incubation period that separates infection from disease appearance on the fruit. In 1995, Brown and Sutton published results of field studies in North Carolina that showed that the incubation period for SBFS required 272 hours of accumulated leaf wetting, but they did not count wetting periods of less than three hours in duration. Work in Dan Cooley's lab at the University of Massachusetts showed that the fungus causing flyspeck began releasing ascospores sometime during bloom. At about the same time, observations in New York led me to believe that some fungicides (especially benomyl, which is no longer registered) could provide some post-infection activity against SBFS. Putting all of this information together, I proposed the following logic for determining when the first fungicides targeting SBFS might be needed during summer:

1- Fungicides applied to control apple scab also control SBFS during the initial inoculum release starting around petal fall.

2 - In sprayed orchards in the northeastern United States, flyspeck is more difficult to control than sooty blotch. Therefore, spray programs targeting flyspeck will also control sooty blotch. This observation allowed us to focus on timing of flyspeck ascospore release as studied in MA.

3 - The major risk of SBFS infection in sprayed orchards begins when secondary inoculum becomes available from wild hosts in the orchard perimeter.

4 - Combining research results from North Carolina on duration of the incubation period along with data from Massachusetts on the time of ascospore release for the fungus causing flyspeck, we suggested that the incubation period in wild hosts would be roughly 272 hours from apple petal fall. Thus, after 272 hours of accumulated wetting from petal fall (hr-AWPF), growers would need to protect orchards from the influx of SBFS inoculum that could be expected from orchard perimeters. To simplify calculations, we included all wetting periods rather than ignoring those of less than 3 hours duration as suggested by the work in North Carolina.

5 - We suggested that post-infection activity of fungicides would allow us to delay the first application to 350 hr-AWPF because initial infections from secondary inoculum could be eliminated via post-infection activity of the fungicides.

Why the old model no longer applies

Three major changes have occurred that make the old model obsolete. First, the North Carolina model indicating an incubation period of 272 hours of accumulated wetting was based on string recorders, as were the subsequent suggestions for when growers in the Northeast should begin their SBFS sprays. However, NEWA stations are equipped with electronic recorders that are somewhat less sensitive to wetting than the old string recorders. Our current best estimate for the SBFS incubation period using electronic sensors is 185 hrs of wetting (i.e., 272 hr on a string recorder = 185 hr on electronic sensors in the NEWA network).

The second reason for changing the model involves the need for protection against black rot. We have found that omitting fungicides for extended periods in late June and July can result in establishment of quiescent black rot infections that then develop into fruit decays as fruit approach maturity. These quiescent infections are more problematic on early-maturing as compared to late-maturing cultivars.

The third reason for changing the model is that continued field trials and observations at the Hudson Valley Lab have revealed that fungicides almost certainly do NOT provide the degree of post-infection activity that we initially thought we were observing. We have found that fungicides can arrest fungal development of pre-existing infections, but they never provide complete eradication. Once fungicide residues are depleted, many of the pre-existing SBFS colonies resume growth. Thus, if fungicide applications are delayed beyond 185 hr-AWPF (using NEWA data), then some colonies may become established and persist through summer. Those SBFS colonies may never show up on fruit if fungicide protection is maintained right up through harvest. However, in many years, fungicide protection will lapse a week or two prior to harvest and incubating SBFS infections will then appear suddenly prior to harvest because they got a jump-start early in the season. If there are no fungicide protection gaps during summer, then the preharvest protection gap can be as much as 185 hr of accumulated wetting before SBFS will appear on fruit, but any protection gaps during summer must be subtracted from the 185-hr "grace period". A protection gap occurs anytime that the interval between summer sprays exceeds either 2 inches of accumulated rainfall or 21 days.

To illustrate, let's use conditions at the Hudson Valley Lab and data from the Highland NEWA station. I will use May 18 as the petal fall date for starting the SBFS model. (Be sure to set the petal fall date to match your own observations rather than using the default date that is entered at the top of the NEWA page for the SBFS model!) The NEWA model indicates that as of 22 June we have accumulated 170 hours of leaf wetness since petal fall. Let's assume that my last

scab fungicide was applied on 2 June. Rainfall since 2 June totals 2.27 inches, so I know that my last scab fungicide is no longer providing any viable protection against SBFS. Rains predicted for later this week will probably push us over the 185 hr-AWPF threshold for the beginning of the SBFS spore influx from the orchard perimeter. To prevent establishment of any SBFS infections, I will want to apply my first SBFS fungicide sometime this week. However, the timing is not critical. If it is more convenient to delay my next fungicide until next week, that will still be OK so long as I remember that, if we get a lot of rain and a lot of hours of wetting later this week, I will end up using some of my total "grace period" which consists of 185 hr of wetting without fungicide protection between now and harvest.

Current recommendations for SBFS control

The NEWA model provides a reasonable estimate of when the SBFS risk period begins if the petal fall date is entered correctly at the top of the model. Timing of summer fungicides is not nearly so critical as timing for scab sprays, but I strongly recommend that growers avoid extended protection gaps after the NEWA model indicates that SBFS is active. Leaving trees unprotected after late June will increase the likelihood that black rot fruit decays and/or SBFS will appear shortly before harvest.

Fungicide recommendations for SBFS have not changed much in recent years. A quick summary is provided below:

Topsin M + Captan: Standard treatment for SBFS and summer fruit rots, but late-season applications of Topsin M are not acceptable for some markets, and the Topsin M label limits applications to a total of 64 oz/A/year. Most growers are finding that Topsin M must be applied at 12–16 oz/A for good results, so that means that this combination can be used no more than 4 or 5 times per year. (Check with your packer/shipper on restriction on Topsin M use.)

Captan plus a labeled phosphite fungicide: This combination is just as effective as Topsin + Captan against SBFS, but the phosphites have little or no activity against black rot. Thus, with this combination, control of black rot and other summer fruit rots is dependent on the rate of Captan that is applied.

Inspire Super + Captan: Inspire Super is very effective against SBFS, but like the phosphites, it is less effective than Topsin or strobilurin fungicides for controlling fruit rots. Using Inspire Super during summer may also contribute to selection pressure for DMI-resistant apple scab if primary scab was not completely controlled, although that assumption remains unproven.

Flint + Captan, Pristine + Captan, and Merivon + Captan all provide nearly equivalent control of both SBFS and summer fruit rots. The latter two have better long-term residual activity than Flint and are therefore preferred for the last spray in August or September, when a long residual is needed to cover the gap until harvest. All of these combinations include strobilurin fungicides (FRAC group 11) and have label limitations on the total number of applications per season and/or the number of sequential applications that are allowed.

Fontelis does not have much activity against SBFS and is not recommended during summer.

Captan applied alone can be effective if applied at higher rates (4 to 5 lb/A of Captan 80W) and at no more than 14-day intervals. However, mixing captan with one of the fungicides mentioned above generally provides better results. (The seasonal limit of Captan 80 is 40 lb/acre).

Precision Hand Thinning

Stephen A. Hoying, Terence L. Robinson, and Mario Miranda Sazo

Hand thinning to improve fruit quality is a common practice in the apple industry across the United States. It is viewed as the last chance to reduce crop levels to acceptable levels. Hand thinning is widely practiced because of the fear of over-thinning chemically. It is viewed as a necessary evil especially for high valued cultivars such as Honeycrisp and Gala. However, when significantly more fruit remains than is needed to produce a quality fruit crop it can be very expensive. The object is to accomplish most of the thinning using pruning and chemical thinning with hand thinning as a final “touch up”.

The practice of hand thinning can be beneficial to increase fruit size and color by singling fruit within the cluster, by balancing the number of resting spurs with fruitful ones ensuring return bloom, by improving pest control by exposing clustered fruit, and in young trees by balancing continued growth with cropping to help fill out the canopy.

Hand thinning can take place anytime during the growing season between fruit set and harvest. Early hand thinning, before fruit bud initiation, will not only help prevent bienniality but give the maximum fruit size improvement. Hand thinning later in the growing season only helps to marginally increase fruit size and can be used to grade fruit by removing damaged fruit but will not contribute to return bloom.

Please remember that early hand thinning and before fruit bud initiation, will not only help prevent bienniality but give the maximum fruit size improvement. Some growers began hand thinning Zestar and SweeTango last week. In addition to these cultivars, early hand thinning should now be started for Honeycrisp, Macoun, Empire, and Gala. This year we recommend that you count total fruit/tree on 5-10 representative trees in each block and reduce fruit number (via hand thinning) to the most profitable cropload (a targeted fruit number per tree). Hand thinning will be critical especially for those Gala blocks that did not received multiple thinning sprays or where final fruit set (desired number of fruit/tree at harvest) is still relatively high. If possible, take advantage of a platform to get the hand thinning job done quickly this season.

Procedures for Precision Hand Thinning

1. Select 5-10 representative trees throughout the block to be hand thinned and count all the fruit that remain on the tree after chemical thinners have had their effect.
2. Refer to the previous calculations made prior to pruning that determined the total number of apples desired per tree to achieve the fruit size and yield desired.
3. Subtract the desired number of fruit from the total number of fruit counted per tree to determine the number of fruit that need be removed from each tree.
4. First single all fruit on the tree and then recount to see how close the number of remaining apples is to the targeted fruit number. Calculate how many fruit still need to be removed to reach the target number of fruit.
5. Finish by removing additional apples to reach the final target. Remove the smallest apples first, then space fruit apart.

An example:

1. Counts from 20 representative trees show that there are 154 fruit remaining on the tree after pruning and hand thinning. The target number of fruit needed to produce 1200 bushels of 100 count fruit from the previous example was 100 fruit per tree.
2. By subtracting 100 fruit from the 154 fruit remaining we know we must remove 54 fruit.
3. By singling fruit we find that we remove 36 fruit therefore we need to remove an additional 18 fruit in each tree.
4. We then choose 18 more fruit to remove selecting those that are the smallest fruit or those that are clustered and touching.

The simplest method for thinning is to use some sort of an area template so that people who are hand thinning know how many fruit should be within a smaller but specific area of the tree. In trellised blocks this might be the area between two adjacent trees and two adjacent trellis wires. For example, a four wire trellis will have 3 sections between wires and a 5 wire trellis will have 4. The distance between the tree trunks equals the area occupied by an individual tree. Therefore counting all the apples between the tree trunks will equal all the apples on a single tree. From our previous example, we know that we want 100 apples on each tree. If we have 3 sections then we must have 33 apples in each section of the 4 wire trellis and 25 apples in each section of the 5 wire trellis (a few additional apples will be between the bottom wire and the ground and above the top wire). It is very simple to count the number of apples in each section and adjust the amount of hand thinning to achieve this target.

To estimate apple numbers on individually staked trees is not as simple but because of the relatively small number of apples on each tree is not an onerous task. In this case, make quick counts of the number of fruiting shoots on each tree and divide the number of apples by the number of shoots to determine how many apples should be on each shoot. The typical tall spindle will have 20-25 fruiting shoots per tree. Therefore if our target is 100 fruit per tree there should be 4 to 5 apples per shoot. Simply have people who are hand thinning reduce fruit numbers to 4-5 per shoot by first singling fruit on spurs then by spacing fruit where they are touching along each shoot. Recount and adjust hand thinning depending on the results to achieve the targeted number of fruit per tree.

Hand thinning is not new and is widely practiced; however implementing a procedure to count fruit

Lake Ontario Fruit Program
Cornell Cooperative Extension
12690 State Rt. 31
Albion, NY 14411

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and reduce fruit number to a targeted number is new for most growers. Improving precision by counting and targeting fruit numbers will improve profitability. Fruit growers could implement this or a similar method to accurately count fruit and see an immediate impact on their profitability.

Economic Example

Estimates are made and the targeted number of fruit that need to be removed are 54 fruit per tree. To get this estimate would require 1.5 hours of counting and recording data or about $15 which is essentially insignificant. Grower A counts fruit and readjusts hand thinning to achieve his goal resulting in 1200 bushel of 100 count fruit for a return after packing and sales charges of $19,200. The cost of hand thinning for grower A was $500/acre so the net is $18,700/acre. Grower B does only touch up thinning to breakup multiple fruit per spur. This reduces the crop to 145 apples per tree and because of the high fruit number per tree fruit size is reduced to 140 count fruit with only a modest increase in yield to 1253 bushels per acre. This increase in yield and reduction in fruit size returns Grower B $17,545 in this example. His cost of hand thinning for this block was $100/acre. The net return then was $17,454. By not accurately counting apples and hand thinning to the most profitable crop load Grower B left more than $1,000 in the orchard. As is evident from this example the consequences of not accurately hand thinning is very costly!

SAVE THE DATE!!!!

The Department of Environmental Conservation, Bureau of Pest Management, will be conducting a Worker Protection Standard (WPS) mock inspection on Tuesday, July 22, 2014 at De Marree Fruit Farms, located at 7654 Townline Road, Williamson, NY. Pesticide Applicator recertification credits will be offered. Time to be determined. More information to follow!!!!!!