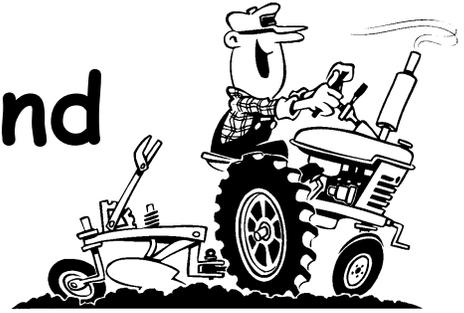


Cultivating Cumberland

June - 2013 VOL. 18, ISSUE 6



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Attachments:

Nursery Sample Monitoring

As indicated in our March issue of Cultivating Cumberland, Jim Johnson, Nursery agent, is on sabbatical and only available by appointment for diagnosis of plant problems in commercial nurseries. Additional diagnoses will be handled through the Rutgers Plant Diagnostic Lab.

Beginning the week of May 27th, 2013, Steve Rettke will be picking up any nursery samples from the Extension Office that need to go to the Diagnostic Lab.

Please drop off the samples to the Extension Office labeled with the Nursery name, contact person, address and phone number. Please be sure that the sample is taken by someone at the office so it can be stored properly until pick up. Delivery of samples on Wednesday of each week would be best as pick up is scheduled for Thursdays.

If you have any questions, please contact Tammy at the Extension Office, 856-451-2800 x1.

Food Safety Modernization Act

Meredith Melendez and Wesley Kline

Over the last few months we have provided Q&A from the Food and Drug Administration conference calls as it relates to the proposed rule for the Food Safety Modernization Act. Following are three additional calls on specific subparts of the proposed rules. To hear the recorded tapings of these conference calls visit: <http://producesafetyalliance.cornell.edu/psa.html>. For additional questions and answers go to <http://1.usa.gov/Xcdg6o>.

HEALTH, HYGIENE AND TRAINING Subpart D

- 1. In the case of farms who sell entire fields of produce, pre-harvest, who is responsible for food safety?** If the ownership of the product in the field changes hands then the responsibility from that point forward belongs to the new owner. Just because the ownership of the crop transferred does not absolve the previous owner's responsibility for the field production when it was under their ownership.
- 2. What constitutes a visitor? Would a sales rep be considered a visitor?** Any person other than personnel is considered a visitor. There is no set time limitation to designate who is a visitor. Growers should consider the potential for contamination from any visitors to the farm.
- 3. Will testing workers, now or in the future, for asymptomatic diseases be a part of this ruling?**
No
- 4. Is there a recommendation as to the type of soap used in hand washing?** No, soap is the minimum requirement.
- 5. Is warm water required for hand washing?** No, there is no temperature requirement.
- 6. When work crews are hired to work on a farm, who is responsible for their food safety training?** The company that manages the work crew is responsible for worker food safety training, not the farm. The farm should obtain documentation from the work crew company to verify worker food safety training.
- 7. What is the requirement for holding onto worker health and hygiene documentation and records?** A minimum of two years past the date of creation.
- 8. How strict is the rule regarding eating in the field?** The rule does not cover this specifically, but is covered by hygienic practices and will be a focus of guidance documents.
- 9. Does eating constitute a break?** Yes. Farm workers must wash their hands after any type of break.
- 10. Is alcohol based sanitizer acceptable?** No, soiled hands prevent the effectiveness of alcohol based sanitizers. Hand washing has been proven to be much more effective.
- 11. Can break areas be a separate area, but not necessarily walled off?** Yes

Domestic and Wild Animals Subpart I

- 1. The phrase is used “growers will act appropriately” regarding potential contamination from animals on the farm. This phrase is very vague; will there be guidance from the FDA detailing what is “appropriate” action?** We did not want to give concrete metrics because we wanted there to be flexibility within the rule for growers. Currently we have a company contracted to prepare technical data which the FDA will then use to prepare guidance documents.
- 2. If a grower does not “act appropriately” what will the penalties be?** Growers are expected to take all measures reasonably necessary to prevent cross-contamination. Unsanitary conditions are a violation of the act. Section 401-A1 contains pathogen compliance information and section 402-A4 contains information on the course of action should unsanitary conditions be found. Inspectors will not be looking for deer or birds but will be looking for fecal material that is left by them. Will this fecal material come in contact with or be likely to come in contact with the product? Growers should avoid this situation.
- 3. Will there be an opportunity for input into the governing guidance document?** Yes, we are tracking questions now and this will help inform the rule making and inform the guidance documents. The guidance documents are non-binding and can be easily changed. Comments will always be accepted on the guidance documents.
- 4. When will these guidance documents become available?** Soon after the final rule is published.
- 5. Deer droppings are not always evident, how do you monitor large areas of land?** We want to leave it up to your judgment; you should deem what is appropriate.
- 6. Will thresholds be developed, such as number of pellets per acre acceptable?** No. We do not want to do this; we are looking at the potential for commodity contamination. We suggest that you review commodity specific guidance documents (leafy greens, green onions, fresh culinary herbs, etc.) that are already in existence and apply them to your situation. Obviously if fecal material is observed in direct contact with the produce it should not be harvested.
- 7. Is product testing required?** No product testing is required.
- 8. When the guidance document is released will it first come as a draft?** Yes, it will be released as a draft through the federal register.

Equipment, Tools, Buildings and Sanitation Subpart L

- 1. Are cats permitted in packing houses? They serve as effective rodent control.** There is no rule that cats cannot be used for rodent control but you must consider the potential for contamination of product or product contact surfaces by the cat.
- 2. Where does OSHA come into play with the Food Safety Modernization Act?** The FDA used 29CFR (OSHA standards) as guidance for toilets and handwashing stations. However, the rule is not exactly the same as OSHA.
- 3. Is a household toilet facility OK if it is in compliance with OSHA regulations?** Yes, that is OK, but it should be supplied with soap, single use paper towels, toilet paper and a trash can. Cloth towels should not be used.

- 4. Are cement floors required in a packing house?** No
- 5. Should hand washing stations be located inside of a portable toilet?** Yes they should but it is not mandated. FDA would like comments on whether the handwashing station should be located outside the portable toilet.
- 6. What guidance is given regarding rodents?** The FDA wanted to take a holistic approach with rodent control, so that growers can take care of problems as they occur. No specifics are given as to the methods of rodent control so that it can work with existing systems already in place.
- 7. Are there specifics on how to clean equipment in a packing shed?** The goal is to prevent contamination of product and product contact surfaces. Guidance will be coming on this topic after the final rule is written.
- 8. Are instruments required for testing to determine how clean equipment is maintained?** No testing is required.
- 9. Do wooden tables need to be sanitized?** Wooden bins, tables' etc. need to be sanitary not sanitized.
- 10. How about wood surfaces where produce is cut or packed?** Product contact surfaces must be sanitized – how an operation gets to that point is up to them.
- 11. When picking buckets are emptied, cleaned and returned to the field how should they be transported (upside down on the wagon, right side up, stacked)?** The grower must consider the likelihood of contamination and reduce that likelihood.
- 12. What is recommended for the disposal of grey water from a hand washing station?** The rule states that it should be disposed of in a way that prevents it from becoming a potential contaminant.
- 13. What pest control methods are required for packing sheds that are not fully enclosed or enclosed at all?** Measures should be taken to prevent pests from becoming established. These areas should be monitored and if pests are noticed they should be removed and prevented from posing additional problems.
- 14. Can harvest bins be stored in the field overnight?** Yes, measures should be taken to prevent contamination such as covering the bins. Bins should be inspected before their use and not used if contamination is evident.
- 15. How stringent is the rule regarding seams of equipment or tools?** Seams should be smoothly bonded or maintained so that they do not pose a contamination risk. In older equipment retrofits may be required.
- 16. Alternative methods are discussed repeatedly in the rule, and during the last Q&A it was suggested that alternative methods would be applied to groups. Can alternative methods be applied to individual growers?** Alternative methods are appropriate for groups as well as individuals provided they are science based.
- 17. Vegetable washers often have brushes or sponges that are tough to take apart and clean, what should be considered in this situation?** The FDA would like comments on specific washing practices and equipment. Close attention should be paid to the equipment used for washing produce to determine the potential for it to contaminate produce.

Two Viruses Found Throughout Strawberry Fields in US

Posted May 24, 2013 Plant & Pest Advisory
Dr. Andy Wyenandt, Rutgers and Peter Nitzsche, Rutgers

Two strawberry viruses are causing problems for strawberry growers in Eastern and Mid-west states this spring. The viruses (strawberry mottle virus, abbreviated SMOV) and strawberry mild yellow edge virus (SMYEV) have been found in Pennsylvania, Virginia and New Jersey this spring.

Both viruses are not new to strawberry in the US. Unfortunately for the industry, infected plants were unknowingly distributed to strawberry producers throughout the US. Last fall, some strawberry growers in southern states began noticing poor growth in their fields, sometimes in spots within fields, sometimes in virtually the entire field. Older leaves sometimes turned bright red in color, while the edges of leaves around the crowns of plants, and/or emerging leaves, showed a distinct yellowing, which sometimes developed into patterns of marginal necrosis (i.e., dead tissue along the margins of leaves). Roots and crowns of most of these plants showed no sign of fungal infection. Initially, the cause of these problems was thought to perhaps involve soil and/or fertility conditions, such as low soil moisture and/or pH, boron toxicity, or fertilizer burn, perhaps associated with weather and/or errors in custom-blended fertilizers. However, similar problems were observed in Florida, North Carolina, and other southern states as well as Virginia.

Because of the widespread nature of these symptoms, and an apparent association with bare-root plants or tips from the Great Village area of Nova Scotia, Dr. Barclay Poling of NCSU travelled to Nova Scotia in early December to visit with Canadian strawberry plant growers and Extension staff. While there, Dr. Barclay was told that apparent strawberry virus symptoms had started showing up in fields of some strawberry cultivars in Great Valley in October. The Canadians who had not had this problem before, and contacted Dr. Bob Martin, a USDA-ARS small fruit virologist who is an expert on small fruit/strawberry viruses located at Oregon State University, to help determine the cause. Dr. Martin collected plant samples in early November to take back to Oregon for laboratory testing.

Dr. Martin found Strawberry Mild Yellow Edge Virus (SMYEV) and Strawberry Mottle Virus (SMOV) in samples from several matted row varieties. Dr. Barclay noted that he had never before seen strawberry viruses to be a problem. Dr. Barclay also noted that 'Chandler' plants in Canada looked healthier than other varieties he saw, such as 'Camarosa' and 'Winter Star'. Upon returning to NC, Dr. Barclay collected and submitted 7 plant samples to Dr. Martin's lab, and found one with SMOV and five with SMYEV. All infected plants were plug plants produced from tips grown by one nursery in the Great Valley area of Nova Scotia. Although four of Barclay's samples were 'Chandlers', one such plant that looked "good" tested negative for both viruses, while another "good" plant tested positive for SMYEV only. Dr. Martin also tested 20 strawberry samples from Florida and found SMYEV and SMOV in 15 (75%).

SMYEV and SMOV are very common around the world, and often occur together and with other viruses. In fact, it may be that they only cause significant problems in strawberry when they occur together. Yield losses (probably when 100% of plants are infected) can be expected to range from 0% to 30%, and can differ among strawberry cultivars and also depending on which "strain" of each virus may be present. These viruses are usually only a problem in matted-row strawberry pro-

duction, where plants are in the field for a much longer period of time and plantings are not destroyed at the end of each growing season. Importantly, although the strawberry plant may show symptoms and yield less, fruit from infected plants are still edible and there should be no difference in taste.

SMYEV is a “persistent, circulatively-transmitted” virus spread by some (but not all) aphids – *Chaetosiphon fraegolii* (the strawberry aphid), *C. thomasi*, and *C. jacobi*. “Persistent” means that these aphids need to feed for hours or days in order to “get” and spread the virus. However, “persistent” and “circulative” also mean that a virus spreads through the body of an insect once the virus has been acquired, and once an aphid has the virus, the virus remains in the aphid through most or all of its life. If a grower only has a small percentage of infected plants in fields with low to moderate aphid populations, promptly spraying an insecticide that kills aphids quickly should be more likely to kill the insects before they can acquire and transmit viruses like SMYEV. Some more “good news” about SMYEV is:

1. It infects no weeds or crop plants other than strawberry (wild and cultivated)
2. It is only supposed to be a problem when other viruses are also present.

Most of the virus-infected plants diagnosed so far also had SMOV, which is also aphid-transmitted (*C. fraegaefolii*, several other *Chaetosiphon* species, and the melon aphid, *Aphis gossypii*). However, SMOV is “semi-persistently” transmitted, which means that aphids can “get” and transmit the virus within only a few minutes as they probe infected plants and then move to nearby healthy plants. However, aphids also “lose” the virus within a few hours as they probe plants, potentially slowing the initial rate of virus spread if most of the plants that aphids probe are healthy, such as when only a low percentage of plants in a field are infected. In addition to wild and cultivated strawberry, SMOV also infects several species of *Chenopodium*, including common lambsquarters. Aphid control programs are also supposed to be effective in reducing SMOV spread in strawberry fields.

So, what are we to do about this situation?

1. Growers with fields that “look good” and contain plants that weren’t sourced from the one nursery in the Great Valley area of Nova Scotia should NOT be “at risk”. One cautionary note: because these viruses are both transmitted by aphids, it is possible that active aphid populations in strawberry fields could cause “secondary spread” from infected to non-infected plants in the same field or in nearby fields (I doubt anyone knows exactly how close “nearby” is).
2. Plants that were sourced from the one nursery of concern are likely to be infected by one or both viruses. Plants traced back to other, nearby sources in Nova Scotia could also be involved, but not as far as we know at this time. However, it’s very important to remember that apparent symptoms of plant virus infection can be very misleading. Sick plants may have similar symptoms, yet can be suffering from very different causes, none of which may involve virus infection. My experience with viruses in another crop (tobacco) suggests that factors such as production practices and weather conditions could have a major impact on apparent damage and yield loss. Even if a grower knows that their plants are infected, ensuring that they are doing everything that they possibly can to minimize stress on their crop could significantly im-

prove their outcome this growing season. The factors that come to my mind for strawberry are frost protection, fertility, and irrigation/moisture stress.

3. There is no cure for plant virus infection. Once infected, plants are infected for life, and every cell in an infected plant will eventually contain virus. There are no “silver bullets” or miracle cures, despite what some may claim. Infected plants can’t be saved, although growers could see some improvement in their appearance and growth between now and harvest. We don’t know why that is, so we don’t know how to promote it. This means that growers with infected plants should focus on preventing spread to healthy plants. Since we can’t test every plant, the safest assumption is that apparently symptomatic plants are infected, while those that “look good” aren’t, even though we know this isn’t always true.
4. If almost all of the plants in a field are stunted and symptomatic, applying an insecticide will not help them. The only possible benefit from such a spray would be to minimize possible spread to nearby healthy strawberry fields. Treating severely-infected fields that are isolated is extremely unlikely to produce any benefit whatsoever.
5. If there are enough good plants in a field that look to be worth saving, application of a systemic insecticide should be an effective treatment to prevent or minimize spread of these viruses. Scientists disagree to some extent on the effectiveness of this approach, but the plant pathology literature suggests treating can reduce further disease spread. Remember that this only works if there are aphid populations in the field. If there are no aphids, what is an “aphid-killer” going to accomplish? Growers may consider treating to prevent aphid populations from developing this spring as a type of “insurance”, but an alternative approach that should be cheaper and more environmentally friendly would be to scout fields more closely for aphids so that a crop is treated only if when determined necessary. If a grower decides to treat, the systemic insecticides need to be applied at least 14 days before bloom to avoid injuring pollinator populations. Recommended insecticides include imidacloprid (Admire Pro for drip, Provado for foliar applications) and thiamethoxam (Platinum for drip, Actara for foliar spray). There may also be some generics labeled for strawberry that have the same active ingredients, but may be cheaper.
6. Don’t be too discouraged. This virus situation is yet another plant disease problem in strawberries tied to transplants that look healthy, but aren’t, but should be “containable” to this year. Those involved in strawberry plant production in Nova Scotia are aggressively working to correct their virus situation. Although many growers consider carrying strawberry plants over from one season to another, 2013 looks to be a very poor year for this. If possible, all strawberry plants (Note from Kathy Demchak – this means plantings that are known to be infected with the viruses in question, that show symptoms, or that were obtained from the nursery in question) should be destroyed after this season’s harvest is completed, to avoid potential carry-over of SMYEV and SMoV. Leaving potentially infected plants in the field this summer risks virus spread into next years’ crop. Fields in matted-row production should be monitored for potential virus incidence as well. Southern Region strawberry research and extension folks meet with national experts and Canadian representatives in late March to plan methods to avoid a repeat of this past fall.

Additional notes from Kathy Demchak, Penn State:

Regarding the recommendations Dr. Johnson discusses above for Virginia growers, which will apply just as well to Pennsylvania and New Jersey growers.

1. Make sure that you scout for aphids, as aphids are needed for the viruses to be moved around. Don't just spray without knowing whether you have a reason to do so. Treat plants if you find aphids, but be careful to observe label recommendations to avoid harming pollinators.
2. Carrying over plantings for a second year is NOT a good idea if you suspect or know that your plants are infected.
3. Take care of your plants no matter what. Giving up on them could ensure that infected plants perform more poorly, as well as healthy ones. 4) If you see plants that are stunted and showing symptoms depicted below, an additional option for smaller growers is to rogue plants – probably only practical if a relatively portion of them appear to be infected and they look noticeably worse than others (remove the plants from the field).

Strawberry mild yellow edge virus is said to be the most common strawberry virus, and was first described in 1922, but symptoms only show up when a second virus is present. Much of the work done on strawberry mild yellow edge virus was done on older cultivars grown on the west coast through the 1950's, 60's and 70's. While the current work is finding the serious problems to be caused from strawberry mild yellow edge virus in combination with strawberry mottle virus, similar symptoms have been described when it's been found in combination with three additional viruses, at least two of which I'm guessing are also around. Our native strawberries are susceptible to these viruses as well. Different strains of strawberry mild yellow edge virus that differed in severity had been documented in the past on the west coast. Further, there's been some indication that plug plants seem to be healthier than fresh-dug plants planted in Florida even if infected. That might be because northern plantings had an opportunity to become well-established before fruiting begins.

Plug plants originating from other sources (runner tips grown on-site or from tip suppliers other than affected one(s) in Nova Scotia), and dormant plants (as used for matted-row production or for summer-planted plasticulture) appear to be OK, though this does underline the importance of getting plants from nurseries that do virus testing and utilize tissue culture.

For more information on the situation in Canada, you can "google" the words "Great Village Nova Scotia strawberry virus" for some recent newspaper articles. Note that one source describes the combination of two viruses mentioned above as a new mutant virus, but really, the problem is just that two viruses are present at the same time giving the plants too much to deal with – not that a new virus had formed.

Current strawberry virus situation in New Jersey – After learning of the situation in the other states, Peter Nitzsche Morris County Agricultural Agent collected samples from two northern NJ farms and sent samples to Bob Martin of USDA ARS. As suspected, several of the samples from small or stunted plants came back positive for both viruses and some large and small plants tested positive for one of the viruses. This means the viruses are in NJ as well and growers should follow the recommendations stated above. New Jersey strawberry growers who purchased plants who tips were sourced from Nova Scotia should follow the above recommendations. If you have questions or concerns, please contact your county agent.

Pepper Weevil Alert

Joe Ingreson-Mahar, Rutgers IPM Program

Posted May 28, 2013 Plant & Pest Advisory

There are now 6 non-farm locations where adult pepper weevils are being trapped. Traps at 3 farm sites have also caught weevils in the past week, including 2 pepper fields. Large numbers of weevils are being trapped at one of these non-farm sites, 54 in a 4 day period. It is not clear if this represents typical numbers or if this year the number of weevils is exceptional.

Farmers are advised to prevent an infestation of pepper weevil because there are currently no registered insecticides that will exterminate the population once the weevils have become established. To become established there must be at least flowers present on the plants. The female weevil lays eggs into flowers and developing fruit which the plants will abort. As the smaller fruit drop off, the weevils will lay eggs in larger fruit. Without treatment, crop loss could reach 80%. Insurance insecticidal applications are recommended before plants produce flowers or fruit. Use one of the insecticides listed in the next paragraph.

Insecticidal control is difficult and expensive. Once a field is infested, University of Florida researchers and extension personnel recommend weekly applications of Actara alternating with Vydate. A University of Florida 2011 insecticidal trial indicated that alternating Vydate with Belay or Leverage may also suppress weevil populations almost as well as Actara.

The cool, windy weather of the past few days probably hindered the movement and development of the weevils. Unfortunately, upcoming weekend temperatures reaching into the 80-90's will favor the weevil.

Affordable Care Act (ACA) Resources

Compiled by Barbara O'Neill, Ph.D., CFP®, oneill@aesop.rutgers.edu
 Extension Specialist in Financial Resource Management, Rutgers Cooperative Extension
 Updated May 15, 2013

Resources for Consumer Programs

- ◆ *Affordable Care Act Brochures and Educational Presentations:*
<http://www.hhs.gov/intergovernmental/acaresources/>

Includes dozens of links to ACA fact sheets, brochures, and PowerPoint presentations for different audiences.

- ◆ *eXtension Health Insurance Literacy Community of Practice (CoP):* <https://ask.extension.org/groups/1790>

This eXtension community exists to help people make smart health insurance choices and to plan for health care costs. The Web site includes links to CoP resources including an Ask an Expert (AaE) service for consumers at <http://bit.ly/askhealthlit> where users can receive answers to their health insurance and ACA questions from university faculty across the U.S.

- ◆ *Find Insurance Options:* <http://finder.healthcare.gov/>

Includes a simple two-step online process to help users find health insurance suited to their needs.

- ◆ *Healthcare.gov* (U.S. Department of Health and Human Services): <http://www.healthcare.gov/index.html>

Includes dozens of fact sheets and short videos about the Affordable Care Act (ACA) including the Web page *The Health Care Law & You*: <http://www.healthcare.gov/law/>.

- ◆ *Health Reform: Seven Things You Need to Know* (Consumer Reports);
http://www.consumerreports.org/health/resources/pdf/ncqa/The_Affordable_Care_Act-You_and_Your_Family.pdf

A 16-page publication that describes key features of the ACA and how it impacts health care decisions.

- ◆ *How Much Will a Family Save Under the New Federal Health Law?* (UC Berkeley Labor Center):
<http://laborcenter.berkeley.edu/healthpolicy/calculator/>

This calculator helps users estimate the cost of health care under ACA with and without government subsidies.

- ◆ *How the Health Care Law Benefits You:* <http://www.healthcare.gov/law/information-for-you/benefits.html>

Includes an interactive U.S. map where users can click on their state to find out about health care options.

- ◆ *Implementation Timeline:*
<http://www.acog.org/~media/Departments/Health%20Care%20Reform/WHTimeline.pdf?dmc=1&ts=20130430T1427150282> and <http://www.healthcare.gov/law/timeline/index.html>

Includes a description of actions that are being taken to implement ACA between 2010 and 2015.

- ◆ *Pew Charitable Trusts:* <http://www.pewstates.org/search?terms=aca>

Provides the latest news on the Affordable Care Act and health care compiled by the non-profit Pew Charitable Trusts.

- ◆ *Summary of Coverage Provisions in the Affordable Care Act (Kaiser):* <http://kff.org/health-costs/issue-brief/summary-of-coverage-provisions-in-the-patient/>

Provides a 2-page summary of key ACA provisions including the individual mandate and employer requirements.

- ◆ *Your State Marketplace*: <http://www.healthcare.gov/marketplace/about/state-marketplace/index.html>

Provides information about state-run health insurance marketplaces and those that are partnering with the federal government.

Resources for Small Business Programs

- ◆ Appleby, Julie (2013, May 9). Health Perks Geared to Top Workers Could Trigger Penalties Under Health Law. *Kaiser Health News*. URL: [http://www.kaiserhealthnews.org/Stories/2013/May/09/executive-perks-and-the-health-law.aspx?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+khn+\(All+Kaiser+Health+News\)](http://www.kaiserhealthnews.org/Stories/2013/May/09/executive-perks-and-the-health-law.aspx?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+khn+(All+Kaiser+Health+News))

This article describes the penalty of up to \$500,000 for employers with health insurance plans that violate anti-discrimination rules (i.e., providing more generous health insurance benefits for highly paid workers than others).

- ◆ *Calculating the Potential ACA Employer Tax Penalty*: <http://www.benefitscfe.com/newsletter/03-calculating-aca-tax-penalty.html>

Includes a four-step process and examples of how to estimate the potential tax penalty for employers with 50 or more workers.

- ◆ *Health Mandate Cost Calculator*: <http://www.retailmeansjobs.com/health-care-calculator>

This online calculator from the National retail Federation can help employers understand their potential ACA mandate penalty exposure. Users enter the number of full-time employees that work 30 hours or more on a monthly average and the number of hours that part-time employees work and get an estimate of possible penalties.

- ◆ *IFA's Employee Mandate Penalty Calculator*: <http://www.franchise.org/healthcare/calculator.aspx>

Business owners plug in two numbers (number of full-time employees and average number of hours worked by part-time employees) to find out whether they are subject to employer mandate penalties and, if so, what the estimated cost will be. The calculator was developed by the International Franchise Association (IFA).

- ◆ Maltby, E. & Needleman, S.E. (2013, April 8). Some Small Businesses Opt for Health-Care Penalty. *The Wall Street Journal*. URL: <http://online.wsj.com/article/SB10001424127887323916304578401413507987532.html>.

This article describes business owners weighing the cost of providing coverage versus paying ACA penalties.

- ◆ Mulvey, J. *Potential Employer Penalties Under the Patient Protection and Affordable Care Act (ACA)*, Congressional Research Service (May 6, 2013): <http://www.fas.org/sgp/crs/misc/R41159.pdf>

This 18-page publication explains potential ACA employer penalties in depth with tables and charts.

- ◆ Rabin, J. (2012, Nov. 12). Health Care Reform and NJ Farms. *Sustaining Farming on the Urban Fringe*. URL: <http://sustainingfarminguf.blogspot.com/2012/11/farm-calls-health-care-reform-and-nj.html>.

This article summarizes provisions of the ACA that are especially relevant for agricultural producers.

- ◆ *Total (FTE) Employee Workforce Calculator*: <http://npins.net/total-fte-employee-workforce-calculator/>.

This calculator will help employers determine the total full time equivalent (FTE) of their workforce subject to penalty.

- ◆ *What Health Care Reform Means For Your Business* (Newkirk): http://www.newkirk.com/healthcare_hrb.htm

This 16-page brochure, available in bulk quantities, describes ACA provisions that affect small business owners. It was developed for financial services professional to add their company branding and distribute to clients.

Direct Marketing Twilight Meeting**Tuesday, July 16th at 7:00 PM***Location:*

Duffield's Farm Market
Corner of Greentree and Chapel Heights Road
Sewell, NJ 08080
<http://www.duffieldsfarm.com>

Co-Sponsored by**Rutgers NJAES Cooperative Extension****Agritourism Working Group*****<http://njsustainingfarms.rutgers.edu/agritourism.html>*****And****The New Jersey Farmers Direct Marketing Association**

An association designed to represent the interests of nearly 2,000 Garden State producers who market an estimated \$100 million worth of agricultural produce to consumers.

<http://www.njfarmmarkets.org>***email: info@njfmda.org******[facebook.com/NJFarms.NJFDMA](https://www.facebook.com/NJFarms.NJFDMA)*****7:00PM****Educational Tour and Presentations****Tracy Duffield and Rutgers NJAES Cooperative Extension****Agritourism Working Group Members****8:00PM****NJFDMA Business Meeting**

Join the Officers and Directors of the New Jersey Farmers Direct Marketing Association for an informative meeting

In the past, the NJFDMA hosted regular twilight meetings around the state to network and coordinate efforts among members. This association is once again working to bring together its membership for educational and networking purposes. Please join the Rutgers NJAES Agritourism Working Group and NJFDMA at Duffield's Farm Market, in Gloucester County on July 16th at 7:00pm.

Directions to:
Duffield's Farm Market
Corner of Greentree and Chapel Heights Road
Sewell, NJ 08080

GPS Address: 280 Chapel Heights Road, Sewell, NJ 08080

FROM ATLANTIC CITY EXPRESSWAY

Take Expressway to the Last Exit - 44w
Go East on Black Horse Pike (168 East)
Turn right at 651 (Greentree Road)
Continue to Chapel Heights Road

FROM VINELAND

Take Route 47 North to Glassboro
Make a right at 651 (Greentree Road)
Continue to Chapel Heights Road

FROM NORTH AND CENTRAL NEW JERSEY

Take 295 South to 42 South
Continue onto Black Horse Pike (168 East)
Make a right at 651 (Greentree Road)
Continue to Chapel Heights Road

For More Information or if you have questions, contact
Michelle Infante-Casella, Agricultural Agent,
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Heat-Related Illnesses and Agricultural Producers

Linda M. Fetzer, Penn State Extension

Farmers and ranchers perform job responsibilities in all types of weather conditions including excessive heat and humidity. It is important for agricultural producers to understand risks associated with working in high heat work environments, potential heat-related illnesses, precautionary steps, and appropriate medical responses.

Understanding the Body's Response to Heat

Our body's primary defense against heat is through sweating. Sweating allows moisture to collect on the skin and evaporate. Sweating happens when the surrounding environment becomes greater than skin temperature. When this occurs, an internal body system called the sympathetic nervous system releases a chemical called acetylcholine which turns on sweat glands in the skin in an area called the dermis. The sweat glands release moisture and move it to the outer surface of the skin for cooling. However, in hot, humid weather, the moisture does not always evaporate and can collect on the skin causing the body to warm up and the heart to pump more blood to the skin. When this happens, the body starts to sweat excessively and depletes the body of water and electrolytes, which can lead to a heat-related illness.

The range for normal body temperature is between 96° to 100°F. Hard exercise, strenuous work, or fever will usually put the body in a range between 101° to 105°F. At 105° to 107°F, cooling treatment or fever therapy may be needed, and at even higher body temperatures, heat exhaustion and heat stroke usually occur. Heat exhaustion and heat stroke indicate a serious impairment to the body's cooling system and is a definite signal for medical assistance. Heat stroke or body temperatures beyond 110°F may result in death.

Risk Factors for Heat-Related Illnesses

Everyone is at risk for heat-related illness if they do not follow standard precautionary measures. The following factor(s) can increase the chance for developing one of the five main heat-related illnesses:

- Being elderly or an infant.
- Having certain medical conditions such as circulatory problems, heart conditions, or pregnancy.
- Being physically unfit or overweight.
- Consuming alcohol and/or drugs (including prescriptions; for example, the medication atropine interferes with the ability to sweat).
- Having lower heat tolerance levels or not becoming acclimated to working in high heat and humidity.
- High temperatures and humidity levels in the environment (as well as sun radiation or heat-conducting surfaces like black asphalt).
- Not having adequate fluid intake levels needed to hydrate the body.
- Limited air flow or breeze to aid in the cooling process.

Breakdown of Common Heat-Related Illnesses

There are five heat-related illnesses: heat rash, syncope, cramps, exhaustion, and stroke. Heat exhaustion and heat stroke are typically the most severe and require immediate medical attention. Figure 1 outlines each illness, typical symptoms, and treatment.

Figure 1: Breakdown of Heat Related Illnesses

| Heat-Related Illnesses | Cause | Symptoms | Treatment |
|------------------------|--|---|---|
| Heat rash | Excessive sweating during humid weather | Red, blotchy skin rash; clusters of pimples or small blisters | Keep the affected area dry, and treat with cornstarch or powder. Work in a cooler, less humid work environment. |
| Heat syncope | Prolonged standing or rising suddenly from a sitting or lying position | Light-headedness, dizziness, or fainting | Move person to a cool place to lie down, elevate the feet, and give liquids to drink. |
| Heat cramps | Loss of body salts and fluids from sweating during strenuous activity | Pain in stomach, arms, and/or legs | Stop activity, drink clear or sports beverage. Massage affected muscles. |
| Heat exhaustion | Excessive loss of body salts and water from sweating | Cool, pale skin, dizziness, headache, cramps, nausea, sweating, weakness, confusion, high body temperature, and unconsciousness | Have the person drink plenty of cool fluids, remove excess clothing, and apply cool compresses. Call for medical attention. |
| Heat stroke | System that regulates body temperature fails and the body temperature rises to critical levels | High temperature, hot dry skin, slurred speech, confusion, loss of consciousness, and seizures | Immediately call for medical assistance. Move the person to a cool place, and slightly elevate the head and shoulders. Remove outer clothing, and cool the body with water & wet towels sheets. |

Recommendations to Avoid Heat-Related Problems

- Do not wait until you are thirsty-drink about eight ounces (1 cup) of water every 15 to 30 minutes.
- Take a 15-minute break in a shaded area every two hours.
- Monitor weather, and schedule strenuous work activities accordingly to reduce exposure to high heat situations.
- Wear light-colored, lightweight, and loose-fitting clothing.
- Avoid use of alcohol, drugs, caffeine, and large amounts of sugar when exposed to heat; they can increase your rate of dehydration.
- Check prescriptions and over-the-counter medications to determine if there are side effects for heat exposure.
- Appropriately wear protective gear such as cooling vests to reduce your risk of a heat illness; if used inappropriately, heat illness can actually increase.
- Learn about prevention of heat illness and teach workers about health and safety instructions related to working in hot weather and appropriate responses to heat-related illnesses.
- Gradually build a tolerance to working in the heat. If you have a severely low tolerance to heat, you may need to perform tasks that limit exposure to the heat.
- Certain types of personal protective equipment (PPE) can increase the risk of heat stress, such as protective suiting. Schedule jobs that require PPE during cooler times.
- Recognize the conditions that can affect body heat such as fever, physically strenuous work, and even time of day (for example, body temperature is higher in late afternoons).
- Talk to your doctor if you have a chronic health condition or disability (e.g.,spinal cord injuries, multiple sclerosis) before working in the heat.

More information including a video about the risk of heat-related illnesses for outdoor workers can be found at the Occupational Safety and Health Admin. website: <http://www.osha.gov/SLTC/heatillness/index.html>

Heat-related illnesses and agricultural producers. (2012) Farm and Ranch eXtension in Safety and Health (FReSH) Community of Practice. Retrieved from < <http://www.extension.org/pages/62261/heat-related-illnesses-and-agricultural-producers> >.

Posting Fields and Notifying Workers on Pesticide Applications

There have been some discussions related to when fields need to be posted. The following information was provided by the Rutgers Pest Management Office to help clarify the issue.

New Jersey regulation NJAC 7:30-12 (b) addresses notifying workers of pesticide applications. It is consistent with that of the federal Worker Protections Standard where oral warning and/or field posting is allowed unless the label specifically requires both oral warning and field posting. EPA's Label Review Manual Chapter 10: Worker Protection Labeling substantiates this further.

However, New Jersey's regulations are more stringent than Federal WPS regarding field posting in one circumstance. This is found in NJAC 7:30 Subchapter 9 Pesticide Exposure Management in section 9.16 "General Agricultural Notification". Specifically, New Jersey regulation NJAC 7:30 - 9.16 states that If a private or commercial pesticide applicator has been previously issued any notice by DEP for certain violations, they must post notification of any outdoor pesticide application made within 250 feet of abutting property line for the next five years. The flag or sign must bear "Pesticide Treated Area" lettered at least one inch high, and have contact name and phone. Following are more details:

7:30-9.16 General agricultural notification

- (a) Any private or commercial pesticide applicator, who has been issued any notice by the Department for **violations of regulations concerning pesticide drift, direct application to non-target site(s), or misuse involving risk or actual harm, injury or damage to persons or the environment**, which has occurred during the course of producing an agricultural commodity shall be subject to these notification requirements.
 1. This requirement to notify shall commence upon the applicator's receipt of the notice as specified in (a) above and shall continue for a period of **five years**.
 2. Should the applicator receive another notice for a violation concerning pesticide drift, direct application to non-target sites, or misuse as specified in (a) above during this five year period, then a new five year period shall commence with the applicator's receipt of the latest violation notice.
- (b) The applicator shall post a flag or sign prior to **any outdoor pesticide application that is made within 250 feet from the abutting or contiguous property line, so that the sign is visible to those neighboring persons who abut the treated site**.
- (c) The applicator shall post such flag or sign at the start of the application and shall remain posted at least 24 hours and removed within 72 hours of the end of the restricted entry interval.
 1. The signs shall be posted in the following manner:
 - i. The flag(s) or sign(s) shall be legible from the neighboring borders or fence line abutting the treated areas; and
 - ii. If a smaller section of a larger property has been treated, only the treated area need be posted with a flag or sign.
 2. The signs shall bear the following information in letters at least one inch high:
 - i. "Pesticide Treated Area"; and
 - ii. The name and telephone number of the person to contact for additional information.
- (d) The applicator shall be responsible for removing the flag or sign.

Citations: NJAC 7:30 Subchapter 12 - Agricultural Worker Protection; www.nj.gov/dep/enforcement/pcp/regulations/Subchapter%2012.pdf

NJAC 7:30 Subchapter 9 Pesticide Exposure Management; www.nj.gov/dep/enforcement/pcp/regulations/Subchapter%209.pdf

EPA Label Review Manual. Chapter 10 "Worker Protection Guidance"; www.epa.gov/oppfead1/labeling/lrm/chap-10.pdf

Calendar of Important Events

↪ Indicates the newly added event since last calendar

June 2013

June 4-6

International Potato Processing and Storage Convention, Sonesta Hotel, Philadelphia. For more info visit: www.potatoconvention.com

June 5, 6, 7

HACCP Certification, Rutgers Food Innovation Center, Bridgeton, NJ. For info contact Donna Schaffner at 856-459-1900 x4528 or email: DFSchaffner@njaes.rutgers.edu

June 26-28

National Potato Council summer meeting, Marcus Whitman Hotel, Walla Walla, Wash. For more info call 202-682-9456 or email: hollee@nationalpotatocouncil.org

July 2013

July 11-13

HACCP Certification, IFT Annual Meeting, Chicago, IL. For info contact Donna Schaffner at 856-459-1900 x4528 or email: DFSchaffner@njaes.rutgers.edu.

August 2013

↪ **August 15**

66th Annual Clinic, Tradeshow and Clambake, Hickman Hall, Douglass campus, 89 George Street, New Brunswick, NJ. Cost \$125-\$290 (call 732-932-9271 for details). For info call 732-932-9271 or visit: www.cpe.rutgers.edu

October 2013

October 18-21

Produce Marketing Association Fresh Summit 2013, New Orleans. For more info call 302-738-7100, email: solutionctr@pma.com or visit: www.freshsummit.com

November 2013

November 13-14

Pacific Northwest Vegetable Assoc. Conf. & Trade Show, Three Rivers Conv. Ctr, Kennewick, Washington. For info call 509-585-5460 or visit: www.pnva.org

December 2013

December 2-4

Washington State Hort. Assoc. Annual Mtg, Wenatchee, Wash. Info call 509-665-9641 or visit: www.wahort.org

December 4-7

Joint NCSA/NASGA Conf., Sheraton Imperial Hotel, Durham, N.C. For info email: info@ncstrawberry.com or visit: www.ncstrawberry.com

December 6

Haygrove Owners Conference. For info call 717-492-4955 or visit: www.tunnelbuzz.com

December 10-12

Great Lakes Fruit, Veg & Farm Market EXPO, DeVos Place Conv. Ctr, Grand Rapids, Mich. For info call 616-794-0492 or visit: www.glexpo.com

January 2014**January 8-10**

Potato Expo 2014, Henry B. Gonzalez Convention Center, San Antonio, Texas. For info call 202-682-9456, email: hollee@nationalpotatocouncil.org or visit: www.nationalpotatocouncil.org

January 10-11

National Potato Council annual meeting, Henry B. Gonzalez Convention Center, San Antonio, Texas. For info call 202-682-9456 or email: hollee@nationalpotatocouncil.org

January 20-22

Ohio Produce Growers & Marketers Association, Kalahari Resort & Convention Center, Sandusky, Ohio. For more info visit: www.opgma.org

January 21-23

Empire State Fruit & Vegetable Expo, Oncenter Convention Center, Syracuse, NY. For info email Jeanette Marvin at nysvga@twcny.rr.com

January 23-24

Iowa Fruit and Vegetable Growers Association Conference, Ankeny, Iowa. For more info contact Adam Hohl by email: info@ifvga.org

REGULARLY SCHEDULED MEETINGS

✓ Indicates meeting will be held at RCE of Cumberland County

| | | |
|--|--|--|
| <p>✓</p> <p>Pesticide Certification Exam Schedule—Cumberland County 291 Morton Avenue Millville, NJ 08332 (Between Rosenhayn & Carmel)</p> <p><u>2013</u></p> <p>Jun 5 Sept 25 Oct 23 Nov 6 Dec 18</p> <p>To Register call 609-984-6614 For directions call 856-451-2800</p> <p>*****</p> | <p>✓</p> <p>Cumberland County Agriculture Development Board 291 Morton Avenue Millville, NJ 08332 (Between Rosenhayn & Carmel)</p> <p><u>2013</u></p> <p>Jun 12 Jul 10 Aug 14 Sept 11 Oct 9 Nov 13 Dec 11</p> <p>Reg. Meetings start at 7 p.m. Call DeAnn at 856-453-2211</p> <p>*****</p> | <p>✓</p> <p>Cumberland County Board Of Agriculture 291 Morton Avenue Millville, NJ 08332 (Between Rosenhayn & Carmel) 7 pm meetings</p> <p><u>2013</u></p> <p>Sept 19 Oct 17 Nov 21 Dec 19</p> <p>For info call Shirley Kline, President 856-685-3784</p> <p>*****</p> |
|--|--|--|

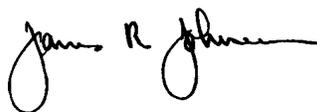
**Cumberland County Improvement Authority (CCIA)
Pesticide Container Recycling
9:00 a.m. to 12 Noon**

Cumberland County Solid Waste Complex
169 Jesse's Bridge Rd. (located off Route 55 Exit 29)
Deerfield Township, New Jersey

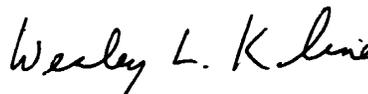
Questions? Call Karen Kritz, NJ Dept. of Ag 609-984-2506

| | | | |
|--------|---------|---------|--------|
| | June 21 | July 19 | |
| Aug 16 | Sept 20 | Oct 18 | Nov 15 |

Sincerely,



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Pesticide User Responsibility: Use pesticides safely and follow instructions on labels. The user is responsible for the proper use of pesticides, residues on crops, storage and disposal, as well as damages caused by drift.

Use of Trade Names: Trade names are used in this publication with the understanding that no discrimination is intended and no endorsement is implied. In some instances the compound may be sold under different trade names, which may vary as to label.

Have you visited the Cumberland County website for the Present and/or past issues of "Cultivating Cumberland"? It's a great resource for information and dates.....

<http://Cumberland.njaes.rutgers.edu/>

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