Cultivating Cumberland

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COVID-19 Closure Information

Please be aware that while the Rutgers Cooperative Extension Office of Cumberland County may be closed to the public, you can still reach your County Agents! Call (856) 451-2800

Updates about our office can be found on https://cumberland.njaes.rutgers.edu/ and www.co.cumberland.nj.us

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<tr>
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<td>Wesley Kline</td>
<td><a href="mailto:wkline@njaes.rutgers.edu">wkline@njaes.rutgers.edu</a></td>
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<td>Nursery Production</td>
<td>Tim Waller</td>
<td><a href="mailto:twaller@njaes.rutgers.edu">twaller@njaes.rutgers.edu</a></td>
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- Follow our Facebook page to stay up to date on Food Safety Issues. https://www.facebook.com/RutgersOnFarmFoodSafety/
- New Covid-19 information is added to our website at least weekly: onfarmfoodsafety.rutgers.edu
- To stay current on commercial agriculture information, including updates on Covid-19, join the Rutgers Plant and Pest Advisory at https://plant-pest-advisory.rutgers.edu/, click on the subscribe link at the top of the page then click EMAIL on the edition you are interested in subscribing to. If you are interested in more than one edition you need to subscribe to each one individually. Current editions are vegetable, fruit, and landscape/nursery/turf.

Attachments
- Protecting Workers from the Effects of Heat
- Heated-Related Illnesses
URGENT REQUEST

July 13, 2020

Dear Farm Owner/Operator,

As you are all aware, New Jersey is still under a Public Health Emergency as we try to contain and prevent the spread of COVID-19, a contagious and, at times, fatal disease transmitted mainly through close contact with infected people, such as an infected person’s coughs and sneezes. The Department of Health has identified farm workers as one of the most vulnerable populations in the State for potentially contracting COVID-19 because such employees often work and live near each other.

Over the past several months, the Department of Agriculture has been closely coordinating with the Departments of Health and Labor to assist farm operators and farm workers to minimize and control the spread of COVID-19 during this pandemic. One program that is being implemented FREE OF CHARGE for all farms is a COVID-19 testing and education program through Federally Qualified Health Centers (FQHCs) and local health departments. Along with free testing, the program provides education and other related support services. The Department of Health has also created guidelines for seasonal farm labor camps, a "Quick Facts" infographic, and prevention signs on face coverings, hand cleaning, social distancing, and helpful hotlines.

The Commissioner of the Department of Health has broad powers under the Emergency Health Powers Act to take all reasonable and necessary measures to prevent the transmission of infectious disease, which can include mandated testing for COVID-19 as part of the above-mentioned program (N.J.S.A. 26: 13-12; 13-13). At this time, the Commissioner strongly urges farm workers and staff to be tested by an FQHC or another county testing site. This will help reduce the risk of spreading the virus to others.

Although many farms have been cooperating and thousands of farmworkers have been tested to date, our goal is to work together with every farm in the State to reach the best possible outcome for everyone. Thus, workers can cohort or assemble into groups based on the test results. As a last resort, they can continue to work even if they test positive for COVID-19 but do not exhibit symptoms. Also, workers tested through the program that require medical attention will be assisted with housing options and provided medical treatment at no cost to the operator or the worker. In addition to the above, FQHC staff are available and more than willing to discuss other options/solutions/concerns with you.
Unsolicited Seeds From China

We have been receiving reports of people receiving seeds in the mail from China that they did not order. Sometimes the seeds are sent in packages stating that the contents are jewelry. Unsolicited seeds could be invasive, introduce diseases to local plants, or be harmful to livestock.

Here's what to do if you receive unsolicited seeds from another country:

- DO NOT plant them and if they are in sealed packaging don’t open the sealed package. Take a photo of the package and seeds and send the photos to the New Jersey Department of Agriculture to joseph.zoltowski@ag.nj.gov and USDA SITC at SITC.Mail@aphis.usda.gov

This is known as agricultural smuggling. Report it to the USDA! Maintain the seeds and packaging and send to the USDA Office located at 1500 Lower Rd, Linden NJ 07036 for evidence.

If individuals are aware of the potential smuggling of prohibited exotic fruits, vegetables, or meat products into or through the USA, they can help APHIS by contacting the confidential Anti-smuggling Hotline number at 800-877-3835 or by sending an Email to SITC.Mail@aphis.usda.gov. The USDA will make every attempt to protect the confidentiality of any information sources during an investigation within the extent of the law.

For all these reasons, it is critical that you welcome FQHC staff to your farm to educate you and your workers about the virus, how to reduce the potential for transmission through best practices, and to provide testing services.

Let’s stand together and demonstrate the agricultural community’s responsible reaction in confronting this unprecedented situation with emphasis on the safety of workers and farm families across the state.

Sincerely,

Douglas Fisher
Secretary, NJ Department of Agriculture

Sincerely,

Judith M. Persichilli, RN, BSN, MA
Commissioner
New Jersey Department of Health
Farm Tag Renewals/ Ag Certification Numbers for Motor Vehicle

Are you needing your Ag Certificate Number for 2020? We can now do this for renewals through the mail! If you have gotten your Ag Certification number with us before, we can mail your certificate with a 2020 Ag number by following the following steps:

1) Pick up an application from the front entrance of our building. They are in a plastic bin on the front steps. You will need separate applications for each different registered name on the motor vehicle registrations. Be sure your application includes the EXACT name on the registration.
   - For example: If you have a truck registered to “John M. Deere” and a truck registered to “Deere Farms, LLC,” you will need 2 applications.

2) Fill out the application and make sure to sign it.

3) Include a self-addressed, stamped envelope in your mailing. This is how we will mail your certificate.

4) Mail the application and envelope to us at:

   Rutgers Cooperative Extension
   Ag Dept.
   291 Morton Avenue
   Millville, NJ 08332

Email brandiwi@co.cumberland.nj.us if you have any questions or would like a digital copy of the application to print out. You will still have to mail the form and an envelope to us.

Photo shows the plastic bin the applications are in at the front entrance of the Rutgers Cooperative Extension of Cumberland County, 291 Morton Avenue, Millville, NJ 08332.
Don’t Let Your Guard Down With Farm Worker Health

Rick VanVranken

July 21, 2020

The COVID-19 pandemic has highlighted the critical, indeed essential, role of farm labor in getting food from farm to plate. However, health concerns should not stop with a negative COVID test, especially if an employee or family member is exhibiting any of the ‘flu-like’ symptoms that are associated with corona virus.

A recent farm call was a reminder that working outside, especially during this July heat wave, exposes workers to a number of potential health risks that may present very similar symptoms and can be equally health, and even life, threatening. Recently published studies from the Rutgers Institute of Earth, Ocean, and Atmospheric Sciences suggest growing numbers of people worldwide are at risk of heat stress and related complications, including farmers and ag laborers working in high heat and humid conditions.

Harvesting and other activities along field edges, including going into the woods instead of using a portable bathroom facilities, also lead to a high risk of tick bites, which can also carry a number of diseases, many as or more debilitating than Lyme disease that most are now aware of. A recent story at Today.com suggested that the COVID-19 pandemic might lead to more tick-borne disease this year, quoting Rutgers entomologist and assistant professor Alvaro Toledo at the Center for Vector Biology with suggestions how to prevent tick bites.

It is critical for your employees’ health and well-being to get proper diagnosis and treatment for all of these ailments. This table illustrates how many tick-born diseases, as well as heat stress, all have potential symptoms very similar to those of COVID-19. Each is linked to additional resources at the CDC. In many cases, it may be the ‘other symptoms’ that may be unique to each disease and assist a medical practitioner with correct identification and lead to better verification with further testing.

Continue on next page
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<th>COVID-19</th>
<th>Heat Stress</th>
<th>Lyme Disease</th>
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*NOTE – main vector listed, but many tick borne diseases may be vectored by other species of ticks, or different species causing same disease.
**OSHA-NIOSH Heat Safety Tool App**

When you're working in the heat, safety comes first. With the OSHA-NIOSH Heat Safety Tool, you have vital safety information available whenever and wherever you need it - right on your mobile phone.

The App allows workers and supervisors to calculate the heat index for their worksite, and, based on the heat index, displays a risk level to outdoor workers. Then, with a simple "click," you can get reminders about the protective measures that should be taken at that risk level to protect workers from heat-related illness, illness-reminders about drinking enough fluids, scheduling rest breaks, planning for and knowing what to do in an emergency, adjusting work operations, gradually building up the workload for new workers, training on heat illness signs and symptoms, and monitoring each other for signs and symptoms of heat-related illness.

Working in full sunlight can increase heat index values by 15 degrees Fahrenheit. Keep this in mind and plan additional precautions for working in these conditions.

The OSHA-NIOSH Heat Tool is available in English and Spanish for Android and iPhone devices. To access the Spanish version, set the phone language to Spanish.

For more information about safety while working in the heat, see OSHA's heat illness webpage at [https://www.osha.gov/heat/index.html](https://www.osha.gov/heat/index.html), including online guidance about using the heat index to protect workers.

The OSHA-NIOSH Heat Safety Tool features:

- A visual indicator of the current heat index and associated risk levels specific to your current geographical location
- Precautionary recommendations specific to heat index-associated risk levels
- An interactive, hourly forecast of heat index values, risk level, and recommendations for planning outdoor work activities in advance
- Editable location, temperature, and humidity controls for calculation of variable conditions
- Signs and symptoms and first aid information for heat-related illnesses

Download this app from your smartphones “app store” for free.
The Statewide Wine Grape Twilight Meeting – II will be held on August 5th from 6 – 7:30 pm. This will be a Webex meeting. No registration is required. We will follow the Summer Grape Camp format.

6:00 pm – 7:00 pm: Vineyard Observations from Rutgers Extension

7:00 pm – 7:30 pm: Grower’s Questions and Answers

Growers are encouraged to discuss or send questions or vineyard problems, in advance to Hemant Gohil gohil@njaes.rutgers.edu or Megan Muehlbauer muelhbauer@njaes.rutgers.edu

Hosted by Hemant Gohil

Join the meeting online by going to:
https://rutgers.webex.com/rutgers/j.php?MTID=m4f29c62a14ede6bf4fbbf5a527f6634c
Meeting number: 120 900 8336
Password: wN6T8MPyim5

Join by phone
+1-650-429-3300
Access code: 120 900 8336

There will be no pesticide re-certification credits for this program.

Soil Health Solutions

Monday, August 17, 1-4 PM
Online via Zoom

Please join us for an interactive webinar to address soil health challenges on all types of farms. Shannon Zezula, Indiana State Resource Conservationist will present about the process of finding soil health solutions based on individual farming situations. Participants will also have discussions about specific farming scenarios and find ways to improve soil health and productivity.

Please contact Jason Challandes at jchallandes@desu.edu or 302-388-2241 to register and you will receive a link to join.

Presented by Northeast SARE, Delaware Soil Health Partnership, Delaware State University and University of Delaware.
Two-Day Online Course

NJ Compost Operator Certification

September 29-30, 2020 | 8:30am - 12:00pm EDT | Online | $295

This two-day, online class meets the requirements of N.J.A.C. 7:26A - 1.4(a)(14)(xiv), which states that all operators of composting facilities in New Jersey must attend a composting course approved by the NJDEP.

You will learn how to improve your compost facility's operation, with instruction on the following topics:

- NJDEP regulatory requirements
- Scientific principles of composting
- How to deal with health and odor issues
- And more!

A Certificate of Completion will be provided to each fully paid participant who successfully completes the course.

The Rutgers online NJ Compost Operator Certification Course is approved for the following continuing education credits:

- NJ Certified Recycling Professionals (CRPs): 6 Classroom credits
- NJ Certified Public Works Managers (CPWM): 5.5 Technical credits
- NJ Licensed Professional Engineers: 6 CPCs
- NJ Public Health Continuing Education Contact Hours: 5.5 CEs

Learn more and register at http://www.cpe.rutgers.edu/courses/current/er0303wa.html

New Rutgers Fact Sheets

The following bulletin is now available on NJAES Publications:

FS1322 German Cockroach. Wang, C.
https://njaes.rutgers.edu/fs1322/
Edema (Oedema) on Pepper Fruit

Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

With recent wet, cloudy weather we are seeing some edema (or oedema) on bell pepper and banana pepper fruits. Edema is also called water blistering. The most common cause of edema is warm wet soils, high humidity in the air, low wind, and overcast (cloudy) skies. Under these conditions the roots of the pepper plant absorb water at a rate faster than is lost through transpiration. Excess water accumulates in the developing fruit, some fruit cells enlarge, stomatal openings become blocked by these enlarging cells, and water continues to accumulate in the fruit. The enlargement of these fruit cells then causes a rupture of the epidermis leaving raised bumps and scarring. To reduce edema, limit irrigation during cloudy, humid weather.

Edema in Banana Pepper Fruits. Note the raised brown bumps and scarring. Magnified picture of ruptured epidermis on edema affected banana pepper fruit.

Blossom Drop of Vegetables

Wesley Kline

With the high temperatures we have been experiencing over the last few weeks plants are under stress which can cause either blossom drop or with lima beans the pods do not develop seeds and dry up.

Sustained high temperatures especially at night result in pollen drying up or not sheading properly. With tomatoes daytime temperatures above 85F or high nighttime temperatures above 70F the pollen becomes tacky and non-viable. Temperatures over 104F for only four hours can cause the flowers to abort. With peppers daytime temperatures over 89F can cause flowers and buds to fall off. With most flowering vegetable temperatures in the 90s will cause stress on the plant and flower and fruit drop.
Particle Films for Sunburn Protection

Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

With the recent high temperatures, we have seen an increase of sunburn in vegetables and fruits. Crops with inadequate leaf cover will be most susceptible.

For sunburn protection at a field scale, use of film spray-on materials can reduce or eliminate sunburn. These materials are kaolin clay based, calcium carbonate (lime) based, or talc based and leave a white particle film on the fruit (such as Surround, Screen Duo, Purshade, Reflections and many others). There are also film products that protect fruits from sunburn but do not leave a white residue, such as Raynox. Apply these materials at the manufacturer’s rates on the label for sunburn protection. They may have to be reapplied after heavy rains or multiple overhead irrigation events.

Purshade treated pepper. Note the sunburn on the side with lower coverage.

Particle films also have been used to reduce heat stress related disorders in fruits and vegetables. While particle films have gained use in tree fruits, their usefulness in vegetables is still unclear. Research in a number of states has shown reduced fruit disorders such as sunburn in peppers and white tissue in tomatoes when applied over those crops. Watermelon growers have used clay and lime based products for many years to reduce sunburn in that crop in southern states. Research at the University of Delaware in 2018-2019 showed improved tomato interior quality with some particle film products. Past work on watermelons has shown limited usefulness for overall stress avoidance.

There are some drawbacks to the use of particle films. If used for sunburn protection on fruits, there is added cost to wash or brush the material off at harvest. Where overhead irrigation is used, or during rainy weather, the material can be partially washed off of plants, reducing effectiveness and requiring additional applications. Produce buyers can also have standards relating to the use or particle films and may not accept products with visible residues.
Importance of Leaf Cover in Fruiting Vegetables

Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

July is the month that we see the highest temperatures and often have cloud free, high light intensity days and long day lengths. Under these conditions, good leaf cover is essential for producing high quality fruits. Lack of leaf cover will expose fruits to high levels of radiation and cause excessive heating of the fruit surface. This can lead to a variety of disorders including sunburn, sunscald, fruit yellowing, fruit cracking, and shiveled fruit.

Lack of leaf cover often occurs due to storm damage where high winds or hail damage leaves. After damaging storms, attempts should be made to promote new leaf cover as quickly as possible by sidedressing or fertigating with nitrogen fertilizer and by irrigating.

A second, temporary loss of leaf cover occurs during hot periods when plants are allowed to wilt. Just a few hours without cover under high heat and light can cause severe damage to fruits. This is most severe in dark colored fruit such as peppers and cucumbers. Irrigation management is critical to limit fruit damage due to wilting.

Lack of leaf cover can also be due to lack of plant vigor and poor plant growth which may have a variety of causes such as underfertilization, deficiencies, water stress, wet soil, compacted soil, hot soil conditions or other soil, water, or fertility related issues. Finding the root cause will be critical to address and correct these growth-limiting factors and improve leaf cover.

Diseases that reduce leaf production, attack leaves, or cause wilting can reduce leaf cover and lead to fruit disorders. Leaf feeding insects can also contribute to leaf area losses. Protecting plants against expected diseases and insects along with scouting for signs of infections or infestations is critical to maintain canopies. Air pollution damage can also cause losses of leaf cover in sensitive crops and varieties.

Staking and pruning practices are also important to manage leaf cover. Excessive pruning of tomatoes can expose fruits to excess radiation leading to fruit damage. Single or double stem training systems, as are often used in greenhouses and high tunnels, are at most risk. Staking peppers has been shown to reduce fruit damage by maintaining leaf cover over developing pepper fruit.

One common problem in high radiation exposure conditions and lack of leaf cover is sunburn. We commonly see sunburn in watermelons, tomatoes, peppers, eggplants, cucumbers, apples, strawberries, and brambles (raspberries and blackberries).

There are three types of sunburn which may have effects on the fruits. The first, sunburn necrosis, is where skin, peel, or fruit tissue dies on the sun exposed side of the fruit. Cell membrane integrity is lost in this type of sunburn and cells start leaking their contents. The critical fruit tissue temperature for sunburn necrosis varies with type of fruit. Research has shown that the fruit skin temperature threshold for sunburn necrosis is 100 to 104°F for cucumbers; 105 to 108°F for peppers, and 125 to 127°F for apples. Fruits with sunburn necrosis are not marketable. Injury may be white to brown in color.
The second type of sunburn injury is sunburn browning. This sunburn does not cause tissue death but does cause loss of pigmentation resulting in a yellow, bronze, or brown spot on the sun exposed side of the fruit. Cells remain alive, cell membranes retain their integrity, cells do not leak, but pigments such as chlorophyll, carotenes, and xanthophylls are denatured or destroyed. This type of sunburn browning occurs at a temperature about 5°F lower than sunburn necrosis (i.e. 115 to 120°F in apples). Light is required for sunburn browning. Fruits may be marketable but will be a lower grade.

The third type of sunburn is photooxidative sunburn. This is where shaded fruit are suddenly exposed to sunlight as might occur with late pruning, after storms where leaf cover is suddenly lost, or when vines are turned in drive rows. In this type of sunburn, the fruits will become photobleached by the excess light because the fruit is not acclimatized to high light levels, and fruit tissue will die. This bleaching will occur at much lower fruit temperatures than the other types of sunburn. Damaged tissue is often white in color.

[link to website]

**Weed Management in Pastures Webinar**

Online by Zoom, Wednesday August 5, 2020 7:00-9:00 pm

Join Dr. Mark VanGessel, University of Delaware Extension Weed Specialist for another program in our Webinar Wednesday forage series. Managing weeds in pasture is a common question among horse owners and livestock producers. In this webinar you will learn about these plants we call weeds; why they are a concern for many owners and producers and what strategies you can use to control them. We will discuss both cultural and chemical methods for weed control and also briefly touch on the topic of toxic weeds.


Sponsored by Delaware Cooperative Extension, a joint effort between Delaware State University and the University of Delaware.

**Farmer Panelists Discuss Soil Health – Virtually**

Tuesday, August 11, 2020 12:30-1:30 p.m.

A virtual farmer panel will discuss a soil health with Steve Groff, owner of Cover Crop Coaching, as moderator. Panelists include Blaine Hitchens, a Sussex County farmer and National Association of Conservation District Soil Health Champion from Laurel, Del., Steve Kraszewski, of Mason’s Heritage in Queen Anne, Md. and Aaron Thompson, Thompson Family Farm in Hartly, Del. This event is free and preregistration is required.

“Due to COVID-19 we were unable to hold the annual soil health field day. However, we are very excited to offer this virtual event to allow farmers the opportunity to discuss topics related to soil health,” said Debbie Absher, director of agricultural programs at Sussex Conservation District.

Registered attendees will receive the webinar registration link one day prior to the event.

*For more information or to register, visit www.sussexconservation.org/events or call Siobhan Kelley, communications and outreach specialist at SCD, 302-856-2105, ext. 122.*

This event is presented by the Sussex Conservation District, Delaware Soil Health Partnership, Delaware State University, Northeast Sustainable Agriculture Research and Education program and the U.S. Department of Agriculture Natural Resource Conservation Service.
NYCAMH/NEC Farmworker Needs Assessment Survey
Julie Sorensen

The New York Center for Agricultural Medicine & Health/Northeast Center for Occupational Health and Safety in Agriculture, Forestry, and Fishing based in Cooperstown, NY is conducting a farm worker health needs assessment to help them better address worker health and safety needs during the COVID-19 pandemic. They have asked us to share this message with NJ agricultural employers asking you to share the survey links with your employees and to encourage them to fill out the survey.

Dear Farm owner/manager,

First, let us apologize for the unfortunate time of this request. We recognize that this is an extremely busy time of year for the farm community and that you have many challenges both new and old to ensure your business remains viable in the months ahead. However, as a private, nonprofit agricultural organization that has been working to provide health and safety services to agricultural workers for nearly forty years we are eager to understand the unique challenges your workers are facing in relation to the COVID-19 pandemic. This information will help us create materials and programs that are more appropriate and helpful to you and your workers.

To gather this data, we are asking if you would share the following survey link with your workers:

NYCAMH/NEC Farmworker COVID Survey:
To take the survey in English – https://redcap.bassett.org/redcap/surveys/?s=NH8CHXX499
To take the survey in Spanish: https://redcap.bassett.org/redcap/surveys/?s=LND3MR9TPD
You can either email the link directly to your workers or contact us to request paper copies that you can distribute to them. You can also contact us if you would prefer to have your workers complete the survey over the phone or if they need assistance completing the survey (assistance is available in English or Spanish). [contact: Nicole Blanchard at 607.422.7527 or farmworkercovidsurvey@bassett.org]. Lastly, we would to like to reassure you that the survey is voluntary and responses are confidential (no contact information will be requested in the survey).

If you would like to learn more about our organization, please visit www.nycamh.com or www.necenter.org.

Thank you very much for considering this request and for your essential work in providing agricultural products to the nation throughout the pandemic.
Governor Signs Permit Extension Act: NJDEP Water Certifications Extended 1 Year

Governor Murphy signed The Permit Extension Act (A3919/S2346) this week, which extends certain permits during the COVID-19 emergency. Agricultural Certifications issued by the DEP are included in this extension, so any Agricultural Certification which expired on or after March 9, 2020 will be extended.

Any complete new, renewal or modification application already submitted to the DEP will continue to be reviewed and issued for the full five-year term.

Any Certification holder who received the first renewal reminder which contained the pre-filled application form does not need to do anything at this time. The DEP will forward you a new pre-filled application once the extension period is over.

“COVID-19 extension period” means the period beginning March 9, 2020 and continuing for as long as a public health emergency, pursuant to the “Emergency Health Powers Act,” P.L.2005, c.222 (C.26:13-1 et seq.), or a state of emergency, pursuant to P.L.1942, c. 251 (C.App.A.9-33 et seq.), or both, that has been declared by the Governor in response to COVID-19, is in effect.

Please be advised that annual water diversion reports were required to be submitted to the DEP by February 28, 2020 and are not extended due to the passage of this Bill. The DEP is issuing reminders to those who failed to submit this information in accordance with their Certification. Continue to log diversion amounts and submit your reports in accordance with the deadlines in your Certification.

Rutgers Cooperative Extension is working very closely with the DEP’s Bureau of Water Allocation & Well Permitting to resolve any ongoing issues and concerns. The Bureau is aware that many renewal applications are awaiting the Ag Agent review and signature. With the extension act, these renewal applications are being extended as mentioned above.

Some RCE Offices remain closed or with minimal access at this time. Call your local Rutgers Cooperative Extension office for specific information. In addition, during the month of July, staff in the NJ Department of Agriculture and the NJ DEP personnel are furloughed, and response times will be slowed, so please be patient during these challenging times.
Calendar of Important Events

✓ Indicates a newly added event since the last calendar

• Online

✓ August 5
● Statewide Wine Grape Twilight Meeting—II; Webex meeting; 6:00 PM—7:30 PM; Hosted by Hemant Gohil. More information and how to join can be found on page 8

✓ August 5
● Weed Management in Pastures Webinar; Online Zoom Meeting; 7:00 PM—9:00 PM; More information can be found on page 12; Sign up by going to https://www.pcsreg.com/weed-management-in-pastures

✓ August 11
● Farmer Panelists Discuss Soil Health; Online Zoom meeting; 12:30 PM—1:30 PM; For more information or to register, visit www.sussexconservation.org/events or call Siobhan Kelley, communications and outreach specialist at SCD, 302-856-2105, ext. 122.; More information can be found on page 12

✓ August 17
● Soil Health Solutions; Online Zoom meeting; 1:00 PM—4:00 PM; Sign up by emailing Jason jcallandes at jchallandes@desu.edu or calling 302-388-2241; More information can be found on page 8

✓ August 17-21
● Better Process Control School; Virtual Online Course
9:00 AM—1:30 PM; Attend a 5 half-day, virtual online BPCS course this August to reduce your contamination susceptibility, minimize your liability and comply with FDA/USDA regulations. Topics covered include: Aseptic Processing and Packaging in Systems, Container Closure Evaluations, Food Plant Sanitation, and Retort Operations. Space is limited, find more information and register at http://www.cpe.rutgers.edu/courses/current/lf0703wa.html

September 17
CORE Training Program for the NJ Pesticide Applicators License; Extension Conference Center
18 Ag Extension Way, New Brunswick, NJ 08901; 12:30 PM – 4:30 PM; Bilingual Class; This course satisfies New Jersey’s requirement of attending a basic pesticide training course for new applicants; Registration fee is $145; Six (6) CORE units toward re-certification for New Jersey licensed applicators/operators; For more information or to register go to http://www.cpe.rutgers.edu/courses/current/ae0801ca.html

October 5
Rutgers Turfgrass Research Golf Classic, 25th Anniversary; Fiddler’s Elbow Country Club, 811 Rattlesnake Bridge Rd, Bedminster, NJ 07911; This event is the largest turfgrass research golf event in the US; For more information or to register go to https://njta.wildapricot.org/
Protecting Workers from the Effects of Heat

At times, workers may be required to work in hot environments for long periods. When the human body is unable to maintain a normal temperature, heat illnesses can occur and may result in death. It is also important to consider that hot work environments may exist indoors. This fact sheet provides information to employers on measures they should take to prevent worker illnesses and death caused by heat stress.

**What is Heat Illness?**
The following are illnesses that may result from exposure to heat in the workplace.

**Heat Stroke** is the most serious heat-related health problem. Heat stroke occurs when the body's temperature regulating system fails and body temperature rises to critical levels (greater than 104°F). *This is a medical emergency that may result in death!* The signs of heat stroke are confusion, loss of consciousness, and seizures. Workers experiencing heat stroke have a very high body temperature and may stop sweating. If a worker shows signs of possible heat stroke, get medical help immediately, and call 911. Until medical help arrives, move the worker to a shady, cool area and remove as much clothing as possible. Wet the worker with cool water and circulate the air to speed cooling. Place cold wet cloths, wet towels or ice all over the body or soak the worker's clothing with cold water.

**Heat Exhaustion** is the next most serious heat-related health problem. The signs and symptoms of heat exhaustion are headache, nausea, dizziness, weakness, irritability, confusion, thirst, heavy sweating and a body temperature greater than 100.4°F. Workers with heat exhaustion should be removed from the hot area and given liquids to drink. Cool the worker with cold compresses to the head, neck, and face or have the worker wash his or her head, face and neck with cold water. Encourage frequent sips of cool water. Workers with signs or symptoms of heat exhaustion should be taken to a clinic or emergency room for medical evaluation and treatment. Make sure that someone stays with the worker until help arrives. If symptoms worsen, call 911 and get help immediately.

**Heat Cramps** are muscle pains usually caused by the loss of body salts and fluid during sweating. Workers with heat cramps should replace fluid loss by drinking water and/or carbohydrate-electrolyte replacement liquids (e.g., sports drinks) every 15 to 20 minutes.

**Heat Rash** is the most common problem in hot work environments. Heat rash is caused by sweating and looks like a red cluster of pimplies or small blisters. Heat rash may appear on the neck, upper chest, groin, under the breasts and elbow creases. The best treatment for heat rash is to provide a cooler, less humid work environment. The rash area should be kept dry. Powder may be applied to increase comfort. Ointments and creams should not be used on a heat rash. Anything that makes the skin warm or moist may make the rash worse.

**Prevention Made Simple:**
**Program Elements**
Heat Illness Prevention Program key elements include:

- A Person Designated to Oversee the Heat Illness Prevention Program
- Hazard Identification
- Water, Rest, Shade Message
- Acclimatization
- Modified Work Schedules
- Training
- Monitoring for Signs and Symptoms
- Emergency Planning and Response
**Designate a Person to Oversee the Heat Stress Program**

Identify someone trained in the hazards, physiological responses to heat, and controls. This person can develop, implement and manage the program.

**Hazard Identification**

Hazard identification involves recognizing heat hazards and the risk of heat illness due to high temperature, humidity, sun and other thermal exposures, work demands, clothing and PPE and personal risk factors.

Identification tools include: OSHA's Heat Smartphone App; a Wet Bulb Globe Thermometer (WBGT) which is a measure of heat stress in direct sunlight that takes into account temperature, humidity, wind speed, sun and cloud cover; and the National Weather Service Heat Index. Exposure to full sun can increase heat index values up to 15°F.

**Water, Rest, Shade**

Ensure that cool drinking water is available and easily accessible. (Note: Certain beverages, such as caffeine and alcohol can lead to dehydration.)

Encourage workers to drink a liter of water over one hour, which is about one cup every fifteen minutes.

Provide or ensure that fully shaded or air-conditioned areas are available for resting and cooling down.

**Acclimatization**

Acclimatization is a physical change that allows the body to build tolerance to working in the heat. It occurs by gradually increasing workloads and exposure and taking frequent breaks for water and rest in the shade. Full acclimatization may take up to 14 days or longer depending on factors relating to the individual, such as increased risk of heat illness due to certain medications or medical conditions, or the environment.

New workers and those returning from a prolonged absence should begin with 20% of the workload on the first day, increasing incrementally by no more than 20% each subsequent day.

During a rapid change leading to excessively hot weather or conditions such as a heat wave, even experienced workers should begin on the first day of work in excessive heat with 50% of the normal workload and time spent in the hot environment, 60% on the second day, 80% on day three, and 100% on the fourth day.

**Modified Work Schedules**

Altering work schedules may reduce workers' exposure to heat. For instance:

- Reschedule all non-essential outdoor work for days with a reduced heat index.
- Schedule the more physically demanding work during the cooler times of day;
- Schedule less physically demanding work during warmer times of the day;
- Rotate workers and split shifts, and/or add extra workers.
- Work/Rest cycles, using established industry guidelines.
- Stop work if essential control methods are inadequate or unavailable when the risk of heat illness is very high.

Keep in mind that very early starting times may result in increased fatigue. Also, early morning hours tend to have higher humidity levels.

**Training**

Provide training in a language and manner workers understand, including information on health effects of heat, the symptoms of heat illness, how and when to respond to symptoms, and how to prevent heat illness.

**Monitoring for Heat Illness Symptoms**

Establish a system to monitor and report the signs and symptoms listed on the previous page to improve early detection and action. Using a buddy system will assist supervisors when watching for signs of heat illness.

**Emergency Planning and Response**

Have an emergency plan in place and communicate it to supervisors and workers. Emergency plan considerations include:

- What to do when someone is showing signs of heat illness. This can make the difference between life and death.
- How to contact emergency help.
- How long it will take for emergency help to arrive and training workers on appropriate first-aid measures until help arrives.
- Consider seeking advice from a healthcare professional in preparing a plan.
Engineering Controls Specific to Indoor Workplaces

Indoor workplaces may be cooled by using air conditioning or increased ventilation, assuming that cooler air is available from the outside. Other methods to reduce indoor temperature include: providing reflective shields to redirect radiant heat, insulating hot surfaces, and decreasing water vapor pressure, e.g., by sealing steam leaks and keeping floors dry. The use of fans to increase the air speed over the worker will improve heat exchange between the skin surface and the air, unless the air temperature is higher than the skin temperature. However, increasing air speeds above 300 ft. per min. may actually have a warming effect. Industrial hygiene personnel can assess the degree of heat stress caused by the work environment and make recommendations for reducing heat exposure.

Additional information

For more information on this and other issues affecting workers or heat stress, visit: www.osha.gov/heat; www.cdc.gov/niosh/topics/heatstress; and www.noaa.gov/features/earthobs_0508/heat.html.

Workers have the right to working conditions that do not pose a risk of serious harm, to receive information and training about workplace hazards and how to prevent them, and to file a complaint with OSHA to inspect their workplace without fear of retaliation.

For more information about workers’ rights, see OSHA’s workers page at www.osha.gov/workers.html.
# HEAT-RELATED ILLNESSES

## WHAT TO LOOK FOR

### HEAT STROKE
- High body temperature (103°F or higher)
- Hot, red, dry, or damp skin
- Fast, strong pulse
- Headache
- Dizziness
- Nausea
- Confusion
- Losing consciousness (passing out)

### HEAT EXHAUSTION
- Heavy sweating
- Cold, pale, and clammy skin
- Fast, weak pulse
- Nausea or vomiting
- Muscle cramps
- Tiredness or weakness
- Dizziness
- Headache
- Fainting (passing out)

### HEAT CRAMPS
- Heavy sweating during intense exercise
- Muscle pain or spasms

### SUNBURN
- Painful, red, and warm skin
- Blisters on the skin

### HEAT RASH
- Red clusters of small blisters that look like pimples on the skin (usually on the neck, chest, groin, or in elbow creases)

## WHAT TO DO

### HEAT STROKE
- Call 911 right away—heat stroke is a medical emergency
- Move the person to a cooler place
- Help lower the person's temperature with cool cloths or a cool bath
- Do not give the person anything to drink

### HEAT EXHAUSTION
- Move to a cool place
- Loosen your clothes
- Put cool, wet cloths on your body or take a cool bath
- Sip water

**Get medical help right away if:**
- You are throwing up
- Your symptoms get worse
- Your symptoms last longer than 1 hour

### HEAT CRAMPS
- Stop physical activity and move to a cool place
- Drink water or a sports drink
- Wait for cramps to go away before you do any more physical activity

**Get medical help right away if:**
- Cramps last longer than 1 hour
- You’re on a low-sodium diet
- You have heart problems

### SUNBURN
- Stay out of the sun until your sunburn heals
- Put cool cloths on sunburned areas or take a cool bath
- Put moisturizing lotion on sunburned areas
- Do not break blisters

### HEAT RASH
- Stay in a cool, dry place
- Keep the rash dry
- Use powder (like baby powder) to soothe the rash
REGULARLY SCHEDULED MEETINGS

✓ Indicates meeting will be held at RCE of Cumberland County

Extension Education Bldg., 291 Morton Ave, Rosenhayn, NJ (Between Carmel and Rosenhayn)

<table>
<thead>
<tr>
<th>Cumberland County Pesticide Certification Exam Schedule</th>
<th>Cumberland County Agriculture Development Board</th>
<th>Cumberland County Board Of Agriculture</th>
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</thead>
<tbody>
<tr>
<td>RCE of Cumberland County 291 Morton Avenue Millville, NJ 08332 (Between Rosenhayn &amp; Carmel)</td>
<td>County Administration Bldg. Freeholder Room 164 W. Broad Street Bridgeton, NJ 08332</td>
<td>RCE of Cumberland County 291 Morton Avenue Millville, NJ 08332 (Between Rosenhayn &amp; Carmel)</td>
</tr>
</tbody>
</table>

Meeting dates to be determined once COVID-19 restrictions are lifted.

To Register call 609-984-6614
For information call 856-451-2800

Reg. Meetings start at 7 p.m.
For information call 856-453-2211

Meetings start at 7 p.m.
For information call Lew DePietro, President at 856-981-9843

The program in Cumberland County is suspended until further notice.

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 Division of Ag & Natural Resources, NJ Dept. of Ag 609-292-2242

Sincerely,

Wesley L. Kline, Ph.D.
Cooperative Extension Agent
Vegetable Production and Food Safety
WKline@njaes.rutgers.edu

Timothy J. Waller, Ph.D.
Cooperative Extension Agent
Nursery Production
TWaller@njaes.rutgers.edu

Salvatore Mangiafico, Ph.D.
Extension Department Head & Environmental and Resource Mgt. Agent
Mangiafico@njaes.rutgers.edu

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 Cooperative Extension is an equal opportunity program provider and employer. Contact your local Extension Office for information regarding special needs or accommodations. Contact the State Extension Director’s Office if you have concerns related to discrimination, 848-932-3584.

Cooperative Extension of Cumberland County

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