RUTGERS
New Jersey Agricultural Experiment Station

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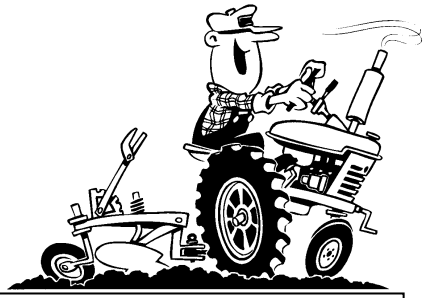
Cultivating Cumberland

October - 2021 VOL. 26, ISSUE 10



Inside this issue:

The office remains closed to the public.

RUTGERS
New Jersey Agricultural Experiment Station

TWILIGHT MEETING

10/7/21 MEETING RESCHEDULED

NOVEMBER 17, 2021
3:00-5:00 PM

CLEANING AND SANITIZING GRADING EQUIPMENT

RUTGERS AGRICULTURAL RESEARCH AND EXTENSION CENTER
121 NORTHVILLE RD.
BRIDGETON, NJ 08302-5919

This program is free but please visit the link below to register in advance by November 12th. Ten people must register to hold this event,
HTTP://RUTGERSONFARMFOODSAFETY.EVENTBRITE.COM
Any questions contact Brandi at (856) 451-2800 x 1 or email BrandiWi@co.cumberland.nj.us.

MASK POLICY
As per Rutgers policy, masks will be required during the entire meeting, no exceptions. If you do not have a mask, one will be provided. Hand sanitizer will be available as well.

Topics Covered

- Cleaning Packing Equipment
- Difference between Cleaning & Sanitizing
- Different products to use for monitoring pH and sanitizer concentration
- Hands-on Activities

on-farm food safety team

New Jersey Department of Agriculture Expands Spotted Lanternfly Quarantine Zone

William Errickson, July 29, 2021

New Jersey Secretary of Agriculture Douglas Fisher announced the Department has added five counties to the spotted lanternfly quarantine zone. The counties new to the list are Morris, Monmouth, Middlesex, Essex, and Union. They join the previously announced quarantine counties of Burlington, Camden, Gloucester, Hunterdon, Mercer, Salem, Somerset, and Warren.

Business entities that routinely travel in and out of the quarantine area are required to take, and pass, free training regarding the spotted lanternfly at https://bit.ly/3mDGv2d. Those businesses that interact exclusively in New Jersey's quarantine zone must comply with the details outlined in the quarantine order. The quarantine also allows access to property for Department, USDA, or USDA contracted agents where the spotted lanternfly is suspected or confirmed so that the property can be evaluated and treated, if necessary.

The full press release from NJDA can be found at: https://www.nj.gov/agriculture/news/press/2021/approved/press210830.html

For additional information on spotted lanternfly, visit:

Rutgers NJAES Spotted Lanternfly Website https://njaes.rutgers.edu/spotted-lanternfly/

NJDA Spotted Lanternfly Business Resources Website: https://www.nj.gov/agriculture/divisions/pi/prog/pests-diseases/spotted-lanternfly/business-resources/

Spotted Lanternfly Reporting Tool

William Errickson, July 29, 2021

Spotted Lanternfly (SLF) sightings are increasing on many NJ farms, especially as customers from across the tri-state area visit agritourism and pick-your-own operations, contributing to the spread of this invasive insect. Accurate reporting is important for understanding the movement of this pest and for developing a comprehensive management plan.

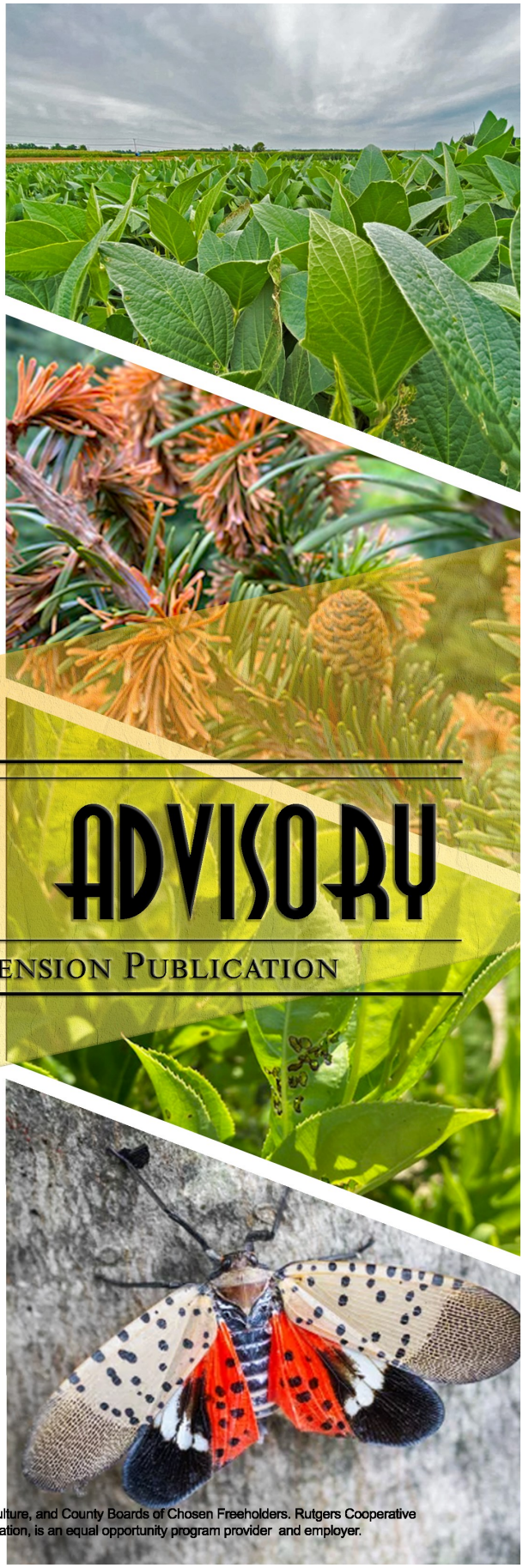
SLF sightings should be reported to the NJ Department of Agriculture using their online reporting tool: https://www.nj.gov/agriculture/divisions/pi/prog/pests-diseases/spotted-lanternfly/#reporting-tool

If the sighting was in a known quarantine county (*Burlington, Camden, Gloucester, Hunterdon, Mercer, Salem, Somerset, or Warren*) you do not need to fill out the report.
Additional resources for managing SLF on your farm can be found at:
https://njaes.rutgers.edu/spotted-lanternfly/

https://www.nj.gov/agriculture/divisions/pi/prog/pests-diseases/spotted-lanternfly/business-resources/

RUTGERS
New Jersey Agricultural Experiment Station
COOPERATIVE EXTENSION CUMBERLAND COUNTY

HAVE YOU SIGNED UP FOR **PLANT & PEST ADVISORY** UPDATES YET?



PLANT & PEST ADVISORY

A RUTGERS COOPERATIVE EXTENSION PUBLICATION

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HTTPS://PLANT-PEST-ADVISORY.RUTGERS.EDU/

WE R HERE WHEN YOU NEED **US**

Cooperating Agencies: Rutgers, The State University of New Jersey, U.S. Department of Agriculture, and County Boards of Chosen Freeholders. Rutgers Cooperative Extension, a unit of the Rutgers New Jersey Agricultural Experiment Station, is an equal opportunity program provider and employer.

Taking a representative soil sample

Wes Kline

Each fall growers should take soil samples to base their fertilizer needs for the following growing season. How that sample is taken determines whether the effort was worth it. This past summer a grower contacted me about poor growth in part of a field. A soil sample had been taken the fall before and fertilizer was applied at the recommended rates. During the growing season, the plants in one area of the field were stunted. We pulled soil samples from the good and poor areas. The difference between the good and poor areas was the results of pH. The poor area had a pH of 4.51 and the good area 6.05. Most vegetable crops grow best between 6 and 6.8. Even with liming to increase the pH the poor area would still be too low. It is critical that samples are collected correctly that represents the field. One sample should represent between 2.5 and 10 acres. Below are instructions from the Rutgers Soil Testing Laboratory on how to take a sample.

Soil Sampling Instructions - Field, Commercial Vegetables and Fruit, or Nursery Crops

Sampling scheme

1. Areas that are different in appearance, slope, drainage, soil type, or past cropping should be sampled and tested separately.

2. Also sample separately areas that have received different lime and/or fertilizer treatments. Avoid taking the sample from the fertilizer band when sampling areas in row crops.

3. To obtain a representative sample, plan to collect 12 - 16 subsamples within the field. The subsamples will be combined and mixed to create one representative sample. Note that fruit orchards require two samples for each field. One sample should be a composite of 12 - 16 subsamples taken under the trees, and the other sample should be a composite of 12 -16 subsamples taken between trees.

4. Each sample must be submitted with the appropriate soil test questionnaire.

Sampling procedure

1. The soil is easier to sample when its moisture condition is suitable for plowing.

2. Use a trowel, spade, auger, or soil tube to obtain thin vertical slices or cores of soil from the surface to a depth of 6 - 8". If using a trowel or spade, insert the blade into the soil to a depth of 6 - 7"; remove soil and throw it aside. Reinsert the blade to take a thin (½") slice of soil and lift the slice from the ground. Using a knife, cut from the center of this slice a 1" wide core from top to bottom. Place the core (subsample) in a clean bucket or other container.

3. Repeat this procedure at 11 - 15 locations within the sampling area, placing the subsamples together in the container.

Continued on next page

4. If the soil is very wet when samples are taken, the soil should be laid out on clean paper to air-dry (**do not heat** to dry).

5. Mix the subsamples of a sampling area together in the container, breaking up large clumps. The goal is to provide a representative sample.

6. Place 1 pint (2 cups) of the soil in a plastic bag (sandwich bags are a good size). Securely seal the plastic bag with a rubber band or twist tie and label the bag using permanent ink. Any excess soil can be returned to the field.

7. Repeat for any separate areas that you wish to have tested.

New Rutgers Fact Sheet

The following revised fact sheet is now available on NJAES Publications:

E371: Livestock and Poultry Veterinary Care Services Series, Part I: What Kind of Vet Do I Need? How Do I Find One? (Rutgers NJAES). Bravo, M.

FS1335: Livestock and Poultry Veterinary Care Services Series, Part II: Federal Resources (Rutgers NJAES). Bravo, M.

FS1336: Livestock and Poultry Veterinary Care Services Series, Part III: State Resources (Rutgers NJAES). Bravo, M.

Dr. Joseph Heckman, Extension Soil Fertility Specialist gave this presentation at the August 19th, 2021, grower twilight meeting at the Rutgers Agricultural Research and Extension Center in Upper Deerfield.

Silicon, Sulfur, and Manganese Protect Pumpkin from Powdery Mildew

Dr. Joseph Heckman

Surveys of grower pest problems often put powdery mildew (PM) diseases at top of list. Fungicides are expensive. Repeated use of same fungicide allows disease to develop resistance. Plant nutrition is a more sustainable solution. Good plant nutrition works and keeps on working year after year. It may not give complete crop protection, but research shows that it can certainly help and reduce or may be even eliminate the need to use fungicides. Also, plant nutrition done well is very much compatible with organic production.

Silicon

Over the past twenty years I have conducted numerous studies on how silicon nutrition can suppress PM disease on crops. Enhanced silicon nutrition works especially well on pumpkin and wheat. Crops most responsive to Si include cucurbits, grasses, and grain crops.

Silicon is an element that is abundant in mineral soils, but it is mostly insoluble. Silicon, along with aluminum, oxygen, are major components of the mineral makeup of sand and clay particles. Silicon fertilizers are used to supply soluble silicon.

Silicon is the element. Silicone is a rubbery organic compound. Silica is combined with oxygen and is common mineral like sand – it is not very soluble.

Functions of Si: growth and yield, suppress disease, protect from some insects, protects against environmental stresses.

Soil testing. No good soil test for Si. Soil pH test, however, used to determine application rates.

We know from research field and greenhouse experiments that many of New Jersey soils can benefit from added silicon.

Plant tissue analysis is typically done to diagnose Si deficiency. Many of our research trials show substantial increases in Si plant uptake where Si has been added to soil. Crops grown on amended soil may have 1% or more Si in plant tissue.

Silicon Fertilizers. AAPFCO designated Si as a beneficial substance. Fertilizer dealers in NJ should take advantage of this as an opportunity to provide a fertilizer product to Garden State growers. Si fertilizers may be sold as solids or liquids. Liquids are specialty fertilizers for greenhouse crops.

Solids are minerals like wollastonite. This is a naturally occurring calcium silicate mined material from the Earth. It looks similar to pulverized agricultural limestone and can be applied in the same way and as a substitute for limestone. It raises soil pH and supplies calcium just like limestone.

Base application rates of wollastonite on recommended rates of limestone. In other words, if the soil test report recommends a ton of CCE, apply wollastonite at the same rate instead. Applications of 1 or 2 tons of wollastonite are typical effective applications rates for PM disease suppression.

Continued on next page

The benefits of wollastonite have been documented to increase Si uptake for at least five years after the initial application. Some wollastonite products are OMRI approved

Steel mill slags are also effective sources of Si. Slags are industrial by products and probably not organic approved. They contain some other micros such as Ni, Cr, and Mo.

Sulfur

Sulfur (S) is essential to all plant and animal life. Several essential amino acids require S. S is also a component of aromatic compounds that give flavor to vegetables. But the main reason to talk about S is that it makes plants more resistant to disease.

Quote from Mineral Nutrition and Plant Disease: Because enhanced sulfur nutrition plays a physiological role in protecting plants from pathogens, soil fertility recommendations "should go beyond the usual considerations of growth and yield. They should be designed to optimize functions of S for induced plant disease resistance and crop quality" (Haneklaus et al., 2007).

S deficiencies are becoming more common. With air quality improvements, less free S rains down from the atmosphere.

Soil tests are not commonly done for S. Consider crop and soil conditions for need for S. Sandy soil with low organic matter contents is likely to be S deficient. Soils recently amended with manures or composts probably are well supplied with S.

Thoughtful selection of fertilizers for N or K can ensure that S is not limiting. Consider using ammonium sulfate as an N source or potassium sulfate as a K source. Typical application rates of N or K as fertilizer will supply adequate S. Gypsum or calcium sulfate is also a good source of S.

Manganese

Manganese (Mn) is one of the most common micronutrient deficiencies in crops grown on coastal plain soils of New Jersey. Frequent use of glyphosate herbicides is making Mn deficiency more common. Glyphosate blocks the Shikimate metabolic pathway where Mn plays a key role. Glyphosate is a metal chelator which means that it grabs on to metals like Mn and renders it unavailable for plant nutrition.

Soil testing and plant tissue analysis are good diagnostic tools for Mn availability. In the crop Mn should be about 25 ppm. On the soil test report look at both the level of soil test Mn along with soil pH. As soil pH increases, Mn availability deceases. Excessive liming can induce a Mn deficiency.

Mn has been shown to be important to suppression of PM disease. That is why I mention it here while I am talking about plant nutrition for PM disease suppression.

Foliar application of Mn fertilizer is generally more economical than broadcast soil applications. A good foliar application rate is 1 lbs. Mn per acre as a foliar treatment. Manganese sulfate is an excellent fertilizer source. When crops are Mn deficient, repeated foliar applications may be necessary.

Steve Johnson, Crops Specialist at the University of Maine wrote this article for the December 2001 issue of "Spudlines" which provides good information to help growers interpret soil tests.

Soil pH: The "potential (of) hydrogen" or pH test measures the relative acidity of the soil. The pH is only a measurement of the hydrogen and tells us that the soil is acid or alkaline but does not tell us the reason why the soil is acid or alkaline. A low pH does not necessarily mean a shortage of calcium. The pH is purely a measure of the number of hydrogen ions in the soil. Hydrogen ions are positively charged and are attracted to colloidal particles of clay or organic matter. In a balanced soil, the colloidal particles have the correct proportion of various minerals attracted to them. This allows the soil to interact correctly with its environment, giving and taking different nutrients to plant roots and microbes. When hydrogen levels become too high, the soil can no longer interact well with the living organisms around it. Trace elements such as copper, zinc, and phosphorous become "locked up" and although present, are not available to plants as nutrients.

The pH of a soil is influenced by three crucial elements: calcium, magnesium, and potassium. The balance of these within any soil will determine the hydrogen level (or pH) and the relative health of the soil. Only a healthy soil, well balanced with these elements, can support a good level of microbial activity, hold air, and water in its structure and allow trace elements to become available for plant use.

Some clay particles are so small that they stay suspended in water. These clay particles are negatively charges and repel each other, which is why they are held in suspension. This is called a suspended colloid. Portions of the organic matter in soils are also suspended colloids. The colloidal constituent of the soils is of great importance to pH and the availability of nutrients for plant growth. All the electrical energy of the colloid portion of the soil tells us how much potential there is in that soil to react with other nutrients.

Cation Exchange Capacity (CEC): The negative charge of soil colloids attracts positively charged cations such as calcium, magnesium, and sodium. The surfaces of clay and organic matter that hold cations are the action exchange sites. The soil's ability to react is measured as its cation exchange capacity (CEC) in milliequivalents (Meq). CEC is usually related to soil texture. For example, clay soils will have a higher CEC because they have more "surface area" than coarse, sandy soils. The more sites a soil has, the higher its cation exchange capacity (CEC), and the greater its ability to hold nutrients. In order to maintain equilibrium, the negative charges in the soil must be balance by positive charges. This means that exchange sites are always full, safely storing plant nutrients. In a nutshell, the higher CEC and organic matter, the more lime it will take to move the pH.

Base Saturation Balancing –Major Elements of Cation Exchange: Conventional soil analysis centers on phosphorous, potassium, magnesium, and pH, but does not focus on the *balance* of the soil. In order to have chemical equilibrium it is essential that major elements are balanced on the soil colloid exchange sites. This allows the soil to function far more efficiently than if they are out of balance. The first priority is to achieve a balance between calcium and magnesium. This will benefit nutrient availability, soil structure and ease of cultivation.

Base saturation analysis centers on the ratio of exchangeable bases making up the CEC and is expressed on a percent basis. There are several theories on what these ratios should be. Some deal with the ratio of Ca-Mg being from 5 to 10 based on the CEC; others involve the Ca being a 7-fold multiple of the Mg and the Mg being a 2-fold multiple of the K. I prefer the following approach, which identifies ranges for the Ca, Mg, and K.

Continued on next page

Calcium	**60% to 80%**
Magnesium	**10% to 25%**
Potassium	**5% to 7%**

Calcium (Ca^{2+}): Calcium activates a number of plant growth-regulating enzyme systems, helps convert nitrate -nitrogen into forms needed for protein formation, is used in cell wall formation and normal cell division, and contributes to improved disease resistance. Along with magnesium and potassium, calcium helps to neutralize organic acids, which form during cell metabolism in plants. In soil, calcium replaces hydrogen (H) ions from the surface of soil particles when lime is added to reduce soil acidity. Calcium is essential to microorganisms as they turn crop residues into organic matter, release nutrients, and improve soil aggregation and water holding capacity.

Calcium and magnesium must always be considered together and the balance between them kept correct at all times. Excess in one will cause deficiency in the other. In the soil, calcium should occupy between 60 to 80 percent of the positions on the soil colloid in terms of the exchange capacity. When this correct saturation level is achieved, calcium improves soil texture, makes phosphorous and micronutrients more available and improves the environment for microbial growth. Calcium tends to improve soil structure; therefore, on a light soil structure the target for calcium would be nearer 60 percent, while on heavy clay it would be nearer to 80 percent.

Magnesium (Mg^{2+}): Magnesium is closely associated with calcium and therefore the two elements should be considered together. Fertilizer more readily inhibits magnesium than calcium, particularly super phosphates.

Magnesium is an essential component of the chlorophyll molecule, with each molecule containing 7 percent magnesium. Therefore, magnesium is important to plants in photosynthesis. Magnesium also acts as a phosphorous carrier in plants. It is necessary for cell division and protein formation. Phosphorous uptake could not occur with out magnesium and vice versa. Magnesium is essential for phosphate metabolism, plant respiration and the activation of several enzyme systems. It should be remembered that magnesium is far more reactive that calcium in the soil. Magnesium has far more influence on soil pH than calcium. Magnesium has 1.67 times more exchange capacity than an equal amount of calcium. It should occupy between 10 percent and 25 percent of the soil's cation exchange capacity. Magnesium helps to hold the soil together and tightens it up in terms of physical structure. Deficiencies occur most often in coarse-textured, acid soils.

Magnesium availability to plants is often related to soil pH. On soils with a pH below about 5.8, excessive hydrogen and aluminum can influence Mg availability and plant uptake. At pH values about 7.4, excessive calcium may have an overriding influence on Mg uptake by plants. Sandy soils with low cation exchange capacity have a low Mg supplying power. Application of high calcium lime can aggravate a Mg deficiency by increasing plant growth and increasing the demand for Mg. High applications of ammonium and potassium may also interfere with balanced nutrition through competitive ion effects. Magnesium tightens the soil and pulls it together, making it sticky. The higher the magnesium content, the stickier the soil will be when wet, the harder when dry. In a clay soil, the target for magnesium would be 10 percent.

For soils with a cation exchange capacity (CEC) higher than about 5 milliequivalents (Meq) per 100 grams, it may be desirable to maintain the soil Ca to Mg ratio at 10 to 1. For sandy soils with a CEC of 5 Meq pr less, it may be desirable to maintain the Ca to Mg ratio at about 5 to1.

Continued on next page

Potassium (K^+): Potassium is involved in the conversion of free air-borne nutrients – carbon, hydrogen, and oxygen – into plant materials: starches, sugars, proteins, vitamins, enzymes, or cellulose. Potassium is inhibited by a soil too high in iron or with a low pH. Both potassium and phosphorous benefit enormously, in the terms of availability to plants, from the decomposition of nutrients by soil microbes. Because potassium (K) is a cation, it can be measured like calcium and magnesium. Generally, K levels are 5-7 percent saturation.

Availability of Trace Elements: There are three forms in which plant nutrients can exist in soils: **unavailable, exchangeable (partly available) or soluble (readily available)**. In the *unavailable* form the nutrient element is bound in a chemical compound that renders it unavailable, so it is not free to be absorbed by plants. Decomposition of the compound is required to free the element for use. For example, nitrogen or other elements bound in plant residue or soil organic matter cannot be used until the organic compounds have been decomposed by soil micro-organisms, which then release the nutrients in an available form for plant use. Phosphate added in a soluble form as a fertilizer can be rendered useless to plants, as it precipitates into the high insoluble iron and aluminum phosphates. The *exchangeable* form is when an element is "adsorbed" (attached to the surface of a colloid particle) and available for exchange. Most colloids are negatively charged, and it is the positively charged cations that are attracted to them. In addition to macro elements, calcium, magnesium, sodium, potassium, and hydrogen cations also include zinc, copper, manganese, and iron as trace elements. Plants can exchange cations with the colloids freely. If a colloid or plant root does, not hold elements such as potassium, in exchangeable form, they are soon washed out of the soil. When soils become too acidic, some of the exchangeable cations become unavailable to plant roots. Sulfur, nitrogen, phosphorous, molybdenum and boron form negatively charged ions called anions. These are not held to any great extent by the soil in exchangeable form. These elements are mainly present in soluble form in soil solution, or in fairly insoluble substances such as calcium sulfate or dicalcium phosphate. A main source of these elements is in organic combination with plant residues and soil organic matter. Most fertilizers are designed to provide nutrients in the most *available,* soluble form. However, if applied to soils that are imbalanced in terms of the cation exchange equilibrium, much of the product can be readily leached from the soil, only offering short-term benefit. The availability of minerals to the plant for uptake varies according to soil pH. Between 6.0 and 6.5 there is maximum availability for boron, copper, iron, manganese, and zinc. However, this only holds true if, in addition to correct pH (hydrogen level), there is also the correct balance of macro elements on the cation exchange sites of the soil colloid particles. In other words, calcium, magnesium, sodium, and potassium must also be in correct balance to enable the trace elements to become available for uptake. Nitrogen, phosphate, and sulfate must also be adequate.

The basic idea is that inadequate exchangeable Ca results in poor soil structure, characterized by "tightness", because the amount of pore space for air is less than optimal. Consequently, root health is compromised, and nutrient availability and uptake reduced. A general rule often given is that the ratio of calcium (Ca) to magnesium (Mg) should be about 5-7 to 1.

Calendar of Important Events

× Indicates a newly added event or more information since the last calendar

October 28-30

PMA Fresh Summit Convention and Expo; New Orleans, Louisiana; Fresh Summit brings together produce and floral industry leaders, retail buyers, food safety experts and importers/exporters from across the globe. From decision makers to market innovators, Fresh Summit attendees and exhibitors are the people you need to know; Find more information and register online at https://www.pma.com/events/freshsummit/attend

December 1-2

Organic Grower Summit; Monterey, CA; Two days of information, education, and networking opportunities with organic growers; provides growers firsthand knowledge and information in a variety of areas ranging from Agtech to food safety to sustainability. Through engaging educational sessions, insightful Keynote presentations and a trade show floor featuring nearly 100 exhibitors offering supply chain and service provider opportunities for growers, OGS 2021 is an event not to be missed! Find more information and sign up at organicgrowersummit.com

December 7-9

Great Lakes Fruit, Vegetable & Farm Market EXPO; Over three days, the program includes sessions on fruit crops, vegetable crops, other specialty crops, greenhouse crop production and marketing, farm marketing ideas and operations, farmers' markets and organic production and marketing. There will also be sessions covering a diversity of general interest topics, including food safety and labor; Registration opens in October; Find more information at glexpo.com

December 6-8

Washington State Tree Fruit Association Annual Meeting; Yakima Convention Center, Yakima, Washington; More information available at Wstfa.org

December 6-10

2021 Irrigation Show and Education Week; Long Beach, Ca; More information available at www.irrigation.org

December 11-12, 2022

Empire State Producers Expo; The Oncenter, 800 South State Street, Syracuse, NY 13202; Agricultural trade show and education for the fruit and vegetable grower and marketer; 45 educational sessions; For exhibitor information call (800)218-5586 or email dwren@leepub.com

January 31, 2022

× **Harmonized Audit Training; Online Event;** What records do you need? What does the audit language mean? Join us for an open discussion of each requirement in the audit standard so you are prepared for your audit; $25.00 per person; Deadline to register 1/27/22; Hosted by the Rutgers On-Farm Food Safety; Register online at rutgersonfarmfoodsafety.eventbrite.com

January 31– February 2, 2022

Global Organic Produce Expo 2022; Seminole Hard Rock Casino & Resort, Hollywood, FL; As the only globally driven show for organic produce, this show creates a forum for unique and specific opportunities. Network, exchange ideas, source new products and services, and do business with the industry's leading growers, distributors, packer and retailers. Register online at https://events.farmjournal.com/global-organic-produce-expo-2022/home

February 1-2, 2022

Total Pro Professional Landscape, Nursery & Hardscape Expo & Conference; New Jersey Convention Center, Edison, NJ; The Northeast's professional landscaping event of the year! Trade show, educations, equipment and supplies, discover new products, suppliers and services and much more! Early bird registration open now at $20.00. Use code BLUEBIRD; Find more information or register at totalproexpo.com

February 1-3, 2022

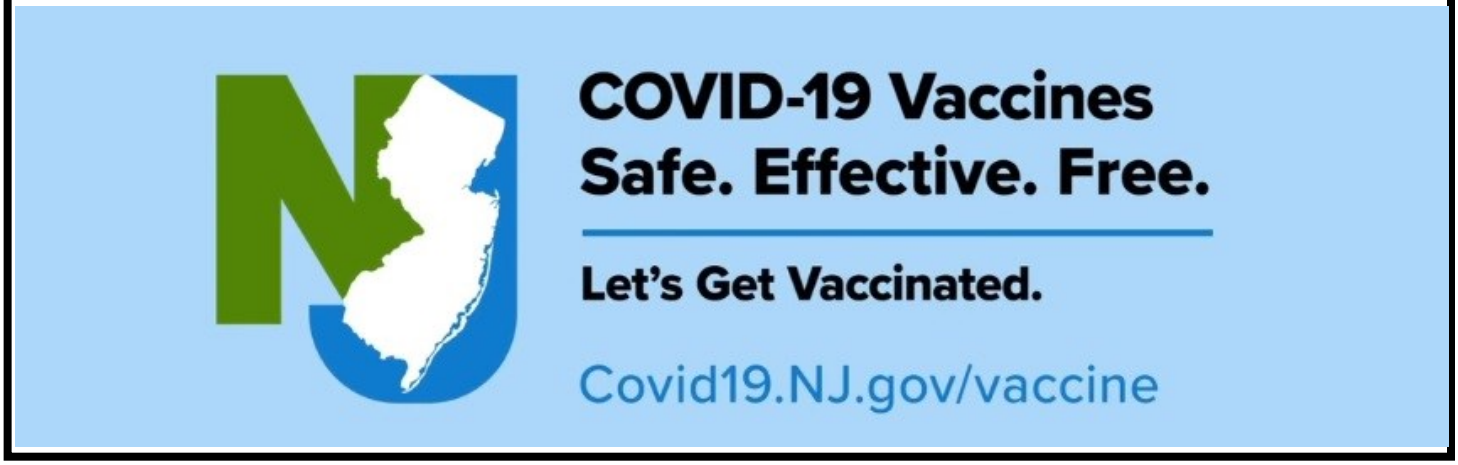
× **Mid-Atlantic Fruit and Vegetable Convention; Hershey Lodge, PA;** The premier grower meeting in the Northeast, normally combining three days of six or more concurrent educational sessions with a large industry trade show and numerous networking opportunities. Find more information at www.mafvc.org

February 8-10, 2022

× **2022 NJ Agricultural Convention and Trade Show; Atlantic City, NJ;** Vegetable Growers Association will hold their annual convention with educational sessions and trade show. Save the date! Find more information at vganj.com

March 2, 2022

× **Harmonized Audit Training; Online Event;** What records do you need? What does the audit language mean? Join us for an open discussion of each requirement in the audit standard so you are prepared for your audit; $25.00 per person; Deadline to register 2/26/22; Hosted by the Rutgers On-Farm Food Safety; Register online at rutgersonfarmfoodsafety.eventbrite.com



REGULARLY SCHEDULED MEETINGS		
Pesticide Certification Exams	**Cumberland County Agriculture Development Board**	**Cumberland County Board Of Agriculture**
Testing is currently being held virtually because of the COVID pandemic.	Virtual Meeting Information can be found on the Public Meeting Calendar on co.cumberland.nj.us	Virtual Meeting Information https://rutgers.zoom.us/my/smangia Meeting ID: 529 557 9817 Passcode: Sal2020 Or call 1 (646) 558-8656
Rutgers will be taking over the pesticide exam program.	Oct. 12 Nov. 9 Dec. 14	Oct. 21 Nov. 18 Dec. 16
Sign-up and find more information at https://pacer.rutgers.edu/	**Meetings start at 7 p.m.** **For more information call the Dept. of Planning, Tourism and Community Affairs at 856-453-2175**	**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,

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RUTGERS
THE STATE UNIVERSITY OF NEW JERSEY

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/

Cooperative Extension of Cumberland County

Since 1915

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