

PLANT & PEST ADVISORY

FRUIT EDITION \$1.50

SEPTEMBER 11, 2007



INSIDE

Food Safety Series: Program Maintenance... 1

Apple Maturity Update for North-Central NJ... 2

Eligibility for Deer Fencing Program Expanded for 2007... 4

Announcing Green Energy Website for Farms and Greenhouses... 4

Food Safety Series: Program Maintenance

Wesley Kline, Ph.D., Cumberland County Agricultural Agent

In August 2007, a company in California recalled bagged spinach for possible salmonella contamination. There were no reported illnesses from the tainted spinach. Another company recalled baby carrots after they were found to be contaminated with Shigella bacteria in Canada. There were four reported illnesses in Canada from the contaminated carrots.

What does this tell us? First, in these two instances the system worked. The products were traced back to the companies who sold them and were removed from the market. Second, food borne illnesses are not going away. Growers need to maintain a strong food safety program and be prepared for third party audits next year.

With some recent audits in New Jersey, two areas of concern became apparent:

1. If a grower hires someone to write his/her food safety manual, the grower must know what is in the manual and adhere to the contents! There have been instances when the auditors came to do the audit it was obvious the grower did not know what was in his/her manual. Each grower must sit down with the person developing the manual to make sure there is agreement about what to put in the manual. Once the manual has been developed, each section must be reviewed for clarification and necessary changes should be made for the final version. Remember, auditors use the grower's food safety manual as the basis for the audit. If the grower does not understand the contents of their manual, how can he/she answer the auditors' questions?
2. Many growers are using services to supply portajohns and hand washing facilities. These services generally clean the facilities once or twice a week depending on the contract specifications. This does not mean growers can ignore the portajohns! Whenever crews are working in the field, growers must take responsibility to see that the facilities are checked on a daily basis. Some audited farms automatically failed their third party audit because the facilities were not clean or were not supplied with soap, water, toilet paper or single use towels for hand washing.

As we move into 2008, training sessions are being organized on food safety and third party audits. This is a collaborative effort be-

SEE FOOD SAFETY ON PAGE 4

Apple Maturity Update for North-Central New Jersey

Win Cowgill, County Agricultural Agent

Apple maturity is developing nicely. Warm temperatures this week have slowed red color development and the dry conditions the past two weeks have stressed trees where not irrigated. Much needed rain in North Jersey is coming down as I finish this article on Tuesday morning.

The cool nights however, combined with the warm sunny days have made for great apple growing conditions resulting in high red color on all varieties. Note that some blocks of stressed trees have fruit that is very loose even if Retained. Stop drop sprays do not work as well on trees that are stressed. Some varieties are maturing sooner than others due to this stress.

Note that Naa can be applied ovetop of Retain to add additional sticking power. It is labeled at 10-20ppm. One grower has had repeated success adding 15ppm Naa following Retain to hold apple blocks for PYO.

What the numbers mean on the maturity report

Several growers have asked for a bit of information on what the numbers mean in our brix and starch iodine tests. The SI (starch) is a measure of how much starch has converted to sugar. The lower the number the more "immature" the fruit is. The higher the number the more "mature" the fruit is. We like to have an SI of between 5-6 to harvest for retail sales. Brix is a measure of sugar content of fruit. A brix of at least 12 percent should be present for acceptable eating quality. Pressure is also an excellent indicator of maturity and the "crunch factor". For most varieties I would like to see a pressure of no less than 16 lbs at harvest. The exception is Honeycrisp. It has excellent crunch at 13-14 lbs pressure. The reason is that studies have shown that the Honeycrisp fruit contains double the number of cells. This is what gives the fruit its unique crunchy texture.

North Jersey Apple Maturity Results

HoneyCrisp - All but the more northern NJ orchards have completed Honeycrisp harvest. Since it must be picked multiple times to obtain the red color and allow for development of the excellent varietal flavor, several growers are on their 3rd and 4th picks.

The recommended maturity for the harvest of Honeycrisp in NJ is starch=7.0, internal pressure > 13.5 pounds, soluble solids > 13 brix, and the presence of good varietal flavor. A lousy eating Honeycrisp is a lousy apple.

Warren-Hackettstown	Date	Retain	Pressure	Brix	Starch
Honeycrisp	9/9	yes	14.4	10.8	7.5

Gala- Harvest is pretty much complete in NJ

McIntosh - Many blocks in North Jersey have colored nicely; sugars are developing ranging between 9-12 brix. Central Jersey Mac harvest is winding down, growers in the Hudson Valley, NY are going full tilt with their McIntosh harvest.

Warren-Hackettstown-	Date	Retain	Pressure	Brix	Starch-Iodine
McIntosh MacSpur	9/9	yes	13.6	10.8	5.4

Warren- Blairstown	Date	Retain	Pressure	Brix	Starch
McIntosh	9/9	No	14.4	11.4	6.3

Morris-Harding Twp.-	Date	Retain	Pressure	Brix	Starch-Iodine
McIntosh Rogers Red	9/10	Yes	14.7	12.6	5.4

Morris- Myerville	Date	Retain	Pressure	Brix	Starch
McIntosh	9/10	Yes	15.5	11.8	5.3

Britemac (NJ#3) – is an older release from the NJ Agricultural Experiment Station. It is a cross between Melba and Kildare. It looks very much like a McIntosh, Red, striped with white flesh, juicy and crisp. The eating quality is good or better than McIntosh and the apple colors better.

Warren- Hackettstown	Date	Retain	Pressure	Brix	Starch
Britemac	9/9	Yes	13.3	10.4	6

Morris- Harding Twp.	Date	Retain	Pressure	Brix	Starch
Britemac	9/9	No	14.2	12.8	6.5

Early Fuji Types- These Early Fuji's are maturing nicely. There are six strains of early Fuji under test at the Rutgers Snyder Farm. They will have a nice fit in the early PYO market. They are almost identical to regular Fuji, the difference is they ripen a full month ahead. In Morris and Hunterdon County the normal harvest date for first pick is around September 20th. They need to be picked several times by background color and maturity. Based on the sugar and starch of the one Morris sample Day Break is running a few days ahead.

SEE APPLE MATURIY ON PAGE 3

Morris	Location	Date	Retain	Pressure	Brix	Starch
Day Break Fuji	Harding Twp.	9/10	no	15	12.8	3

Cortland is an apple that has increased in popularity with newer strains being highly colored. Cortland is usually picked one week after Macs. They do not starch test well but SI testing can be used as guideline. For Cortland target a starch of 5-6. Cortlands are not ready yet anywhere tested.

Warren	Location	Date	Retain	Pressure	Brix	Starch
RedCort	Hackettstown	9/9	yes	16.7	9.4	1.3
Cortland	Blairstown	9/9	no	17	11.6	1.6

Morris	Location	Date	Retain	Pressure	Brix	Starch
RedCort	Harding Twp.	9/10	yes	17	11.6	1.2

Hunterdon	Location	Date	Retain	Pressure	Brix	Starch
RedCort	Pittstown	9/10	no	17	10.4	2.1

Jonathan is an old-time favorite apple popular in the Midwest. It has colored nicely. Ready in Morris but not in Warren Co.

Warren	Location	Date	Retain	Pressure	Brix	Starch
Jonathan	Hackettstown	9/9	no	16.3	11.4	3.3
Jonathan	Blairstown	9/9	no	22	9.6	1.7

Morris	Location	Date	Retain	Pressure	Brix	Starch
Jonathan	Harding Twp.	9/10	yes	16.5	13	5.4

Macoun- Macouns are just beginning to color. They are nowhere near ready for harvest from samples taken this week. I would not expect Macoun to be ready in central NJ until the 25th of September.

Hunterdon-	Location	Date	Retain	Pressure	Brix	Starch
Macoun	Pittstown	9/10	no	17.7	11	2.8

Morris	Location	Date	Retain	Pressure	Brix	Starch
Macoun	Harding Twp.	9/10	yes	18.7	12.2	2.8
Macoun	Myersville	9/10	no	18.9	11.6	2.2

Retain®: Reminder Retain® should be applied 21 to 28 days before anticipated harvest and with a 7 day Pre Harvest Interval (PHI). If blocks were not treated with Retain®, it is too late this season to apply except for October maturing apples such as Suncrisp, Fuji, Stayman, Braeburn.

Note: Retain will not work well if applied to drought stressed trees!

Note: This report takes approximately two days to prepare in collecting and testing samples and in preparation of the text and data. A note of thanks to all who make this report possible beginning with all the growers who participate, and Rob Sancheis and Cathy Kloetzili research assistants at the Rutgers Snyder Farm. □

Eligibility for Deer Fencing Program Expanded for 2007

New and beginning farmers will have an opportunity to participate in the New Jersey Department of Agriculture 2007 Deer Fencing program, a cost-share program that provides fencing material and up to 30 percent of the line posts to qualified farmers. The program, run cooperatively by the Department and Rutgers NJAES Cooperative Extension, has expanded eligibility to new and emerging operations that could benefit from the exclusionary fencing. The new/beginning farmer category is only eligible to farms established from 2000 through the present day which meet an economic threshold.

"The fencing program has successfully assisted participating farmers in minimizing deer damage to crops over the past two years," said New Jersey Secretary of Agriculture Charles M. Kuperus. "This year, we hope to help newer farmers trying to establish their crops as well as long-time farmers keep deer and other animals out of their fields so they can benefit from higher yields and ensure the viability of New Jersey's farms." This is the third year of the Department's deer fencing program. In the first two years, fence, accompanying wire and posts were distributed to 150 farmers throughout the state.

A Rutgers NJAES Cooperative Extension survey of farmers who participated in previous deer fencing programs indicated that almost 70 percent of wildlife crop loss is attributable to deer. The New Jersey Agricultural Experiment Station estimates the economic loss to farmers to be between \$5 million and \$10 million annually. To participate in the program, farmers must meet these eligibility criteria:

- Farmers who were awarded fencing and materials in the **2004/2005 or 2006 program are not eligible** to participate
- Must be a New Jersey farmer having documented proof of a **minimum of \$40,000 in sales** of agricultural commodities produced by the applicant on a New Jersey farm, or
- Must be a New Jersey **certified organic farmer** having documented proof of a **minimum of \$20,000 in sales** of agricultural commodities produced by the applicant on a New Jersey farm, or
- Must be a **New/Beginning farmer** actively engaged in production of agricultural commodities on a New Jersey farm that was established from 2000 through the present day and have documented proof of a minimum of \$5,000 in sales of agricultural commodities produced by the applicant on a New Jersey farm
- Must be the owner of the land or have documented proof of renting preserved farmland or farmland that is enrolled in an **Eight-Year Farmland Preservation Program**

Announcing Green Energy Website for Farms and Greenhouses

The UMass Extension Vegetable and Floriculture Programs are excited to present the addition of "Renewable Energy for Farms and Greenhouses" to their websites. The pages are designed to provide a practical and reliable resource base for farmers and growers on using renewable energy including solar, wind, biomass, and geothermal technologies. With high fuel prices, decreasing consumption of fossil fuels is an important step you can take to ease your wallet and to reduce greenhouse gas emissions. The site is arranged to be a guide for the process of adding green energy; it provides resources on the different types of energy, tax incentives, finding a contractor, and energy efficiency. There is also a page that lists Massachusetts farms and greenhouses that are using green energy. Visit the website by going to www.umassvegetable.org or <http://www.umass.edu/umext/floriculture/> and clicking on the "Renewable Energy" link. □

FOOD SAFETY FROM PAGE 1

tween the New Jersey Department of Agriculture and Rutgers Cooperative Extension. Contact Cooperative Extension of Cumberland County for information on upcoming sessions at 856-451-2800. Plan to attend one of these sessions even if you have been through an audit and passed. Remember -- the audit is good for only one year and there will be changes in 2008. □

-
- Complete a **mandatory deer fence installation workshop** sponsored by the New Jersey Department of Agriculture (NJDA) and Rutgers Cooperative Extension

Farmers who receive fencing and materials will be required to use the material solely for the purpose of keeping deer off their land and are prohibited from using the fence to contain equine, livestock, poultry, or other animals. Any unused fence will have to be returned to NJDA and cannot be sold.

Applications for deer fencing are available to farmers through the New Jersey Department of Agriculture, Soil Conservation Districts and Rutgers Extension offices. **Applications must be postmarked by October 8, 2007.** Farmers also may call (609) 292-5532 for more information or go to the NJDA website deer fencing page at www.nj.gov/agriculture/grants/deer.html. □

RUTGERS

New Jersey Agricultural
Experiment Station

Plant & Pest Advisory
Rutgers School of Environmental
and Biological Sciences
ASB II, 57 US Hwy. 1
New Brunswick, N.J. 08901

FIRST CLASS
POSTAGE PAID
PERMIT #576
MILLTOWN, NJ 08850

PLANT & PEST ADVISORY FRUIT EDITION - CONTRIBUTORS

Rutgers Cooperative Extension (RCE) Specialists and Program Associate

George Hamilton, Ph.D., Pest Management
Norman Lalancette, Ph.D., Plant Pathology
Bradley A. Majek, Ph.D., Weed Science
Peter Oudemans, Ph.D., Small Fruit Plant Pathology
Cesar Rodriguez-Saona, Ph.D., Cranberry/Blueberry Entomology
Peter W. Shearer, Ph.D., Entomology
Daniel Ward, Ph.D., Pomology
Gail Lokaj, Program Associate in Pomology

Rutgers NJAES

Joseph Goffreda, Ph.D., Breeding

RCE Agricultural Agents and Program Associates

Atlantic County, Gary C. Pavlis, Ph.D. (609-625-0056)
Gloucester County, Jerome L. Frecon (856-307-6450)
Hunterdon County, Winfred P. Cowgill, Jr. (908-788-1338)
Morris County, Peter J. Nitzsche (973-285-8300)
Passaic, Elaine F. Barbour, Agric. Assistant (973-305-5740)
Warren County, William H. Tietjen (908-475-6505)
Fruit IPM, Dean Polk (609-758-7311)
Atanas Atanassov, Ph.D., Program Associate (908-788-1338)
Gene Rizio, Program Associate (856-566-2900)
David Schmitt, Program Associate (856-307-6450)

Newsletter Production

Jack Rabin, Associate Director for Farm Services, NJAES
Cindy Rovins, Agricultural Communications Editor

Pesticide User Responsibility: Use pesticides safely and follow instructions on labels. The pesticide user is responsible for proper use, storage and disposal, residues on crops, and damage caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact RCE in your County.

Use of Trade Names: No discrimination or endorsement is intended in the use of trade names in this publication. In some instances a compound may be sold under different trade names and may vary as to label clearances.

Reproduction of Articles: RCE invites reproduction of individual articles, source cited with complete article name, author name, followed by Rutgers Cooperative Extension, Plant & Pest Advisory Newsletter.

For back issues, visit our web site at:
www.rce.rutgers.edu/pubs/plantandpestadvisory