

Cultivating Cumberland

May - 2018 VOL. 23, ISSUE 5



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USDA Reestablishes Fruit & Vegetable Industry Advisory Committee, Seeks Nominees

The U.S. Department of Agriculture today announced that it will reestablish the charter for the Fruit and Vegetable Industry Advisory Committee (FVIAC) and seeks nominations to fill all 25 positions on the FVIAC. FVIAC was established by USDA in 2001 to examine issues facing the fruit and vegetable industry and to provide ideas on ways to improve programs to better meet the changing needs of the produce industry. The recent charter expired July 2017.

USDA's Agricultural Marketing Service (AMS) ensures the committee is administered according to the Federal Advisory Committee Act. Eligible nominees for the FVIAC include anyone actively working in the fruit and vegetable industry as growers, shippers, wholesalers, distributors, brokers, retailers, restaurant representatives, processors, fresh cut processors, foodservice suppliers, representatives of state departments of agriculture and members of trade associations. Additional information about candidate qualifications, nomination requirements and forms, the nomination process and the advisory committee background is available on the [Fruit and Vegetable Industry Advisory Committee](#) page on the AMS website.

Written nominations must be received by May 24, 2018 and should be emailed to marlene.betts@ams.usda.gov or Valerie.minick@ams.usda.gov or sent to c/o Marlene Betts, Acting Designated Federal Officer, Specialty Crops Program, USDA Room 2077-S, Stop 0235, Washington, D.C. 20250-0235; or faxed to (202) 720-0016.

Nominees who applied through the previous call for nominations published in the Federal Register Aug. 2, 2017, do not need to reapply. Former FVIAC members who wish to be considered for a position on FVIAC must reapply. USDA appoints representatives from the list of nominees to serve staggered terms of up to two-year; approximately half of FVIAC will serve one-year terms and the remainder two-year terms.

Strange Mite Pest Found in High Tunnel Vegetables

Weekly Crop Update University of Delaware Cooperative Extension

Jerry Brust, IPM Vegetable Specialist, University of Maryland; jbrust@umd.edu

Over the last three months a few early season high tunnel operations on the Eastern Shore were having problems with some of their seedlings and leaf crops. Crops like spinach would have 'whitening' and then browning and eventually dead margins of their leaves while seedlings would collapse. We found the problem to be 'red legged winter mites' *Penthaleus dorsalis*, which is a new pest in vegetables and herbs for us (Fig. 1). This mite was identified by Dr. Ron Ochoa, USDA, Beltsville. Because these mites are such new pests some of the information presented here is based on other closely related earth mite pest species.

Red legged winter mites thrive in what we would normally consider conditions too cold for an arthropod to cause problems. This mite is cold adjusted and cannot stand hot dry soil conditions and will die as summer heat approaches. Eggs are laid in late spring and they over-summer in the soil. These are stress resistant eggs (i.e., they can withstand drying and heat as well as synthetic chemical applications). In the fall they will begin to hatch, and mites will be active throughout the fall and winter inside a high tunnel with crops. Damage appears as 'silvering' or 'whitening' of the attacked foliage. Mites are most damaging to newly emerging crops, greatly reducing seedling survival and development.

Red legged winter mites are difficult to control even when using synthetic chemicals. Foliar sprays of Pyrethroids (check label for the particular crops that are labeled as this will vary greatly) or Pyrethrum + Neem or *Beauveria bassiana* + Pyrethrum will reduce feeding, but if mite populations are high it will be difficult to eliminate the damage. Applications should start as soon as damage is noticed before mites have a chance to build their population. Foliage should be thoroughly covered with spray material as should the base of plants.

Cultural controls involve using transplants instead of direct seeding, as the mites would do less damage to larger plants. Using high levels of heat such as clear plastic mulch to heat the soil and kill mites and, if used in the summer, kill even their eggs. Steam heat used to control nematodes and soil pathogens can be used to greatly reduce mite numbers before next fall's planting. Many cultivations during the summer can significantly decrease the number of over-summering eggs that survive.



Strip-Till, Biological Strip-Till and No-Till Systems Using Cover Crops for Seedless Watermelon Production

Weekly Crop Update – University of Delaware Cooperative Extension
Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

Strip-Till, Biological Strip Till, and No-Till Systems Using Cover Crops for Seedless Watermelon Production. Seedless watermelons are the most important fresh market vegetable crop on the Delmarva Peninsula with over 5,000 acres grown annually on over 150 farms.

Considerable production costs are incurred to grow seedless watermelons including transplants, plastic mulch, drip tape, irrigation (pumping), fertilizers, and pest control. Over 95% of seedless watermelons are grown on black plastic mulch in a tillage and input intensive system.

Current systems require several tillage operations prior to laying plastic. Heavy tillage reduces organic matter levels in the soil by increasing decomposition rates, destroys soil structure, and negatively affects soil health. Compacted areas between beds allow water to accumulate and can increase disease pressure in wet years as evident with the high amounts of *Phytophthora* fruit rot in watermelon fields on Delmarva in 2017.

Plastic mulch use adds extra cost to production, requires addition labor and time to apply, requires hand labor and machine use for removal, and must be disposed of in landfills. Degradable mulches are available and do offer another option for watermelons, however there is a high up-front cost in their use.

In a standard production system, over 130 lbs. of nitrogen are applied using inorganic nitrogen sources, another input cost (manufactured from fossil fuels), There are a minimum of 4 trips across the field with tillage and plastic laying equipment with associated fuel cost.

There is increased interest in no-till and strip till systems using killed cover crops for seedless watermelon production for later season plantings (late May and June) to reduce costs, reduce the risk of *Phytophthora* fruit rots, and maintain soil health. Another option is to transplant into barley stubble after harvest in June. These systems will not produce early watermelons but can improve the economics of later plantings.

No-till production of transplanted vegetable crops has been researched and demonstrated on-farm over the last two decades and no-till systems have been shown to be as productive as plasticulture based systems.

Research by Johnson and Taylor in Delaware in the 1990s showed the potential for no-till transplanting vegetable crops into rye cover, using a rolling corn stalk chopper to roll kill the rye (newer systems use a chevroned roller/crimper specifically designed to roll kill cover crops). Vegetables successfully grown with this method included pumpkins, cantaloupes, watermelon, tomatoes, and peppers. Additional studies looked at cover crop systems and no-till transplanting of vegetables into hairy vetch, crimson clover, hairy vetch-rye-crimson clover mix, and subterranean clover cover crops. This research showed that crops of squash could be grown with no additional nitrogen in killed legume covers.



Chevron bladed roller crimper for rolling cover crop prior to transplanting

The University of Delaware conducted additional research evaluating no-till and biological strip till methods for seedless watermelon production. The goal was to reduce input costs while maintaining productivity, eliminate plastic mulch in production, maintain or improve soil organic matter and soil health, provide a portion of

nitrogen fertilizer biologically, decrease fruit rots and other diseases, and decrease machine and labor costs.

Use of forage radish in a biological strip till system (winter killed forage radish strips with rye in between) was demonstrated for seedless watermelon and cantaloupe production at the University of Delaware in 2013. Additional research was conducted at the University of Delaware in 2014 with biological strip till using rye, hairy vetch, crimson clover and mixed systems with winter killed forage radish strips.

Biological Strip Till Systems in 2015

A one-acre plot was dedicated to this study. Cover crops were planted in early September 2014 for the 2015 study. A biological strip till system uses a one row strip of forage radish surrounded by the cover crop on either side. This is accomplished by blocking or dedicating seed meters in a drill. A diagram is shown below:

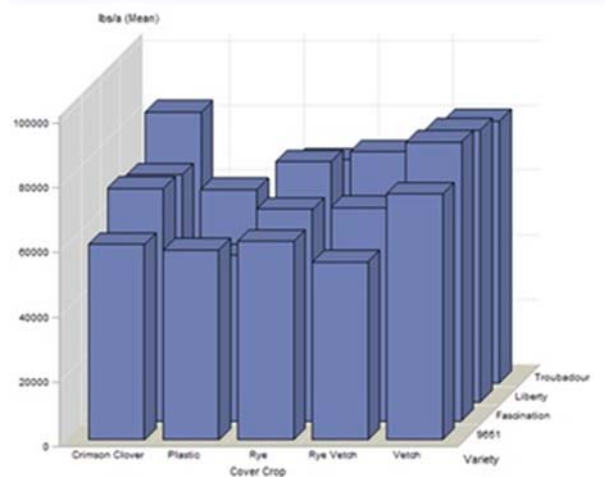
C C C C C R C C C C C C C (C = Cover Crop. R = Forage Radish)

Cover crop combinations are given in the treatments below. The forage radish winter killed and deteriorated, leaving a strip with holes (the biological strip till). Cover crops were rolled using a roller crimper after rye headed but before anthesis and when full biomass was achieved with legumes. Additionally, non-selective and pre-emergence herbicides were applied after rolling. Seedless watermelons and pollinizer plants were set by hand. It has been shown that transplants can be set directly in the hole left by the forage radish that winter kills. Drip irrigation was used in both the plasticulture and biological strip till systems.

Treatments with the single row of tillage radish in the middle and cover crops on either side included:

- 1) Roll killed rye
- 2) Roll killed vetch
- 3) Roll killed crimson clover
- 4) Killed subterranean clover
- 5) Roll killed rye-vetch
- 6) Roll killed rye-crimson clover
- 7) Black plastic mulch (control)

Results indicate that biological strip till systems, when planted later in the season, can be a viable alternative to plasticulture systems. The best cover/radish combination for weed management was the rye/crimson clover mix.



Yield of seedless watermelons in a biological strip till system by variety and cover crop, Georgetown, DE 2015

Tillage Based Strip Till

Tillage based strip till systems can also be used to grow seedless watermelons. In this system strips are tilled using a strip tillage implement with coulters or with mini rotavators. Transplants are set with a transplanter designed to go through some trash or that punches holes in the ground for the transplant.



Strip-till Implement

No-till for Seedless Watermelons

No-tilling into rolled cover crop or into barley stubble can also be successful with seedless watermelons. The key to success with this system is to have soils in good condition that will allow a no-till transplanter to function properly (cut a slot and then close around the transplant). To make this function, soils need to have a sufficient moisture level at transplanting.

All Systems

In each of these systems, addition of a legume cover crop such as hairy vetch or crimson clover can provide a portion of the nitrogen to grow the watermelon crop (credit 60-90 lbs of N/acre). Thick cover crop stands producing high amounts of biomass will serve as a mulch for weed control and will also serve to keep fruit off the ground, limiting fruit diseases. Good transplant to soil contact at planting is essential and equipment must be set up correctly to achieve this. Additional fertilizers can be applied before or at planting and can be sidedressed.

Strip-till and no-till production systems are adapted to overhead irrigation. Drip tape can be applied in strip till systems using properly modified equipment to place in the ground next to plants. Surface applied drip tape is not recommended.

The biggest challenge in each of these systems is weed management, especially in the row. Non-selective herbicides are used before transplanting along with a residual program. Other residuals can be applied between rows with a shielded sprayer. Post emergence applications are limited to grass materials or shielded applications. Irrigation is necessary to activate residual herbicides. See the 2018 Mid-Atlantic Commercial Vegetable Production Recommendations for specific guidance <http://extension.udel.edu/ag/vegetable-fruit-resources/commercial-vegetable-production-recommendations/>.

New Rutgers Fact Sheet

The following fact sheet is now available to download from the Rutgers website:
<https://njaes.rutgers.edu/fs1289/>

FS1289

Ultra-Niche Crop Series: Garlic for Small Commercial Growers

Thomas Orton, William Hlubik, Jennifer Matthews and Meredith Melendez

Calendar of Important Events

📅 Indicates the newly added event since last calendar

May 2018

📅 **May 5**

Rain Barrel Workshop, WheatonArts EcoFair, 1501 Glasstown Road, Millville; \$20. Two sessions will be held: 11am-1pm and 2pm-4pm. All participants will make a rain barrel to take home. Pre-registration is required as space is limited. To register contact Tammy Commander 856-451-2800 x1; tammy-co@co.cumberland.nj.us or mail payment to: Rutgers Cooperative Extension, 291 Morton Ave., Millville, NJ.

📅 **May 9**

MidAtlantic Women in Agriculture: How to Avoid the Probate Process, Webinars held 2nd & 4th Wednesdays of each month at noon. Cost is free. To register visit: <https://www.eventbrite.com/e/2018-Wednesday-webinars-tickets>.

📅 **May 15**

CORE Training Program, Extension Conference Center, 18 Ag Extension Way, New Brunswick, NJ; 12:30-4:30 p.m.; Registration Fee \$145. 6 CORE credits given for this course. For more information call 848-932-7207

📅 **May 17**

Home Landscape Design Part 1: The Fundamentals, Ocean County Agricultural Center, 1623 Whitesville Road, Toms River, NJ; 10:00 a.m.—12:00 p.m. For more information or to register call Deborah Fuentes 732-505-4563.

📅 **May 23**

MidAtlantic Women in Agriculture: Food Marketing Trends, Webinar series held 2nd & 4th Wednesdays of each month at noon. Cost is free. To register visit: <https://www.eventbrite.com/e/2018-Wednesday-webinars-tickets>

📅 **May 31**

Home Landscape Design Part 2: Incorporating Plants, Ocean County Agricultural Center, 1623 Whitesville Road, Toms River, NJ; 10am-12pm. For more information or to register call Deborah Fuentes 732-505-4563.

June 2018

📅 **June 6**

Native Plant Trials, Ocean County Agricultural Center, 1623 Whitesville Road, Toms River, NJ; 6:30-8:30 p.m. For more information or to register call Deborah Fuentes 732-505-4563.

📅 **June 13**

MidAtlantic Women in Agriculture: Holy Hashtag, Webinar series held 2nd & 4th Wednesdays each month at noon. Cost is free. To register visit: <https://www.eventbrite.com/e/2018-Wednesday-webinars-tickets>

June 14

CORE Training Program for the NJ Pesticide Applicators License, Holly House, 130 Log Cabin Road, New Brunswick, NJ; 8:45 a.m. - 12:45 p.m. Registration fee \$145.00. 6 CORE credits assigned to this class. For more information call Carol Broccoli 848-932-7207

June 27

MidAtlantic Women in Agriculture: Facebook Promotions, Webinar series held 2nd & 4th Wednesdays of each month at noon. Cost is free. To register visit: <https://www.eventbrite.com/e/2018-Wednesday-webinars-tickets>

July 2018**July 11**

MidAtlantic Women in Agriculture: Stress Management on the Farm, Webinar series held 2nd & 4th Wednesdays each month at noon. Cost is free. To register visit: <https://www.eventbrite.com/e/2018-Wednesday-webinars-tickets>

July 25

MidAtlantic Women in Agriculture: Farm Transition Taxes and Medicaid Estate Recovery, Webinar series held 2nd & 4th Wednesdays each month at noon. Cost is free. To register visit: <https://www.eventbrite.com/e/2018-Wednesday-webinars-tickets>

July 25-27

Better Process Control School, Cook Student Center, 59 Biel Road, New Brunswick, NJ; 8:30-4:30 p.m.; \$995 by 7/11; \$1,095 after. Continental breakfast & deli buffet lunch provided. For more information call Suzanne Hills 848-932-7234.

August 2018**August 8**

MidAtlantic Women in Agriculture: Understanding Credit and Credit Scores, Webinar series held 2nd & 4th Wednesdays each month at noon. Cost is free. To register visit: <https://www.eventbrite.com/e/2018-Wednesday-webinars-tickets>

August 20-24

Introduction to Food Science Course, New Jersey Institute for Food, Nutrition and Health, Room 101, 61 Dudley Road, New Brunswick, NJ; Registration 5 days \$1,595 by 8/6; \$1,645 after. Breakfast and lunch will be provided. Check in time 8:30; class runs 9am-4pm. For more information call Suzanne Hills, Program Coordinator 848-932-7234.

August 22

MidAtlantic Women in Agriculture: An Overview of the Resource Stewardship Evaluation Tool, Webinar series held 2nd & 4th Wednesdays each month at noon. Cost is free. To register visit: <https://www.eventbrite.com/e/2018-Wednesday-webinars-tickets>

September 2018

📅 September 12

MidAtlantic Women in Agriculture: Soil Maps for Production Agriculture, Webinar series held 2nd & 4th Wednesdays each month at noon. Cost is free. To register visit: <https://www.eventbrite.com/e/2018-Wednesday-webinars-tickets>

📅 September 21

CORE Training Program for the NJ Pesticide Applicators License, Extension Conference Center, 18 Ag Extension Way, New Brunswick, NJ; 12:30-4:30p.m. 6 CORE credits assigned for this class. Registration fee \$145.00. For more information call Carol Broccoli 848-932-7207

📅 September 26-27

Sensory Evaluation, University Inn & Conference Center, 178 Ryders Lane, New Brunswick, NJ. Registration \$945 by 9/12; \$975 after. Continental breakfast and deli buffet lunch provided. Day 1 check in 8:00 a.m.; class runs 8:30 a.m.—4:30 p.m. For more information call Suzanne Hills, Coordinator 848-932-7234

📅 September 26

MidAtlantic Women in Agriculture: Farm Recordkeeping, Webinar series held 2nd & 4th Wednesdays each month at noon. Cost is free. To register visit: <https://www.eventbrite.com/e/2018-Wednesday-webinars-tickets>

📅 September 28

Making Sense of the Numbers: Statistics for Food Scientists, University Inn & Conference Center, 178 Ryders Lane, New Brunswick, NJ; 8:30 a.m. - 4:30 p.m. Check in time 8:00 a.m. Registration \$395 by 9/14; \$450 after. For more information call Suzanne Hills, Program Coordinator 848-932-7234

October 2018

📅 October 10

MidAtlantic Women in Agriculture: Smart Choice Health Insurance Basics, Webinar series held 2nd & 4th Wednesdays each month at noon. Cost is free. To register visit: <https://www.eventbrite.com/e/2018-Wednesday-webinars-tickets>

📅 October 19

CORE Training Program for the NJ Pesticide Applicators License, Extension Conference Center, 18 Ag Extension Way, New Brunswick, NJ; 12:30-4:30p.m. Registration fee \$145.00. 6 CORE credits assigned for this course. For more information call Carol Broccoli 848-932-7207.

📅 October 24

MidAtlantic Women in Agriculture: Preparing Your Marketing Efforts for the Holidays, Webinar series held 2nd & 4th Wednesdays each month at noon. Cost is free. To register visit: <https://www.eventbrite.com/e/2018/Wednesday-webinars-tickets>

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 style="text-align: center;"><u>2018</u></p> <p>May 17 Sep 20 Oct 18</p> <p>To Register call 609-984-6614 For directions call 856-451-2800</p> <p>*****</p>	<p>Cumberland County Agriculture Development Board County Administration Bldg. Freeholder Room 164 W. Broad Street Bridgeton, NJ 08332</p> <p style="text-align: center;"><u>2018</u></p> <p>May 8 June 12 Jul 10 Aug 14 Sept 11 Oct 9 Nov 13 Dec 11</p> <p>Reg. Meetings start at 7 p.m. Information call 856-453-2211</p> <p>*****</p>	<p>✓</p> <p>Cumberland County Board Of Agriculture 291 Morton Avenue Millville, NJ 08332 (Between Rosenhayn & Carmel) 7 pm meetings</p> <p style="text-align: center;"><u>2018</u></p> <p>May 17 Sept 20 Oct 18 Nov 15 Dec 20</p> <p>For info call Hillary Barile, President 856-453-1192</p> <p>*****</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

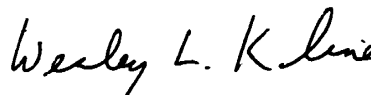
Questions? Call Division of Ag & Natural Resources, NJ Dept. of Ag 609-292-2242

Program in Cumberland County suspended until further notice.

Sincerely,



Salvatore S. Mangiafico, Ph.D.
County Agent II/Associate Professor
Environmental & Resource Management
Internet: Mangiafico@njaes.rutgers.edu



Wesley L. Kline, Ph.D.
County Agent II/Associate Professor
Vegetable & Herb Production
Internet: wkline@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 un-

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



1915-2017

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Cooperative Extension of Cumberland County
Extension Education Center
291 Morton Avenue
Millville, NJ 08332-9791

RUTGERS
New Jersey Agricultural
Experiment Station

Rain Barrel Workshop



Note: A truck or SUV is best equipped to transporting a rain barrel, which is 55 gallons. Homeowner will need to cut their downspout and elevate their finished barrel on a raised platform for rain barrel installation.

Contact:

Tammy Commander
Rutgers Cooperative Extension
291 Morton Ave., Millville, NJ 08332
856-451-2800, ext. 1
tammyco@co.cumberland.nj.us

Saturday, May 5th, 2018 at

WheatonArts EcoFair

11:00am – 1pm and 2pm – 4:00pm

Become a wiser water user and eco-friendly gardener by attending a rain barrel workshop, offered by Rutgers Cooperative Extension of Cumberland County and the Cumberland County Improvement Authority.

This hands-on workshop is designed to educate participants on the benefits of rainwater harvesting.

Workshop participants will build a rain barrel to take home.

Location:

WheatonArts and Cultural Center
1501 Glasstown Rd, Millville, NJ 08332

There will be a free information session followed by building the rain barrel.

A \$20 registration fee includes materials for building one rain barrel. Cash or checks accepted. ***Make checks payable to Cumberland County Board of Agriculture Research Account.***

Space is limited.

You must pre-register.

RUTGERS

New Jersey Agricultural
Experiment Station

**Cumberland
COUNTY
IMPROVEMENT
Authority**

WHEATONARTS
AND CULTURAL CENTER

Longhorned Ticks in New Jersey

In late 2017, animal health experts in New Jersey identified a *Haemaphysalis longicornis* tick, commonly known as the “longhorned tick” or “bush tick,” on a sheep in Hunterdon County. The longhorned tick is not native to the United States. However, it is a serious threat to livestock in Australia, New Zealand and countries of eastern Asia.

Finding the longhorned tick in New Jersey is noteworthy because this is the first time this tick was found in the United States. Animal health authorities are still investigating exactly how the longhorned tick entered the U.S. Some possible ways it may have entered include entering on domestic pets (e.g. dogs), horses, livestock or humans.

Why We Are Concerned

The reason this tick is a concern is because it may pose a risk to New Jersey livestock. It is a serious pest that can attach itself to various warm-blooded animals to feed. If too many ticks attach to one animal, the loss of blood can kill the animal. Ticks can also spread a variety of diseases.

What We Are Doing

The property where the tick was found and animals living there were treated to eliminate the tick. We will continue to monitor wildlife, livestock and horses in the local area for these ticks. Our primary goal is to prevent the spread of the tick, stop it from becoming established in NJ and keep it out of the rest of the country.

What You Can Do

The adult longhorned tick is dark brown in color and grows to the size of a pea when it is full of blood. The other life stages of the tick are very small and difficult to see with the naked eye.



(longhorned tick, adult)



(longhorned tick, full of blood)

If you find a suspected longhorn tick on you, your pets, horses, livestock or hunter-harvested deer, please collect the tick for animal health officials to identify.

- Place the tick in a snack or sandwich size Ziploc baggie and seal it. Do NOT use tape to secure the tick.
- Call animal health officials to pick up and submit the tick for identification:
 - Dr. AC Welsch, USDA – 609-209-6778
 - Dr. Nicole Lewis, NJ Dept. of Agriculture – 609-571-2154

- If you prefer, you can also call Dr. Lewis or Dr. Welsch and they will arrange for someone to come to your property, collect ticks, and submit them to the laboratory.

For additional information about the longhorned tick in New Jersey, visit:

<http://www.nj.gov/agriculture/news/hottopics/topics171123.html>