

Cultivating Cumberland

September - 2013 VOL. 18, ISSUE 9



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Attachments:

2013 Fall Eco-friendly Home
Landscape Series

Immigration Reform Legislation:
Frequently Asked Questions

Organic Certification Costs Assistance

The New Jersey Department of Agriculture announced a partnership with the federal government to reduce organic certification costs as part of the Christie Administration's ongoing efforts to promote New Jersey-grown and marketed organic food products.

Through the United States Department of Agriculture (USDA) Agricultural Marketing Assistance Organic Certification Cost Share Program, each qualified producer of organic products is eligible for a reimbursement of up to 75 percent of its costs of certification not to exceed \$750. Certification costs include fees and charges levied by the certifying agent for certification activities.

To qualify for reimbursement under this program, an organic producer must have been certified or incurred expenses for the continuation of certification during the period of **October 1, 2012 and September 30, 2013**. Certification must be through a USDA-accredited certifying agent.

In the event that demand exceeds the amount of funds allocated to New Jersey, applications will be processed on a first come, first served basis. Operations may receive one reimbursement per certification or category of certification per year.

Applications must be received by the New Jersey Department of Agriculture no later than November 19, 2013. Applications and more information about the program are available online at www.nj.gov/agriculture/grants/organiccostshare.html.

Please contact Debra McCluskey with any questions at (609) 984-2225 or Debra.McCluskey@ag.state.nj.us.

Center for Produce Safety Symposium

Wesley Kline, RCE Cumberland County

The Center for Produce Safety (CPS) held their fourth annual research symposium in June. This symposium featured sixteen CPS-funded research programs and discussions of what the research means to the produce industry. The full technical reports for these research programs can be found on the CPS website at cps.ucdavis.edu. The “10 key lessons” learned from the symposium were summarized by Drs. Bob Whitaker and Jim Gorny representing the technical committee of CPS. I will extract the most important lessons from their summary that pertain to New Jersey growers – Wes Kline

Suggested Glove Types and Sanitation

Produce handling results in contact between the product and various surfaces that can become contaminated with pathogens. The Center for Produce Safety symposium featured a presentation dealing with potential for transference of pathogens from contaminated gloves by Dr. Jennifer Cannon, University of Georgia. The use of gloves has been debated within the produce industry for several years. Data presented suggest that hand wash prior to use of any kind of glove is very important and that the gloves need to be sanitized as they are used. Nitrile gloves do not facilitate cross contamination as well as latex gloves, however both types will transfer pathogens if not cleaned and sanitized regularly with a sanitizer like sodium hypochlorite (>50 ppm) with proper pH control (6.5 to 7>0). The take home message is to switch to nitrile gloves when packing produce.

Possible Transfer of Pathogens from Wiping Tomato Fruit with Cloths

Dr. Michele Danyluk, University of Florida, presented data that shows that pathogens can be transferred from fresh tomatoes to cloths and from cloths to subsequently handled tomatoes. While there are many factors at play, moist cloths facilitate transference more readily than dry cloths and dirty cloths seemingly are less efficient at transference than cleaner cloths, although both can facilitate transference if pathogens are present.

Salmonella Transfer from Buckets to Tomatoes

Dr. Lynn McLandsborough, University of Massachusetts, examined the age and conditions of tomato harvest buckets to determine their potential as transference vehicles. Surprisingly, older, scratched and worn plastic buckets were less effective in transferring *Salmonella* than newer buckets. New and old buckets could affect transference if the pathogen were present and the presence of soil on the buckets decreased *Salmonella* die-off. This emphasizes the importance of regularly cleaning and sanitizing harvest containers to prevent transference of pathogens to harvest products.

***Salmonella* and *E. Coli* Survival on Cilantro**

The FDA has confirmed the presence of *Salmonella* and shiga-toxin producing *E. coli* in over 30 fresh market cilantro samples since 2004 and issued a guidance letter to cilantro producers in 2011 expressing their concerns. Dr. Trevor Suslow (UC-Davis) conducted a study to determine the survivability of attenuated strains of *Salmonella enterica* and *E. coli* 0157:H7 on cilantro during pre-harvest field conditions. The results demonstrate that *Salmonella* is much more vigorous in the production environment compared to *E. coli* 0157:H7. Indeed, *Salmonella* was not only shown to persist on cilantro in the production environment for up to 12 days, but also survive a chlorinated postharvest wash treatment. This observation highlights the fact that wash systems cannot eliminate pathogens present on crops and the importance of defining appropriate disinfection measures in wash systems to prevent cross contamination events that magnify the extent of the contamination. As cilantro can be harvest multiple times over a season, Dr. Suslow also looked at pathogen survival on re-grown cilantro. Detection of *E. coli* 0157:H7 or *Salmonella* appears to be dependent on the timing of the contamination relative to subsequent harvest with decreased survivability over time, though *Salmonella* is hardier than *E. coli* 0157:H7. Growth of pathogens during postharvest holding prior to cooling was not observed up to two hours (the last item measured). The importance of "cut to cool" time should not be overlooked however. As harvested crops heat up due to exposure to the sun or from metabolic activity postharvest, moisture levels can also increase creating an ideal environments for pathogens growth, i.e. what may have been a very low contamination level can be increased to a level that may cause an elevated public health risk. These preliminary studies by Dr. Suslow point out the importance of performing a hazard assessment for every crop production system: seed through finished product. It is not just the crop that presents a food safety risk, but the method of production, agricultural inputs, harvest practices and postharvest handling that need to be considered together and appropriate management practices designed.

Pathogen Contaminated Fields can be Re-planted

At earlier CPS Symposia Steven Koike (UC Cooperative Extension) reported that attenuated *E. coli* 0157:H7 and *Salmonella* strains inoculated onto spinach or romaine leaves could survive for over 90 days in the field when the vegetative materials were turned under the soil. This observation raised questions from growers as typical industry practice (in California) is to cut or mow residual plant materials postharvest and leave it on the surface for several days prior to turning it into the soil and preparing for the next crop. Follow on experiments were performed under commercial conditions using purposely inoculated spinach. Koike reported that when inoculated spinach was chopper or mowed and permitted to remain on the surface and dry out prior to incorporation into the soil, no *E. coli* 0157:H7 was found on the second crop 27 days after planting and no *Salmonella* was detected 35 days post planting. It is thought that leaving the crop residue on top of the soil permits growth. There data point out that pathogens can survive and contaminate subsequent plantings unless sufficient time (27-35 days) is permitted so choice of the next crop should be considered carefully; i.e. a crop that comes to maturity in less than 27 days may not be a wise choice even if the previous contaminated crop residue was permitted to dry out prior to incorporation. It is important to establish time intervals for specific environments, crops and soil types as variability in pathogen survival should be expected.

NEW NURSERY POT RECYCLING POLICY – COMMINGLING

Karen Kritz, NJ Dept. of Ag

When you enter the Solid Waste Complex, look for the yellow pesticide container recycling sign (straight ahead). Then look for my white hand printed lawn sign for the next turn (a right turn at the sign that says “Do Not Enter” and then bear left and then a right at the sign that says “Do Not Enter”). We are up the ramp on the elevated area.

We will continue to accept plastic nursery pots, cell packs or trays for FREE at the Complex only on days when we conduct our pesticide container recycling program (please shake out the dirt and make sure the plant material is removed). You can NO LONGER commingle the nursery pots, cell packs and trays with your pesticide containers. If you come any other time with the horticultural materials, the Solid Waste Complex will charge you the full rate landfill tipping fee. So save some money and bring in your nursery pots, cell packs or trays. We must keep them separate because they will be marketed to different vendors. Thank you for your cooperation.

HELP SPREAD THE WORD – HELP US RECRUIT NEW PARTICIPANTS FOR THIS FREE PROGRAM so we can exceed last year’s collection efforts.

This program is offered to agricultural, professional and commercial pesticide applicators who hold a NJDEP pesticide license. State, county and municipal government agencies may also participate. A representative from the New Jersey Department of Agriculture will be on-site to inspect the containers and issue one core credit to pesticide license holders who follow all of the required processing steps. To receive credit, participants must bring their pesticide license to the collection site and must follow all of the processing steps. Core credits will not be issued to participants who fail to follow all of the pesticide container processing steps.

LOCATION: Cumberland County Solid Waste Complex
169 Jesse Bridge Road (located off Route 55, Exit 29)
Deerfield, New Jersey

(Open trucks or trailers must be tarped before entering Complex)

Plastic Pesticide Container Processing Steps & Size Limits:

1. All pesticide containers must be either triple rinsed or pressure rinsed, drained and dry inside;
2. All pesticide containers must be free of residue (other than stains);
3. The booklet must be removed (you DO NOT have to remove the paper labels glued to the container or the plastic sleeves);
4. Foil seal must be removed;
5. Only non-refillable pesticide containers will be accepted – you must drill a ¼-inch hole in the bottom of the container or with a utility knife make a 6-inch slit in the bottom of the container so the container will not hold liquids;

6. Only pesticide containers embossed with HDPE or the recycling #2 will be accepted;
7. Pesticide containers up to 55-gallons in capacity will be accepted. 5-gallon pales must be cut in half; 30-gallon containers into at least 4 pieces; and 55-gallon containers into at least 8 pieces. This can be accomplished using a sawzall, chainsaw, circular saw, or reciprocating saw. It is not necessary to cut up containers less than 5-gallons; and
8. Pesticide containers must have originally held an EPA registered pesticide.

Items That Will Not Be Accepted and Will be Returned to the Recipient:

1. Pesticide containers with dried formulation on the container, pour spout or the spout threads;
2. Pesticide containers with any liquid residue;
3. Pesticide containers where the insides are caked with dried residue;
4. Mini-bulk, saddle tanks and nurse tanks, which can be made of fiberglass;
5. Pesticide containers with lids; or
6. Containers that held any type of petroleum oil product or antifreeze.

Non-Waxy Cardboard Collection

Clean Non-waxy cardboard is accepted year-round at the Cumberland County Solid Waste Complex's Convenience Center.

Other Rigid Plastic Recycling

If you generate other clean non-petroleum containing HDPE plastic (crates, buckets, pales, etc.), the Cumberland County collection site will accept the material. Contact Karen Kritz, NJDA, at 609-984-2506 if you have any questions.

Future Collection dates for Deerfield in 2013

Friday, September 20

Friday, October 18

Friday, November 15

What Tomato Growers Need to Know About Disease Resistance Issues?

Thomas A. Zitter, Department of Plant Pathology and Plant-Microbe Biology
Martha A. Mutschler-Chu, Department of Plant Breeding and Genetics, Cornell University, Ithaca, NY 14853.

Selecting the best tomato (*Solanum lycopersicum*) cultivars (cvs.) to grow each season involves more than choosing the best color, shape and size, or even if they are determinant or indeterminate in growth habit. Purchasing cvs. with the most complete disease resistance package should now be a consideration for reducing losses to fungal and oomycete diseases, not to mention the added cost and time for any needed fungicide sprays that would normally be required. Perusal of most seed catalogs reveals that many cvs. offer the traditional disease identification codes, such as **VFN**, for Verticillium Wilt Fusarium wilt and Nematode resistance.

You will also see abbreviations for the following: Alternaria stem canker (*A. alternata* f. sp. *lycopersici*) (**A** or **AS**); Stemphylium Gray (Grey) Leaf Spot (caused by three species) (**St** or **L**), with resistance more common in globe cvs. and rare in cherry and grape cvs.; Fusarium crown and root rot (*F. oxysporum* f. sp. *radicis*, a rot inducing pathogen) (**FOR**); Tobacco (**TMV**) or Tomato Mosaic Virus (**TOMV**), both mechanically transmitted; and Tomato spotted wilt virus (**TSWV**) which is vectored by thrips. For the most part these are not an issue for production in the Northeast US.

During the past few years a few new cultivars with tolerance for Early blight (*Alternaria tomatophila* or *A. solani*) (**AB** or **EB**), and resistance for Late blight (*Phytophthora infestans*) (**LB**) and Septoria leaf spot (*S. lycopersici*) (**SLS**) have been introduced to the public. These three diseases are responsible for most tissue defoliation, and two (LB and EB) result in high fruit losses. The remainder of this report will examine 1) what genetic controls are possible for control of these three diseases, 2) a summary of what to expect with each genetic offering among commercially available cvs. (Table 1), and 3) how best to use these cultivars.

1. Forms of genetic control currently available

Early blight genetic control: The current genetic control available is tolerance! It is questionable how much protection is provided when the tolerance is only in the heterozygous condition. For example, when Mountain Merit (see Table 1), which is heterozygous for EB tolerance, was tested in research trials it showed less infection than a fully susceptible cultivar, but will still have considerable defoliation and may require some fungicide applications. The level of tolerance is definitely beneficial in plants homozygous for it, but this tolerance does not provide complete control. The stems are kept clean of all but small lesions, thus preventing early plant collapse. Leaves can still sustain substantial lesion and disease development under conditions that favor this disease. Fruit lesions are rarely a problem. It is good to supplement this available tolerance with core horticultural practices (rotation out of tomato/potato crops for at least 2 seasons, no solanaceous weeds in the field during this period, an adequate N2 fertilization program). If minimal fungicides are required, then select those with low environmental impact quotient (EIQ) values like Quadris Top or the protectants chlorothalonil or mancozeb, and make the first application after fruit set occurs. For organic production choose from among the 6 copper fungicides registered in NYS. Homeowners may choose from chlorothalonil and copper fungicides.

Late Blight genetic control: Three different genes have been described for late blight resistance in tomato.

Ph1: present in old cultivar New Yorker. *Ph1* is only known to control earlier genotypes of the late blight pathogen, but NOT to any of the current genotypes like US22 or US23. This gene is therefore not used in modern cultivars.

Ph2: was found in the old cultivar West Virginia 63. *Ph2* is effective against only some genotypes of the pathogen. *Ph2* slows, rather than providing complete control of the disease, and thus should be viewed as an inoculum provider. *Ph2* is not very effective as a stand-alone genetic control. *Ph2* is also found as solo homozygous resistance in the cultivar Legend, and should NOT be relied upon for LB control.

Ph3: *Ph3* was found in a wild cherry tomato, and transferred into a number of tomato lines. *Ph3* is almost dominant: mild disease can still be present on hybrids heterozygous for *Ph3*, but hybrids homozygous for this resistance have virtually complete resistance against almost all genotypes including US22 and US23.

BEST CONTROL of late blight occurs when the hybrid is homozygous for BOTH *Ph2* and *Ph3*. To date, no genotype of late blight pathogen has been found to cause significant disease on such hybrids. We are still trying to determine if plants heterozygous for BOTH *Ph2* and *Ph3* have as complete protection as plants homozygous for both resistance genes, but we suspect that some late season infection of fruit can be expected.

Septoria Leaf Spot: This appears to be a nearly dominant single gene resistance. We are still trying to determine if plants homozygous for SLS gene have stronger resistance than heterozygous plants. SLS resistant plants develop initial lesions that stay small, but SLS resistance strongly impedes pathogen reproduction, which suppresses epidemic development of this polycyclic disease. Best SLS control is obtained by minimizing initial sources of inoculums, so continue to use good core horticultural practices (mentioned under early blight) and grow upwind/separate from susceptible cultivars for strongest and longest control of disease. If seasonal rains occur during June, July and August and a 3 year rotation out of tomatoes was not adhered to, then expect that one or two fungicide sprays will be required. The spread of SLS can explode dramatically, especially with splashing water, either natural or via overhead irrigation is factored in. Fungicide programs are the same as described under early blight.

2. Current Cultivars

Development of resistant lines and hybrids using conventional breeding practices has been a goal of a number of breeding programs over the past decade. New hybrids have and are being released; Iron Lady has triple resistance as discussed, and is available for the 2013 season. The current cultivars combining resistance to 2 or 3 of these diseases are summarized in Table 1.

Table 1: Tomato cultivars combining genetic control for 2 or more foliar diseases

Tomato cultivars by type with other Resistance ¹	Control for the big 3 defoliating diseases	Seed Available from:			What to expect	
Slicers – Determinate	LB	EB	SLS			
Mountain Merit (F1) F3, N, TSWV, V	Heteroz <i>Ph2</i> , <i>Ph3</i>	Heteroz EBT	Susceptible	Excellent control of LB; but EB and SLS may require sprays	Bejo, Johnny's, Seedway	
Defiant PHR (F1) F2, V	Heteroz <i>Ph2</i> , <i>Ph3</i>	Heteroz EBT	Susceptible	LB will be contained till end of season; but EB and SLS require attention	Johnny's, Stokes	
Iron Lady (F1) F2, V	Homoz <i>Ph2</i> , <i>Ph3</i>	Homoz EBT	Heterozygous SLS-R	Provides the highest level of control for all 3	High Mowing	
Campari - Indeterminate	-	-	-	-	-	-
Mountain Magic (F1) F3, V	Heteroz <i>Ph2</i> , <i>Ph3</i>	Heteroz EBT	Susceptible	LB will be contained until end of season; but EB and SLS require some attention	Johnny's, Totally Tomatoes, etc.	
Fresh Market Plum - Determinate						
Plum Regal (F1) F2, V, TSWV	Homoz <i>Ph3</i>	Homoz EBT	Susceptible	Mild LB will occur; but SLS will require attention	Johnny's, Seedway, Totally Tomatoes	

¹Resistance key: **F** = Fusarium wilt, F, F2, F3 (indicating number of races); **V** = Verticillium wilt; **N** = Nematode; **TSWV** = Tomato spotted wilt virus.

3. How best to use the cultivars currently available

Disease control recommendations are predicated on the need to follow certain core horticultural practices. Crop rotation out of tomato for 2-3 seasons is one of the most important in terms of reducing soilborne inoculum for either early blight (EB) or Septoria leaf spot (SLS). This is not possible in all grower's (or homeowners) situations, thus the influence of these two diseases needs to be considered. Also if you compost and have included tomato debris from the previous season, you may be introducing EB and SLS in this manner, even if rotation is followed. If you interplant these cvs., EBT (homozygous or heterozygous) or SLS-R (either homozygous or heterozygous) with fully susceptible tomato cvs., you can expect to have some inoculum spread into these Tolerant or Resistant cvs., with the amount of defoliation experienced determined by the amount of overwinter inoculum present at the beginning of the season, and how favorable the season will be for each disease. Here is a summary for each production group.

Commercial (conventional) agriculture. - In general, growers who follow the TOM-CAST predicting system will be able to increase the disease severity value index to 25 or higher DSV for their weekly calculations as to when sprays are necessary. If SLS is a threat on your farm, then a closer adherence to the spray schedule is necessary since SLS can explode during a summer with frequent showers. Still, a maximum of two sprays may be sufficient. In the case of EB, TOM-CAST can be followed using the same criterion and perhaps a single spray will be necessary. Make sure that no strobilurin fungicides are used alone because of widespread resistance for EB among all Group 11 fungicides. These fungicides can be used if mixed with another effective fungicide, (ie. Quadris Top, Quadris Opti, or other new chemistry that may be registered in the near future). IN general, LB is not an issue if using the cvs. shown in Table 1 and due attention is paid.

Organic agriculture. – Here your options are more limited since only copper (at least 6 OM-RI formulations are registered in NYS) is available. Our research over the past 3 seasons has shown that copper, when used preventatively, can be an effective control when teamed up with the resistance mentioned for either EB and SLS. We expect that under most situations the spray schedule can be reduced to a 10 day or longer interval. Again, LB should not be an issue, until very late in the season, depending on the cvs. grown.

Homeowners. – Backyard gardeners have the issue of not being able to rotate much around their annual tomato crop. Still if gardeners practice good sanitation by removing all debris at the end of the season and not composting any tomato debris, they should restrict any overwinter source of EB or SLS. Gardeners are in a better situation than organic growers, since if needed they could rely upon either copper or chlorothalonil for protection of the lower plant canopy. LB would be an issue for any susceptible cv. other than the resistant ones mentioned in Table 1.

Rutgers Cooperative Extension has grant funds for conservation practices in the Upper Salem watershed

Salvatore Mangiafico, RCE Salem County

The area includes portions of Pilesgrove, Upper Pittsgrove, Woodstown. It is outlined in the map below.

Eligible applicants must:

- Be located within the Upper Salem River Watershed
- Be on land currently in agricultural usage, including cropland, nursery, pasture, sod farms, livestock
- Propose a conservation measure known to reduce erosion or protect water quality

Examples of conservation practices that can receive funding:

- Filter Strips and Grassed Waterways
- Livestock fencing
- No-till planting
- Stream Buffers
- Soil Erosion Prevention
- Irrigation Systems
- Tailwater Recovery
- Cover Crops
- Nutrient Management Plans and Actions

Funds can be used to complement NRCS or other funding, or be the sole-source of funds for some projects.

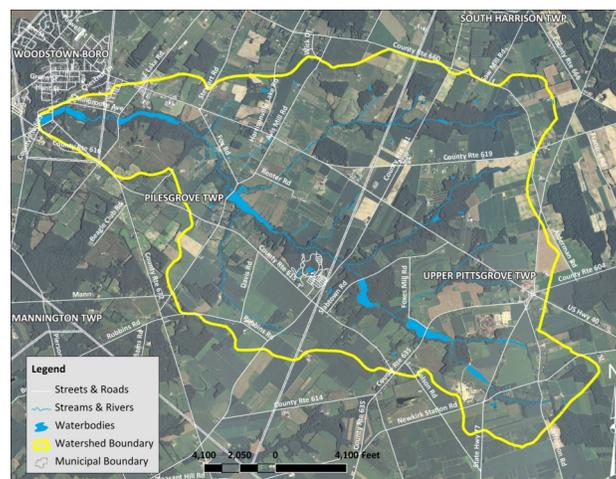
Contact: Sal Mangiafico, Extension Agent, Rutgers Cooperative Extension, 51 Cheney Road Woodstown, NJ 08098. 856-769-0090. mangiafico@njaes.rutgers.edu

For more information and program contacts:

<http://www.water.rutgers.edu/Projects/UpperSalem/UpperSalemImplementation.html>

For larger map:

http://www.water.rutgers.edu/Projects/UpperSalem/UpperSalem_TargetArea_reduced.jpg



New Guidebook Explains the Basics of Farm Leases For New Jersey Farmland Owners and Farmers

Agriculture Secretary Douglas H. Fisher announced that the State Agriculture Development Committee (SADC) has published a new guidebook, *Leasing Farmland in New Jersey*, to assist farmland owners and farmers interested in entering into leasing agreements.

“Nearly 40% of the land in agricultural production in New Jersey is farmed by someone other than the owner, which mirrors a national trend,” said Secretary Fisher. “By helping farmers and farmland owners understand leasing arrangements and develop workable leasing relationships, we can help make more land available to farmers and ensure an agricultural land base is available for viable agricultural production.”

The guidebook will be useful to farmers and landowners who may already have leases in place but want to improve their lease agreements to better meet their needs, or for others who may be interested in crafting a lease for the first time.

The guidebook helps answer commonly asked questions related to leasing, such as:

- What do I need to consider when making my land available or seeking access to land?
- How long should the lease term be?
- What provisions should it include?
- What is a reasonable rental rate?

Leasing Farmland in New Jersey includes information on getting started, suggestions on creating and maintaining a lease, sample leases, profiles of various leasing arrangements, and additional resources to assist with leasing issues.

To obtain a printed copy of the guidebook, contact the SADC at (609) 984-2504 or at sadc@ag.state.nj.us. The leasing guidebook also is available on the SADC’s website at www.nj.gov/agriculture/sadc/farmlink/resources/leaseguide.pdf.

The SADC administers New Jersey’s Farmland Preservation Program and promotes innovative approaches to maintaining the viability of agriculture.

The leasing publication was supported by an agreement with the Northeast Organic Farming Association of New Jersey under a grant from the U.S. Department of Agriculture’s National Institute of Food and Agriculture.

Calendar of Important Events

↪ Indicates the newly added event since last calendar

September 2013

↪ September 19

Cumberland County Board of Ag Meeting, RCE Cumberland County, 291 Morton Ave., Rosenhayn. 7 pm.
For info call 856-451-2800 x1.

October 2013

↪ October 16

Emergency Pesticide Recertification, Rutgers Cont. Ed, 102 Ryders Lane, New Brunswick, 9 am-4 pm
\$245 by 10/2; \$270 after. Credits: 3B, 6B and CORE = 4; 3A and PP2 = 2. For info call 732-932-9271,
email: ocpe@njaes.rutgers.edu or visit: www.cpe.rutgers.edu

↪ October 17

Cumberland County Board of Ag Meeting, RCE Cumberland County, 291 Morton Ave., Rosenhayn. 7 pm
For info call 856-451-2800 x1.

↪ October 18-19

Fall Flower & Garden Fest, Truck Crops Experiment Station, Crystal Springs, Miss. For info contact Rick
Snyder at Rick.Snyder@msstate.edu or visit: www.msucare.com/fallfest

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

↪ October 24

Emergency Pesticide 1/2 Day Sessions in 3A and 3B, 9 am-noon or 1 pm-4 pm Rutgers Cont. Ed, 102
Ryders Lane, New Brunswick, \$175 each by 10/10; \$190 after. Credits: 3A class: 3A - 6, Core - 2; 3B class:
3B - 6 and Core - 2. For info call 732-932-9271, email: ocpe@njaes.rutgers.edu or visit:
www.cpe.rutgers.edu

↪ October 31

Pesticide Calibration, Rutgers Cont. Ed, 102 Ryders Lane, New Brunswick, 9 am -1 pm \$195 by 10/17;
\$210 after. Credits: 8 Core. For info call 732-932-9271, email: ocpe@njaes.rutgers.edu or visit:
www.cpe.rutgers.edu

November 2013

↪ November 4-8

2013 Irrigation & Education Conference, Austin, Texas. For info visit: www.irrigation.org/irrigationshow.

↪ November 7-8

Introduction to Plant Identification, Rutgers Cont. Ed, 102 Ryders Lane, New Brunswick, 8 am-2 pm (11/7)
and 9 am-3:30 pm (11/8); \$395 by 10/21; \$430 after. For info call 732-932-9271, email:
ocpe@njaes.rutgers.edu or visit: www.cpe.rutgers.edu

November 10-13

Western Growers Assoc. 88th Annual Meeting, Waikiki, Hawaii. For more info call 949-885-2262 or visit:
www.wgannualmeeting.com

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

🔗 November 21

Basic Pesticide Training CORE Certification of Applicators and Operators (Bilingual), Rutgers Cont. Ed., 102 Ryders Lane, New Brunswick; \$140. Pesticide credits: 6 Core. For info call 732-932-9271, email: ocpe@njaes.rutgers.edu or visit: www.cpe.rutgers.edu

🔗 November 21

Cumberland County Board of Ag Meeting, RCE Cumberland County, 291 Morton Ave., Rosenhayn. 7 pm
For info call 856-451-2800 x1.

🔗 **Large Tree Climbing and Rigging**, Rutgers Cont. Ed., 102 Ryders Lane, New Brunswick, \$395 by 11/7; \$430 after. For info call 732-932-9271, email: ocpe@njaes.rutgers.edu or visit: www.cpe.rutgers.edu

December 2013

🔗 December 2 & 9

Soil and Plant Relationships, Rutgers Cont. Ed., 102 Ryders Lane, New Brunswick, 9 am-3:30 pm, \$295 by 11/18; \$325 after. For info call 732-932-9271, email: ocpe@njaes.rutgers.edu or visit: www.cpe.rutgers.edu

December 2-4

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

🔗 December 4

Snow and Ice Removal, Rutgers Cont. Ed., 102 Ryders Lane, New Brunswick, 8:30 am-3:30 pm; \$195 by 11/20; \$210 after. For info call 732-932-9271; email: ocpe@njaes.rutgers.edu or visit: www.cpe.rutgers.edu

🔗 December 5

Common Sense Business and Pricing Strategies, Rutgers Cont. Ed., 102 Ryders Lane, New Brunswick, 9 am-4 pm; \$195 by 11/21; \$210 after. For info call 732-932-9271; email: ocpe@njaes.rutgers.edu or visit: www.cpe.rutgers.edu

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

🔗 December 18

Basic Pesticide Training CORE Certification of Applicators and Operators, Rutgers Cont. Ed, 102 Ryders Lane, New Brunswick; \$140. Pesticide credits: 6 Core. For info call 732-932-9271, email: ocpe@njaes.rutgers.edu or visit: www.cpe.rutgers.edu

🔗 December 19

Cumberland County Board of Ag Meeting, RCE Cumberland County, 291 Morton Ave., Rosenhayn 7pm.
For info call 856-451-2800 x1.

🔗 December 19

Basics of Turfgrass Management, Rutgers Cont. Ed., 102 Ryders Lane, New Brunswick, 9 am-3:30 pm, \$195 by 12/5; \$210 after. Pesticide credits: 2 Cat. 13, 4 each for Core, 1A, 5, 3B and PP2. For info call 732-932-9271, email: ocpe@njaes.rutgers.edu or visit: www.cpe.rutgers.edu

January 2014

January 6-7

Kentucky Fruit and Veg. Conference, Lexington, Ky. For more info contact John Strang 859-257-5685 or email: jstrang@uky.edu

January 8-10

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

January 8-12

Illinois Specialty Crops, Agritourism and Organic Conf., Springfield, Ill. For more info contact Diane Handley 309-557-2107 or email: dhandley@iflb.org

January 9-12

Southeast Regional Conf. and Trade Show, Savannah International Trade & Conv. Center, Savannah, Ga. For more info visit: www.seregionalconference.com

January 10-11

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

↪ **January 13-17**

Mid-Atlantic Short Course, Marriott City Center, Newport News, VA. For info visit: <http://www.mahsc.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 21-23**

Indiana Horticultural Congress, Wyndham West, Indianapolis. For info contact Tammy Goodale 765-494-1296; email: tgoodale@purdue.edu or visit: www.inhortcongress.org

↪ **January 21-23**

Empire State Fruit & Veg Expo, Oncenter Convention Center, Syracuse, NY. For more info contact Jeanette Marvin 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

↪ **January 29**

Pesticide Calibration (Session II), Rutgers Cont. Ed., 102 Ryders Lane, New Brunswick; \$195 by 1/15/14 \$210 after. Pesticide credits: 8 Core. For info call 732-932-9271 or visit: www.cpe.rutgers.edu

February 2014

↪ **February 4**

33rd Annual New Mexico Chile Conference, Hotel Encanto, Las Cruces, NM. For info contact the Chile Pepper Institute 575-646-5284 or visit: www.chilepepperinstitute.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>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>Cumberland County Agriculture Development Board 291 Morton Avenue Millville, NJ 08332 (Between Rosenhayn & Carmel)</p> <p><u>2013</u></p> <p>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>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>
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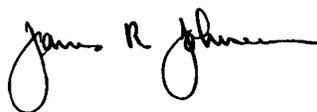
**Cumberland County Improvement Authority (CCIA)
Pesticide Container Recycling
9:00 a.m. to 12 Noon**

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

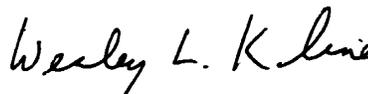
Questions? Call Karen Kritz, NJ Dept. of Ag 609-984-2506

Sept 20 Oct 18 Nov 15

Sincerely,



James R. Johnson
Agricultural Agent
Nursery Management Commercial
Internet: jjohnson@njaes.rutgers.edu



Wesley L. Kline, Ph.D.
Agricultural Agent
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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/>

Public Notification and Non-discrimination Statement

Rutgers New Jersey Agricultural Experiment Station Cooperative Extension educational programs are offered to all without regard to race, religion, color, national origin, ancestry, age, sex, sexual orientation, gender identity and expression, disability, atypical hereditary cellular or blood trait, marital status, civil union status, domestic partnership status, military service, veteran status, and any other category protected by law. Rutgers Cooperative Extension encourages individuals with disabilities to participate in its programs and activities. If you need special accommodations, have questions about physical access, or require alternate means for program information, please contact your local Extension Office. Contact the State Extension Director's Office if you have concerns related to discrimination, 732-932-5000, ext. 584.

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Extension Education Center
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Millville, NJ 08332-9791

RUTGERS
New Jersey Agricultural
Experiment Station

Rutgers Cooperative Extension

2013 Fall Eco-friendly Home Landscape Series

Woodstown and Millville

Environmentally-friendly Lawn Care

Sept. 23 – Millville

Sept. 25 – Woodstown

Best practices for fertilizing, mowing, and watering your lawn. New Jersey's statewide law limiting fertilizer applications to lawns will also be discussed.



Composting, Soil Health, and the Landscape

Oct. 1 – Millville

Oct. 2 – Woodstown

What is soil "health"? And how can you improve the health of your soil to grow better lawns and gardens? Plus, how to compost leaves and other organic materials

Water Conservation for Lawns and Gardens

Oct. 8 – Millville

Oct. 7 – Woodstown

Beautiful landscapes that save money and water can use native plants, mulches, and smart irrigation system controls.



Pond Maintenance to Pre- vent Weeds and Algae

Oct. 21 – Millville

Oct. 23– Woodstown

What can be done to prevent the excessive weeds and algae that are often perennial problems in so

All classes are free, and will be held 6:30–7:30 PM, at either the Cooperative Extension of Cumberland County, 291 Morton Ave., Millville, NJ 08332; or Cooperative Extension of Salem County, 51 Cheney Rd., Woodstown, NJ 08098. Classes will be taught by Extension Agent Sal Mangiafico. Call 856-769-0090 for more information, or to let us know you plan on attending.



Immigration Reform Legislation: Frequently Asked Questions

Is this “amnesty?”

- No. Farm workers could apply for a legal status only after proving that they have worked in agriculture for years, paid taxes, kept out of trouble and paid a fine. This hardly lets anyone off the hook.
- At the same time, farmers need to be able to keep their experienced workers—their trustworthy, right-hand men and women who have worked for them for years and know how to get the work of the farm done.
- The reality is that a large percentage of farm workers are in the U.S. illegally, largely because Congress has failed to fix the shortcomings of the existing agricultural worker program. It's time to deal with that reality. Our proposal offers a tough but fair solution for these workers and the farmers who rely on them. An important part of our proposal is verification that workers who get agricultural visas are, in fact, working in agriculture. We believe enforcement is an important part of the solution, both for farmers and for American workers.

Isn't E-Verify the solution?

- E-Verify is a federal, online system to determine workers' authorization to work in the U.S. That seems like a good idea, and it is... if there are legal and sensible ways for enough workers to enter the U.S. and work on farms. Unfortunately, that is not the case. Without a solution to that problem, simply cracking down on unauthorized workers leaves farmers holding the burlap bag.
- If agriculture has a workable visa program, E-Verify can work as an enforcement mechanism. We are not opposed to E-Verify, as long as farmers have access to a stable supply of workers. Access and enforcement must go hand-in-hand.

Don't foreign farm workers take jobs away from American workers?

- In fact, it's the opposite. Immigrant workers take jobs that Americans don't want. Agricultural work is hard, seasonal and often transitory. Most American workers are unwilling to take these jobs. Therefore, we have come to rely on an immigrant labor force.
- Without immigrant workers, U.S. economic output would decline. Each of the 1.6 million hired farm employees working on American farms and ranches supports two to three full-time jobs further down the value chain in food processing, transportation, farm equipment, marketing and retail and other sectors. Without farm workers, thousands of U.S. workers who do have jobs—on farms, in food processing and in other fields—thanks to the output that immigrant workers produce would lose those jobs.

How do we secure our borders?

- One way to help secure the border is to create legal ways for agricultural workers to enter. If our government doesn't have to waste time and resources locking up farm workers, it can focus on preventing those with nefarious intentions from entering our country. We absolutely agree that America has to secure its borders. Creating a feasible agricultural worker program is a step in that direction.
- As long as there is demand in the U.S. for farm workers and a supply of workers willing to cross the border, hard-working people will continue to enter the U.S. to earn a living for themselves and their families back home. Creating a legal way for them to do so through a new agricultural visa, and a way to know who they are and what they're doing while they are here, makes us more secure.

Why not just change the current ag worker program?

- The H-2A visa program currently allows for citizens of other countries to enter the U.S. to do seasonal or temporary work. The program at its core is very difficult for an employer to maneuver. The Labor Department has too often changed the rules of the program on the fly, making it unworkable. Farmers and ranchers have seen an increase in denials of their applications for workers. It can take so much time and bureaucratic red tape to get workers under H-2A, a crop could be rotting on the vine by the time workers show up to harvest it. A national survey conducted by the National Council of Agricultural Employers showed that administrative delays resulted in workers arriving on the job an average of 22 days after the date of need, causing an economic loss of nearly \$320 million in 2010 for farms that hired H-2A workers.
- H-2A also does nothing to address the “commuter” issue—workers who live just across the Mexican border and go home each night and return the next day. And farms that need workers for longer periods, such as dairy farms, can’t use the program because the work isn’t temporary enough to qualify for H-2A.
- In fact, there have been so many problems with H-2A that farmers have no confidence it can be a solution for the future. It’s time for a new approach—one that farmers and workers will embrace. A program that is market-based and fair to workers and farmers. A program that accommodates year-round work. A program that truly meets agriculture’s needs.

Are adjusted workers covered under the Affordable Care Act?

- Under the bill, workers who adjust to legal status (Blue Card) would be provided healthcare coverage by an employer according to the general rules applying to other workers, as required by the Affordable Care Act. The one difference is that Blue Card workers would not be eligible for tax credits/subsidies to purchase insurance on a state exchange.

What is S. 744?

- S. 744, the Border Security, Economic Opportunity and Immigration Modernization Act, was introduced in the Senate April 16, 2013. The bill provides a comprehensive solution to immigration reform, including border security, immigrant provisional status, the DREAM Act, guest worker visa programs and future enforcement.

How would S. 744 increase border security?

- The intent of S. 744 is to achieve and maintain effective control in high-risk border sectors along the Southern border. This will be done in two ways:

1.) Persistent surveillance in High Risk Sectors along the Southern Border; and

2.) An Effectiveness Rate of 90 percent in a fiscal year for all High Risk Sectors along the Southern Border.

“Effectiveness Rate” definition: The number of apprehensions and turn-backs in a specific border sector, divided by the total number of illegal entries.

“High Risk Sector” definition: Border sectors where apprehensions are above 30,000 individuals per year.

How would this bill impact the current agricultural workforce?

- Gives legal status (Blue Card) to existing agricultural workers who can document working in U.S. agriculture for a minimum of 100 workdays or 575 hours in the two years prior to December 31, 2012.
- After five years, Blue Card workers that have paid all taxes, not been convicted of any felony or violent misdemeanor, and pay a \$400 fine would be eligible for a Green card.
- To be eligible for a Green Card, the Blue Card worker must have:

- Performed at least 3 years of agricultural employment for at least 150 workdays per year during the 5 year period beginning on the date of enactment; or
- Performed at least 5 years of agricultural employment for at least 100 work days per year during the 8 year period beginning the date of enactment.

Does S. 744 require farmers to use E-Verify?

- Yes, S. 744 requires employers to use E-Verify in all industries. The phase-in period is based on the size of a business, with large employers having to implement it before smaller employers are required to do so. However, agriculture is the last industry, regardless of the size of the business, mandated to implement E-Verify. Mandatory use of E-Verify for agriculture will begin four years after the date of enactment of the legislation. Once E-Verify is mandatory for agriculture, it will be that much more important that an agricultural visa program be in place.

What are the legal ramifications for employers who become aware that they have an undocumented worker that is seeking legal status through the Blue Card program?

- The employer would be held harmless and, if needed, can assist an employee in attesting to their past work in agriculture.

What else is required of employers of Blue Card holders?

- No other requirements are mandated.

What about the spouse or family members of blue card workers?

- Agricultural workers who apply for a Blue card can file a family application on behalf of their spouse and children who are residing in the United States.

How does this legislation impact my future labor needs?

- Starting in 2016, a new agricultural worker visa program would be implemented by the U.S. Department of Agriculture (note: current programs are administered by the U.S. Department of Labor). The new visa program is open to all sectors of agriculture without any restriction on an employer's duration of need for labor. Workers can choose whether to work at-will or on a contract. Regardless of at-will or contract worker, workers enjoy portability and can move from employer to employer during their 3-year visa.
 - "At Will" visa – permits workers to work for employers without a contract and can change employers at any time.
 - "Contract" visa – permits workers to work for employers on a contract basis and can change employers after completion of contract.

What is the duration of the visas?

- Agriculture worker visas enable workers to work in agriculture for 3 years with a one-time renewal (total of 6 years).
- After 6 years, a visa holder must return home for 3 months before reapplying.

How would employers secure employees through these visa programs?

- Employers would register their staffing needs with U.S. Department of Agriculture (USDA) as a Designated Agricultural Employer (DAE). Employer would then petition the Department of Homeland Security to employ workers on agricultural worker visas.

How many visas would be available for the agriculture sector?

- Starting in 2016, 112,333 visas would be distributed per year for the agricultural sector. To reflect the needs of different regions, visas would be released on a quarterly basis during the first five years of the program. Unused visas would roll into the next quarter– but not to the next fiscal year. No more than 337,000 work visas would be granted in any three year period. After five years, USDA would reevaluate the program and establish future caps to ensure the labor needs for agriculture are met.

Effective Cap on visa workers in the US per year:

2016: 112,333

2017: 224,666

2018: 337,000

2019: 337,000

2020: 337,000

After 2020: Cap would be set by Secretary of Agriculture based on objective criteria for determining size of agriculture's need for labor.

Note: Blue Card holders do NOT count against the visa cap. The H-2A program would also be available for one year after the visa program is up and running and then would sunset after that twelve month period.

What if these are not enough visas to meet all of agriculture's needs?

- The Secretary of Agriculture has authority to adjust the cap to meet the industry's needs on an emergency basis.

What do these visa programs require of employers?

- **Minimum Wages:** The nationwide wage floor for future guest workers was negotiated for 4 of the 6 occupational categories described by the Bureau of Labor Statistics (BLS), with 2 categories being subject to future USDA determination. These future wages would take effect in 2016 and increase based on inflation by at least 1.5 percent but no more than 2.5 percent annually.

The statutory wage rate for 2016 is:

- Farmworkers and Laborers – Crop, Nursery and Greenhouse: \$9.64
 - Graders and Sorters: \$9.84
 - Dairy and Livestock: \$11.37
 - Ag Equipment Operators: \$11.87
 - Other Occupational Categories: Secretary of Ag would determine
- **Housing:** DEAs employing At-Will visa holders would have to provide either housing or a housing allowance. DEAs employing Contract visa holders would have to provide housing, however, in the case there is an attestation by the Governor that housing is available; DEAs could provide a housing allowance. Allowances would be based on HUD fair market rate for 2 bedroom dwelling, with 2 people per room.
 - **Employment Taxes:** Employers would NOT pay FICA and FUTA for Ag visa holders.
 - **Transportation:** Employers must provide "inbound" transportation to all workers coming to work in the US from abroad, regardless of whether the worker is employed at-will or on contract. Employers who employ a worker on a contract for at least 27 months of the 3-year visa term must provide one "outbound" trip to return the worker home.

Note: An employer seeking to hire US workers must offer those workers no less than the same benefits, wages, and working conditions, excluding housing or housing allowance, which the employer is offering to visa workers

How do these wages compare to current wages in the H-2A program?

- The H-2A program has just one single wage rate (Adverse Effect Wage Rate) for all ag work. The AEW is set each year by DOL for multiple regions of the country as a result of a USDA survey of questionable reliability.
- The wages in this bill are set in statute for several defined agricultural occupations. The wage adjusts annually based on inflation, as measured by the Employment Cost Index. The annual adjustment is at least 1.5%, but never any more than 2.5% in any year.

Is there an option for commuter workers?

- Yes, workers employed within 50 miles of an international border would be able to go back to their home country daily. Employers hiring commuter workers would not be required to provide housing or a housing allowance to those workers. The 50 mile limit is measured from the job site to the nearest land border, not the employee's home or border crossing location. However, the employee's home must be within a reasonable commuting distance from the border.

Can agriculture visa holders bring their spouse or family members into the U.S.?

- The bill does not grant visas to spouses and children of agricultural workers unless those individuals separately qualify for a visa.

After a worker leaves his/her initial employment opportunity, would they be tracked?

- Yes, workers would be tracked from employer to employer throughout their visa term. This program relies on a functioning and effective employment verification system, or E-verify. It is imperative that such a system addresses agriculture's unique hiring circumstances (i.e. in remote rural areas, at a production site, etc.). Also, in addition to E-verify the workers would be tracked by the SEVIS system used by the Department of Homeland Security (DHS) within 2 years after the bill is enacted.

What about E-Verify?

- E-Verify would become mandatory for agriculture employers 4 years after regulations implementing the new visa program are effective.
- In a mandatory E-Verify environment, the creation of an efficient and more market driven ag visa program would be of paramount importance.

How can I get engaged in this issue?

- The first step in achieving comprehensive agriculture labor reform begins by educating lawmakers. Please let your senators and member of Congress know that, as part of immigration reform, you support establishing a new agricultural worker visa program that gives both employers and employees stability and flexibility, now and into the future.
- Visit the Agriculture Workforce Coalition's website to read what the press is saying and get the latest information from the coalition's members. The coalition's website is:
<http://www.agworkforcecoalition.org/>.

If you have additional questions, please contact the Agriculture Workforce Coalition at info@agworkforcecoalition.org.