

PLANT & PEST ADVISORY

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New Jersey Secretary of Agriculture, Charles Kuperus, New Jersey Peach Queen Alyse Scaffidi and Grower Gary Mount with the camera crew at Peach Media Day

Peach Marketing and Promotion Update

Jerome L Frecon, Agricultural Agent

◆ **California** - In the recent California Tree Fruit agreement newsletter "In Agreement" they report that in comparing this year's nectarine volume, they are about 2 million boxes behind last year at this date. Peaches are about 500,000 boxes behind. By season's end they expect volume to be similar to last year but 5 to 12% under their pre-season estimates. This year's production and harvest timing are much more in line with normal. Plum packout is in line with last year and will meet the 11.90 million pre-season estimate.

◆ **USDA Market News Prices** – If you are not reporting your prices you should. You are negatively impacting everyone in the industry by not doing this. The FOB report on peach and blueberry prices is available every afternoon at <http://www.ams.usda.gov/fv/mncs/shipfrui.htm>. If you want to call and talk to Lynn Coffin, USDA Market News about prices her number is Phone: (856) 453-3870 Fax: (856) 453-3880. You should all be aware of current market prices. The individual identity of those of you providing this information is kept confidential.

According to the FOB report from Georgia on August 8, supply is light, demand is fairly light, and the market is about steady. In South Carolina, demand is fairly light but supply is steady. This is the last report from Georgia for the season. As of August 8, Georgia appears to be 1,586 truckloads behind last season as of this date. South Carolina is running 1,313 truckloads behind last season as of this date. According to market report they are shipping some late season varieties at this time in South Carolina.

◆ **Peach Media Day** – This public relations event was held last Thursday at Terhune Orchards in Princeton. Two newspaper reporters and editors and two from the local television station were on hand. Led and organized by Phil Neary for the New Jersey Peach Promotion Council, representatives from Rutgers Cooperative Research and Extension, the New Jersey Department of Agriculture, and the New Jersey Peach Festival Association were on hand to assist with the event. Gary, Pam and Tanwen Mount were our hosts. Gary led a tour of peach plantings and did an able job of explaining varieties and how to select good peaches in the 98 degree weather. Tanwen and Pam prepared and served a unique and tasty peach dinner made entirely of recipes using

SEE PEACH PROMO ON PAGE 2

INSIDE

Peach Marketing and Promotion Update 1

Strawberry Update 2

Painless and Efficient Apple Maturity Testing 2

How to Make Starch Iodine Solution 3

Managing Apple Harvest with ReTain in 2005 4

Fruit IPM 5

Fruit Resources from Penn State Cooperative Extension 7

Strawberry Update

Peter Probasco, Agricultural Agent

Time to get ready for propagating strawberry tips for the next season. Canadian tips are being started now by some growers. Be sure not to drench the plugs with Captan this year since we found out this can stunt root development. The mix needs to have good drainage so if it is mostly peat moss, add vermiculite or perlite until it is about 50% peat. The screen house coverings worked well to provide some shade and cooler temperatures during propagation. Plugs should be set out after Labor Day on plastic mulch. Planting at the end of September will reduce your yields. Chandler and Ovation are the best varieties for New Jersey on plastic. □

PEACH PROMO FROM PAGE 1

peaches. Pam also gave a humorous and informative talk while we were eating on canning, freezing and making jams and jellies with peaches. Peach wine from Heritage Vineyards and peach cider drink from Circle M was served. Newly crowned New Jersey Peach Queen, Alyse Scaffidi, was on hand to welcome the media and hand out press kits. We were also happy to have New Jersey Secretary of Agriculture, Charles Kuperus, on hand to continue working with the media on the promotion of Jersey Fresh Peaches. He did his usual great job talking about “leaners” peaches that are so juicy you have to lean over to avoid getting the juice on your clothing. Each media member was given a gift basket of peaches, and peach products. A media kit was sent to all invited media that did not attend the event. □



Painless and Efficient Apple Maturity Testing

Win Cowgill, Agricultural Agent, RCRE and Jon Clements,
Extension Tree Fruit Specialist, UMASS

Starch Iodine testing is among the best and easiest indicators of apple maturity that a grower can use to plan their harvest and storage regimes. But, our observation has been that few growers utilize the Starch Index (SI) method of determining harvest maturity. Perhaps SI testing is perceived as time consuming and difficult to properly judge.

Why is it important to perform SI testing? First, as mentioned, the SI method is probably the best way to judge fruit maturity without expensive equipment. The SI technique, wherein the starch to sugar ratio is measured, is correlated with ethylene evolution. In fact, ethylene synthesis occurs as fruit ripens. Therefore, the SI index is an inexpensive way to assess the degree to which fruit has converted starch to sugar, and is indicative of the onset and progress of ethylene production.

Secondly, because SI is a reliable indicator of relative fruit maturity, SI testing can help you determine if harvested fruit should be placed in early CA, late CA, or regular cold storage. Remember that, as a rule, fruit with SI readings of 3-4 are suitable for late CA, apples measuring 4-6 on the SI scale are best for early CA, and any fruit reading 6 or above should be placed in regular cold storage or marketed immediately. Of course, reliability in using the SI method for determining apple maturity is predicated on good sampling techniques, i.e.; looking at fruit that has sufficient size and color. Or, in other words, sample apples that you expect are approaching harvest readiness.

Note: Apples going into late CA (available in April-June, etc.) should not average less than 15 IBS Firmness.

Guides

Dr. George Green, Penn State University has more details on harvest maturity in the Pennsylvania Tree Fruit Production Guide (page 221). They can be found online at: <http://tfpg.cas.psu.edu/part6/part61a.htm>. In the Guide, he also offers the following: “Over the years charts have been developed for many varieties but some charts went from 1 to 5 while others went from 1 to 7. There was much confusion so the post-harvest physiologists at Cornell University have developed a more universally accepted chart that is useful for all varieties. It is being used by researchers in over 20 states in the NE-183 national apple cultivar-testing program. Cornell has an excellent publication available to help you use the starch-iodine test and to develop an apple maturity program. The publication also contains a laminated starch iodine chart to aid in interpreting the tests. I strongly suggest that anyone seriously interested in harvesting high quality apples with good storage potential buy a copy of this publication, “Predicting Harvest Date Windows for Apples (1992)” Information Bulletin 221.

We agree with Dr. Green. Full-color plates show how to use and interpret the starch-iodine test for determining maturity and the best harvest dates for quality, especially important for apples going into storage. Covers McIntosh, Cortland, Empire, Delicious, Mutsu/Crispin, and Idared; dates for other varieties can be interpreted from the information presented. 20 pages. Cost \$5.50. This publication can be ordered directly from Cornell University by calling 607-255-2080 and using a

SEE MATURITY TESTING ON PAGE 3

Master Card or VISA credit card to pay for the pub.

Specific starch charts have also been developed for Gala, Empire, and Liberty. On the West Coast they have also been developed for Fuji. We have posted these charts on the web that can be downloaded and printed for your use at: <http://www.umass.edu/fruitadvisor/clements/articles/sitest.htm>.

Wilson Irrigation located in Washington State also has Maturity Photo Charts for sale for Gala, Fuji, Braeburn, Golden Delicious, Granny Smith, and D'Anjou pear. Call 1-800-232-1174 or order from their web site at <http://www.wilsonirr.com>.

Testing Method

Having tested tens of thousands of apples over the years, per numerous experimental protocols, we can now suggest a simple, quick and efficient method for evaluating orchard-by-orchard or block-by-block SI apple samples. Here is our quick and simple testing technique:

- Equipment consists of a one quart hand-operated spray bottle filled with SI solution, a pocket knife, and a Starch Index chart. The most important thing is to just use the chart and begin sampling and testing the fruit two weeks before anticipated harvest to get a baseline on the maturity.

- The procedure is simple—pick a sample of apples that appear ready to harvest, based on size, color, days after full bloom, and taste. Spray the SI solution on longitudinally halved fruit, wait one to one and one-half minutes and make your readings based on the SI chart. The whole process is portable, quick, simple, and saves SI solution compared to dipping individual apple in a solution filled pan.

It is important to keep good records on your maturity determinations by cultivar and block. You will start to build a good database of harvest maturity information for your orchard.

SI Caveats

Although the SI test is a reliable gauge of many cultivars such as McIntosh, Empire, Jonathan, Golden Delicious and Macoun, some cultivars do not respond as well to the SI test, and should be monitored using other methods. Maturity of cultivars such as Gala, Fuji and Honeycrisp should also be gauged using background color, soluble solids, and flesh firmness.

Background color is a particularly good maturity indicator on Gala and will provide the grower with an accurate maturity reading. Red skin color, flesh firmness and sugar content are not as reliable indicators of fruit maturity as background color on this cultivar. Fruit should be harvested for optimum long-term storage quality when the background color of the fruit is changing from a green to yellow color. After that, the background color changes from yellow to cream. It is at this stage that the fruit is ready for immediate sales or short-term storage. Galas will require multiple pickings for optimum fruit quality. Background color is also a good indicator of maturity for Fuji. □

How to Make Starch Iodine Solution

Win Cowgill, County Agricultural Agent, RCRE and George Green, Professor Emeritus, Penn State University

It is time to begin testing apples for maturity; starch iodine is our preferred method. Below is some information on how to make it or obtain the solution.

A solution of iodine and potassium iodide is used to make the starch turn black and this pattern is the basis for the test.

Dr. George Chu, of the University of Guelph - Dept. of Plant Agriculture in Ontario has developed a publication on this test entitled: Evaluating Maturity of Empire, Idared and Spartan Apples (Factsheet No. 00-027.). It is available on the Web at:

<http://www.gov.on.ca:80/OMAFRA/english/crops/facts/00-027.htm>

For those wanting to make their own, Dr. Chu gives these instructions:

Preparing the Test Solution

Always use a freshly prepared solution at the beginning of every season. This solution is sensitive to light and should be stored in a dark container. A dark-colored bottle or a glass jar wrapped in aluminum foil will serve the purpose. Chemicals needed for this test are potassium iodide and iodine crystals. A pharmacist or a chemist can use the following recipe to make up the iodine solution.

Recipe

1. Dissolve 8.8 grams of potassium iodide in about 30 ml of warm water. Gently stir the solution until potassium iodide is properly dissolved.
2. Add 2.2 grams of iodine crystals. Shake the mixture until the crystals are thoroughly dissolved.
3. Dilute this mixture with water to make 1.0 liter of test solution. Mix them well.

Warning

Iodine is a very poisonous chemical. The iodine solution should be properly labeled and kept away from children and pets. Apples used in the test should not be fed to any animals or used in composting. In case of ingestion of either iodine, or iodine treated apples, induce vomiting and consult a physician immediately.

Starch iodine can be purchased from Wilson Irrigation in Washington State at: <http://www.wilsonirr.com/> or call them at 1-800-232-1174.

Wilson Irrigation also has maturity charts for Gala, Fuji, Braeburn, golden and red delicious, Granny Smith, and D'Anjou pear. □

Managing Apple Harvest with ReTain® in 2005

Win Cowgill, Area Fruit Agent

This has been a season of dry spells, wet periods and dry in Northern New Jersey. Some areas have missed rain showers completely and remain dry. For the most part apple harvest is on track with historical norms. Summer apples (Pristine, Sunrise and Redfree) are being harvested now. At the Rutgers Snyder Farm we picked Pristine last week and Sunrise today. Redfree is not quite ready for harvest, it usually comes in with Paulared for us. All of these apples have excellent eating quality and make good additions for direct sale markets.

At this time I anticipate that normal harvest dates will continue to hold for the Gala cultivars and Macintosh, early September for us in Hunterdon County.

Now is the time to consider the use of ReTain® this season for those cultivars. Retain must be applied at least 2-4 weeks before anticipated harvest. We discussed the use of ReTain on summer apples two weeks ago in this Fruit edition of the Plant and Pest Advisory.

ReTain is a harvest management tool that slows the maturation process. It is an excellent stop drop material that can delay fruit maturity from 7-10 days and give growers a longer picking window on many cultivars. ReTain works by retarding the development of ethylene, the chemical that causes ripening. ReTain will increase fruit firmness, decrease watercore and allow for longer cold storage. ReTain may also indirectly enhance fruit size and color by allowing the fruit to remain on the tree longer.

New Jersey growers focus harvest management strategies for optimum fruit quality. Consumer demand, market, storage requirements and labor availability all influence harvest decisions. One tool that allows for increased flexibility in management decisions is the ReTain® Plant Growth Regulator from Valent BioSciences.

Note for Gala strains: the full rate of Retain may delay harvest too much to tap the wholesale window. At the Rutgers Snyder Farm we have used Retain for three years at one half rate on Gala cv. Treeco#2 with out delaying the maturity excessively and gaining fruit firmness. *Consider using 1/2 rate of Retain on Gala at 3-4 weeks before anticipated harvest. Growers should also consider trying a later application on Gala, that is apply Retain 2 weeks before anticipated harvest. (See note number 2 below for an explanation of the timing.)*

Note #2 – Macintosh- recent studies by Dr. Duane Green in Massachusetts have shown that Retain gives better drop control with McIntosh if applied two weeks before anticipated normal harvest than if applied 4-6 weeks before normal harvest as the label indicates. Dr.

Terrence Robinson, Cornell University, confirmed this data on Macs in 2004. McIntosh is a high ethylene producing variety and it is likely that the alter application date does a better job of suppressing ethylene production past the normal harvest date. The earlier applications may let the Retain “wear off” by the time intense drop begins in Macs.

This change in timing is allowed because EPA lowered the pre harvest Interval (PHI) for Retain from 4 weeks before harvest to 3 weeks before harvest. This gives increased flexibility in the application date according to Terrence Robinson. *Growers should consider applying Retain on Macs 2 weeks before anticipated harvest this season.*

The active ingredient is a natural occurring product aminoethoxyvinylglycine (AVG), which is produced by fermentation. The fermentation process required to produce AVG is very difficult and very expensive. As a result, ReTain retails for \$200 - \$240 per acre. Because of this, ReTain should only be used in high value blocks with large crops of unblemished fruit.

Fruit treated with ReTain can be picked during the normal harvest period for enhanced retention of firmness in regular cold storage, or harvest may be delayed, allowing the fruit to continue to grow and develop red color for an extended time. Our experience in New Jersey is that ReTain reduces pre-harvest drop on McIntosh from 10-30%.

Research also indicates that stem-end split (SES) and internal ring crack (IRC) may be reduced on susceptible varieties, such as Gala and Fuji, with the use of ReTain. Although these disorders will not be eliminated with its use, ReTain reduces the stress fluctuations that are thought to cause these disorders.

ReTain must be applied three to five weeks prior to anticipated harvest to be effective, therefore it is essential growers carefully project ripening dates of each individual block which they plan to use ReTain this season.

Important considerations to follow with ReTain® applications in New Jersey

- Use the full rate of ReTain (1 pouch or 333 grams/Acre of formulated product) with an organosilicone surfactant at 0.05% to 0.10 % (v/v).
- ONLY use one of the approved organosilicone surfactants such as: Silwet L77 at 6.5-13 fluid ounces per 100 gallons, or Sylguard 309 at 6.5-13 fluid ounces per 100 gallons. When high temperatures prevail, the lower rate of surfactant is recommended.
- Apply 2-4 weeks before anticipated harvest (21 day PHI).
- ReTain should be applied with a sufficient amount of water to ensure thorough wetting of the fruit and foliage while avoiding spray run-off. Adjust water volume based on tree size and spacing. No alternate row spraying.

SEE RETAIN ON PAGE 5

Fruit IPM

Dean Polk, Fruit IPM Agent and David Schmitt and Eugene Rizio, Program Associates, Tree Fruit IPM

Peach

✓ **Tufted Apple Budmoth (TABM):** Pressure as indicated by trap counts has risen slightly but overall remains lower than normal. Timings are updated in the following table:

County Area	TABM Timings - Application and Insecticide Type – Brood 2		
	OP's, Carbamates, Spintor, Pyrethroids (Conv.)		Intrepid
Southern	4 alt mid sprays 2 nd – 8/8-10; 3 rd – 8/14-15	2 complete sprays 2 nd – 8/16-19	2 complete sprays 2 nd – 8/16-19
Central	2 nd – 8/10-11; 3 rd – 8/15-16	2 nd – 8/17-20	2 nd – 8/17-20
Northern	2 nd – 8/13-15; 3 rd – 8/13-15	2 nd – 8/23-26	2 nd – 8/23-26

✓ **Catfacing Insects:** Pressure from Stink Bugs and Tarnished Plant Bugs continue and along with TABM is the main insect complex now present in most orchards. Lannate is one of the more effective materials with a short PHI. Pyrethroids have a 14 day PHI, and Guthion and Diazinon have a 21 day PHI, and can be used only on the very latest varieties such as Big Red and Parade.

Material	PHI (days)
Lannate	4
Asana	14
Ambush	14
Pounce	14
Warrior	14
Proaxis	14
Imidan	14
Guthion	21
Diazinon	21

Apple

✓ **Tufted Apple Budmoth (TABM):** See Peach section above.

✓ **Codling Moth:** Although the degree day timing for this insect has past, orchards which have had problems should continue to use effective materials at labeled rates. If Codling Moth has been a problem and you are using Intrepid for TABM, the rate must be maintained at 16 ozs./ac. Problem orchards had trap captures above the 5 moth/trap threshold last week.

✓ **Sooty Blotch and Flyspeck; Bitter Rot (Anthracnose):** With frequent showers in the forecast high disease pressure remains, so adequate coverage must be maintained. Consider solid sprays and increased volume for improved control in dense canopies or where these diseases have historically been a problem. Most fungicides will need to be reapplied after 2" of rain.

Blueberry

✓ **Leafroller Larvae and Fruit Feeding:** Again this week we see very few worms in our samples. Fresh feeding is seen in 20% of our samples. Levels of injured fruit this week were almost all under 0.5%. Highest level seen was 7 in 1000 berries or 0.7%.

SEE IPM ON PAGE 6

RETAIn FROM PAGE 4

- For optimum results apply during periods of slow drying weather conditions. No rainfall or irrigation should occur within six hours of ReTain application.
- Do not apply ReTain to trees under stress. They may not respond to the benefits of ReTain.
- Do not tank mix ReTain with other agricultural products.
- NAA may be used according to label directions after the use of Retain if very long drop control is desired, or fruit begin to loosen. Be aware that NAA may accelerate fruit maturation.
- The interaction of ethephon products with ReTain is not well understood but research continues.

Note: New Stone Fruit Label for ReTain: ReTain has a full label for stone fruits (except cherry) in New Jersey for the 2005 growing season. See the July 23 issue of the Fruit Plant and Pest Advisory for details and or consult the 2005 ReTain label. □

✓ **Sharpnosed Leafhopper:** Adults are starting to be found in yellow sticky traps. This is the start of the 2nd flight, and more insects are being found in Burlington County than in Atlantic County, as is common. As the nymphs mature, the adult flight will more fully develop by the end of August and through September. This flight will usually require at least one post harvest insecticide prior to the flight peak. This will control motile adults and minimize the spread of blueberry stunt disease.

✓ **Aphids:** Only 5% of samples show any aphids. Highest level seen was 4% infestation. All aphid sprays should be over for the season. One possible exception would be any Elliott fields that have isolated aphid populations.

✓ **Scarab Beetle Activity (Oriental and Japanese Beetles):** About 9% of samples show injury. All levels seen were under 0.5%. Beetles have not been a significant factor in fruit quality this season.

✓ **Anthracnose:** About 60% of samples have been positive with 28% being over the 1% infection level. As many growers know, anthracnose has been more troublesome this year than in many years past. Continuous thunderstorms, wet and humid weather do not help, even for more tolerant varieties like Elliott.

Insect Trap Counts

Tree Fruit Southern Counties

Week ending	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
7/15/05	235	1	0		9	31	3	1	54	4
7/22/05	237	1	1		8	14	4	4	63	6
7/29/05	584	3	1		10	18	5	11	90	4
8/05/05	583	5	3		6	0	7	11	81	18

Northern Counties

Week ending	STLM	TABM-A	CM	AM	OFM-A	DWB	OFM-P	TABM-P	LPTB	PTB
7/15/05	90	3	0.5			19	3	3		
7/22/05	67	3	2	0	0	17	5	5		
7/29/05	185	2	3	0		25	5	2		
8/05/05	180	2	3	0	0	5	4	4		

Key: STLM = Spotted Tentiform Leafminer, TABM = Tufted Apple Budmoth (A – apple, P – Peach), CM = Codling Moth, AM = Apple Maggot, OFM = Oriental Fruit Moth (A – apple, P – Peach), LPTB = Lesser Peachtree Borer, PTB = Peachtree Borer

Blueberry Trap Counts – Atlantic County

Week Ending	CBFW	RBLR	OBLR	SNLH	OB	BBM
7/15	0.00	30.75	0.40	0.01	1244.19	0.19
7/22	0.07	5.05	0.67	0.00	804.47	0.22
7/29	0.00	9.82	2.25	0.00	266.16	0.19
8/5		11.19	1.00	0.01	30.95	0.14

Blueberry Trap Counts – Burlington County

Week Ending	CBFW	RBLR	OBLR	SNLH	OB	BBM
7/15	0.00	10.70	0.50	0.38	1150.00	0.05
7/22	0.00	2.40	0.75	0.24	562.78	0.22
7/29	0.00	1.89	2.00	1.27	116.25	0.04
8/5		3.50	2.00	4.77	20.00	0.10

Key: CBFW = Cranberry Fruitworm, RBLR = Redbanded Leafroller, OBLR = Obliquebanded Leafroller, SNLH = Sharpnosed Leafhopper, OB = Oriental Beetle, BBM = Blueberry Maggot

Fruit Resources from Penn State Cooperative Extension

Reprinted from Fruit Times, July 26, 2005, Vol. 24, No. 7, Penn State Cooperative Extension

Midwest Grape Production Guide

K. Demchak, Small Fruit Agent, Dept. of Horticulture, Penn State University

Another great Extension publication is available. This one, the Midwest Grape Production Guide, Bulletin 919, contains 155 pages of very grower-friendly information. While written with MidWest production in mind, anyone growing grapes would benefit from having this publication. My favorite part is the plethora of illustrations and photos. It can be purchased by mailing a letter requesting this publication to Ohio State University Extension, Media Distribution, 385 Kottman Hall, 2021 Coffey Road, Columbus, OH 43210-1044. You can also fax your letter to 614-292-1248, or send it by email to pubs@ag.osu.edu. You can phone 614-292-1607 with questions, but phone orders are not accepted. Include your name, street address and phone – the guide will be shipped to you via a carrier that requires a street address, or preferably send the request on a letterhead so the information is all clearly readable. Current cost is \$10.50 plus shipping and handling (shipping and handling will vary with number of copies, and where the purchase is being sent). You can either be invoiced and then pay by check, or you can charge the purchase to MasterCard or Visa only, but you'll need to include which card type, the card number, and expiration date with your request.

New Apple Harvest Training Video Available from PSU Cooperative Extension

Matt Harsh, Adams County Extension, Penn State University Cooperative Extension

Harvest Success: A Guide to Better Apple Picking is now available from Penn State Cooperative Extension. This 14 minute Spanish/English production is designed to help orchardists better train their workers on proper apple harvesting techniques. The video covers six main topics: work preparation (proper dress, water, equipment), ladder skills (carrying a ladder, setting a ladder, tripod ladders), picking (the roll pick method, placing fruit in the picking bag, picking don'ts), spot picking, and transportation (bin hauling, stacking). Filmed in a Pennsylvania orchard using actual apple harvesters, this video is particularly suited for Mid-Atlantic orchardists looking to reduce harvest bruising—get yours today! This production is available in both DVD and VHS formats for \$35 (includes both the Spanish and English versions) from Penn State Cooperative Extension of Adams County. To order, or for more information, contact Matt Harsh (717-334-

6271 ext 321, rmh27@psu.edu or Amber Lockawich (717-263-9226, all180@psu.edu).

Spotlight on Innovation: R & L Orchard Co. – Mountain View

Tara Baugher, Adams County Extension, Penn State Cooperative Extension

Come as you are – straight from the farm!

Thursday, August 11th, 6:00 P.M. - 91 Pleasant Dale Road, Brysonia, PA

Over the years, Mark Rice of R & L Orchard Company has earned a reputation as a serious innovator in the development and management of fruit production systems. Come see what he's been up to lately! Mark has graciously agreed to open his Mountain View farm to us in the middle of peach season, so don't miss this chance to see acre after acre of perpendicular-V peach trees loaded with fruit and ready for harvest! Come stretch your mind and listen to one of the East's leading horticulturist's thoughts on fruit production, orchard efficiency, innovations....and lots more!

Mark Rice has traveled the world seeking new and better ways to raise fruit in Pennsylvania. Don't miss this chance to get a behind the scenes look at a progressive, world-class farming operation that's right in our own backyard! Regardless of our background, you're guaranteed to leave with lots to think about! For more information, contact Matt Harsh rmh27@psu.edu or Tara Baugher tab36@psu.edu.

Directions: From Rt. 34, take Quaker Valley Rd west approximately 3 miles, then a right onto Pleasant Dale Rd. From 234, take Brysonia Rd. north, for ~ 1 mile, bear right onto Quaker Valley Rd., and go ~ 1/2 mile to a left onto Pleasant Dale Rd.

Submitted by Jerome L. Frecon, Agricultural Agent. □

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