



Tree Fruit News

ENYCH Program Educators:

Fruit

Dan Donahue
Phone: 845-691-7117
Email: djd13@cornell.edu
Tree Fruit

Anna Wallis
Phone: 443-421-7970
Email: aew232@cornell.edu
Tree Fruit & Grapes

Laura McDermott
Cell: 518-791-5038
Email: lmg4@cornell.edu
Berries

James O'Connell
Phone: 845-691-7117
Email: jmo98@cornell.edu
Berries & Grapes

Vegetables

Chuck Bornt
Cell: 518-859-6213
Email: cdb13@cornell.edu

Amy Ivy
Phone: 518-561-7450
Email: adi2@cornell.edu

Teresa Rusinek
Phone: 845-340-3990 x315
Email: tr28@cornell.edu

Crystal Stewart
Cell: 518-775-0018
Email: cls263@cornell.edu

Maire Ullrich
Phone: 845-344-1234
Email: mru2@cornell.edu

Kevin Besler
Phone: 845-344-1234
Email: [kreb98@cornell.edu](mailto:krb98@cornell.edu)

Business and Marketing

Bob Weybright
Phone: 845-797-8878
Email: rw74@cornell.edu

Jesse Strzok
Phone: 608-556-4365
Email: js3234@cornell.edu

Content Editor: Dan Donahue

Layout: Carrie Anne Doyle

When Will We See Green Tip This Year?

The NEWA apple scab prediction model estimates that 50% green tip on McIntosh will occur following the accumulation of 101 DD (base 43°F). Experience at the Hudson Valley Research Lab (HVRL) over the previous fifteen seasons indicates a wide range of possible GT dates, March 16th through April 14th, with a mean of April 3rd. Degree day accumulation (base 43°F) at the Lab as of April 6th was 47, with another 54 degree days required. The warmer temperatures of the last several days has moved us forward, however, this coming week will see more moderate temperatures. So far, indications are that McIntosh GT at the Lab will arrive on or shortly before the third weekend in April.

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Historical Green Tip Dates for Macs at the HVRL

Year	GT Date	Year	GT Date	Year	GT Date
2014	4/14	2008	4/10	2003	4/11
2013	4/13	2007	4/2	2002	3/27
2012	3/16	2006	4/3	2001	4/11
2011	4/4	2005	4/7	2000	3/27
2010	3/20	2004	3/25	Avg	4/3
2009	4/6				

BRC Food Safety Certification Training Session

April 9, 2015 from 9 am - 4 pm

Hudson Valley Research Lab, 3357 Route 9W, Highland, NY 12528

The Global Standard for Food Safety, Issue 7, is published by the British Retail Consortium (BRC). Originally developed in the UK Retail Market, it has acquired worldwide recognition as the framework for any business to produce a safe and quality product. This one-day training will provide manufacturers with necessary knowledge concerning the updates that are included in Issue 7 which will go into effect July 1, 2015. Please contact Marge at Hudson River Fruit Distributors (845-795-2121, 65 Old Indian Road, Milton, NY) on this opportunity for interested packer/shippers to partner with Hudson River Fruit Distributors and cost-share this training.

Welcome Jesse Strzok

Jesse Strzok (pronounced struck) is the newest member of our Eastern New York Commercial Horticulture team and joins us as a production economics specialist. A native of Wisconsin, Jesse grew up on the southern shores of Lake Superior on Chequamegon Bay.

He received his Bachelor's degree in economics and mathematics after studying at the University of Wisconsin – Superior and the University of Alaska Anchorage. His graduate work was at Iowa State University in economics with work on co-existence of GM and organic production and experimental non-market valuation of agricultural commodities.

Jesse is working from the Washington County CCE office in Hudson Falls and is living in Queensbury, NY. You can reach Jesse by phone by calling 518-746-2560 or email at js3234@cornell.edu.



Product Registration Update

By Art Agnello, Cornell University, Dept. of Entomology

Following is list of some changes to the insecticides available for use in NY tree fruit crops for the 2015 growing season; more are sure to follow:

Thionex - All endosulfan products are currently registered for use in apples only, with an EPA-mandated stop-use date of July 31, 2015.

Madex - As a reminder, last May, Madex HP (EPA Reg. No. 69553-1) from Certis USA, was registered for use in controlling codling moth and oriental fruit moth in NYS pome and stone fruit crops. The active ingredient, *Cydia pomonella* granulosis virus isolate V22, has activity against both of these tortricid pest species, is OMRI approved for use in organic production, and is harmless to natural enemies and other non-target organisms. Application should target the 5% egg hatch point of each generation of OFM and CM, and can be applied on a 7-day interval. It has a 4-hr REI and no PHI.

Envidor - Last August, the NYS DEC approved a FIFRA 24(c) Special Local Need label for Envidor 2SC miticide (Bayer CropScience, EPA Reg. No. 264-831; active ingredient, spiroadiclofen) for use against mites, including European red mite and Twospotted spider mite, on pome fruit. A maximum of 1 application per season is allowed at a rate of 16–18 fl. oz./A, with a PHI of 7 days; not for sale, distribution or use in Nassau and Suffolk Counties.

Exirel - In January, NY registered Exirel SL insecticide (DuPont, EPA Reg. No. 352-859; active ingredient Cyazypyr®/cyantraniliprole) for use against a range of chewing and sucking pests on pome fruits, including codling moth, oriental fruit moth, obliquebanded leafroller, plum curculio, European apple sawfly, pear psylla, and rosy apple aphid. It has a PHI of 3 days, and a 12-hr REI.

Isomate CM/OFM Mist (Pacific Biocontrol Corp., EPA Reg. No. 53575-44), a battery powered aerosol emitter for delivering codling moth and oriental fruit moth pheromones, received a registration this past winter for use in pome and stone fruit orchards. The supply canister is designed to last all season long (160 days); the unit has an internal clock and temperature sensor, which controls pheromone release. This product is for single season use and is to be disposed of at the end of the season; the unit is compatible for recycling.

Tourismo (Nichino America, EPA Reg. No. 71711-33), a suspension concentrate pre-mix of flubendiamide (the same a.i. as in Belt) plus buprofezin (the same a.i. as in Centaur), has been labeled in NYS for several years for use in pome fruits and stone fruits against leafrollers and internal-feeding Lepidoptera. It has a 12-hr REI, and a PHI of 14 days; not for sale, distribution or use in Nassau and Suffolk Counties.

From Kerik Cox, Cornell Dept. of Plant Pathology

Kasumin 2L, a new antibiotic, has been registered for use on fire blight in NY by Arysta Life-Science (EPA Reg. No. 66330-404). The active ingredient is kasugamycin, an antibiotic with a different mode of action than streptomycin and oxytetracycline, that doesn't have veterinary or human medicinal uses. Kasugamycin does not have systemic activity like streptomycin, but has been equally effective against blossom blight in field trials throughout the US. It should be noted that orchards treated with Kasumin 2L may not be used for livestock grazing. Refer to the label for further use restrictions.

continued on next page

Product Registration Update, continued from previous page

From Debbie Breth, CCE Lake Ontario Fruit Program

BASF

Merivon – Group 7/11, a combination of fluxapyroxad and pyraclostrobin, now has a full label in NYS and has been classified as “Restricted Use” in stone fruit, pome fruit, and strawberries. It is no longer a SLN label as in 2014. The current label says "Do Not Use Merivon with: Emulsifiable concentrate (EC) or solvent-based formulation products, or Crop oil concentrate (COC), or methylated seed oil (MSO) adjuvants." It is not allowed in Nassau and Suffolk Counties.

Vivando (metrafenone) is a new fungicide that affects several steps in the infection process of powdery mildew in grapes and has a supplemental label for pome fruit. It has a new mode of action, Group U8, different from other mildew fungicides. It has no curative effect and must be applied before signs of infection. It has a 12-hour REI, applied at 15.4 oz/acre with 3 applications per year (total season use of 46.2 fl oz/acre), with a 7-day PHI. Do not mix Vivando with horticultural oils. Silicone adjuvants are best. Do not make more than 2 sequential applications. There is also a supplemental label for 2 sprays per season in cherry, apricots, peaches, and hops.

Certis

Certis bought all copper products formerly owned by DuPont, including Kocide 2000, 3000, and Mancocide. Make sure you change the EPA number for the product you are using for your records. They will continue to support Cueva, a lowrate (0.16 lb metallic copper/gallon) copper using a 2 qt/acre rate; it has a 4-day REI in pome and stone fruit. PHI Is 0 days.

Double Nickel LC and WDG 55 was registered for use in NYS in 2012 but more growers had opportunity to use it with heavy pressure in 2014. It is a biological OMRI-approved formulation of *Bacillus amyloliquefaciens* strain D747*. It has a 4-hour REI. It is labeled for use on many bacterial diseases in pome and stone fruit, cane and bushberries and strawberries. For fire blight control, it must be integrated or alternated with an antibiotic program for blossom blight, and mixed or rotated with low-rate copper for shoot blight control. For bacterial diseases on stone fruits, mix or rotate it with copper products. The common commercial use rate for Double Nickel is 1 qt per acre for the LC, and 0.5 lb per acre for the WDG. PHI is 0 days.

Dupont

Vydate – Because of an accident at their manufacturing facility, DuPont will have Vydate only in short supply in 2015.

Valent

Asana is now a Valent material with a new EPA registration number: 59639-209.

Aceto

A **Syllit** label change on new material prohibits use after pink bud on apples, with no more than 2 applications per season using 1.5 pt/acre mixed with captan or mancozeb. The old label still in the system is still legal until the supply is depleted. It should not be mixed with copper, chlorpyrifos or foliar nutrients.

On Hudson's Distant Shore

The following is a list of products that have been registered by EPA, but have not yet gained a NYS registration. New York labels for these materials are in various stages of review by the NYS DEC:

Closer (a.i. sulfoxaflor; from Dow AgroSciences) - a sulfoxamine (IRAC Group 4C) for aphids, white apple leafhopper, and plant bugs; suppression of San Jose scale and pear psylla.

Sivanto (a.i. flupyradifurone; from Bayer CropScience) - a butenolide (IRAC Group 4D) for aphids (except WAA), leafhoppers, San Jose and oystershell scales, and pear psylla.

Nealta (a.i. cyflumetofen; from BASF) - a respiration inhibitor miticide (IRAC Group 25) for European red mite and two-spotted spider mite in pome fruits.

Cornell Pest Management Guidelines

Please note that the 2015 Pest Management Guidelines for Commercial Tree Fruit Production is available this year from the Cornell Store, both in a printed book format as well as online once again; however, the online version is not free, but must be purchased (for \$38.00, the same price as the print version). There is also a bundle option, which provides both for 30% less than the cost of buying each separately.

One free copy of the guidelines comes with ENYCHP enrollment—go to <https://enych.cce.cornell.edu/enrollment.php> or contact Marcie at 518-272-4210.

You may also purchase directly through the Cornell Store at <http://store.cornell.edu/p-190102-2015-cornell-pest-management-guidelines-for-commercial-tree-fruit-production.aspx> or call 607-255-4111 for more information.

ENYCH Grower Advisory Committee Meeting

In December, the Eastern NY Commercial Horticulture Program completed its second full year. In anticipation of this, a grower advisory committee meeting was held on December 16, 2014. Over 50 farmers were in attendance, representing the spectrum of growers we work with—commodities produced, counties and regional location, operation size, and production practices. The meeting was held at 3 locations, the Hudson Valley, Capital District, and Champlain Valley.

The meeting began with a discussion of the ENYCH Program. A review was given of the expanding role of ENYCH. At this point we have grown to include 13 specialists, 17 counties, and 4 commodity groups. Time was also spent explaining the complex, dynamic (volatile?) nature of the budget.

After a combined meeting in the morning, the group broke out into separate locations for further discussion. Those in attendance were asked to identify and prioritize needs of the industry that ENYCH could fulfill. All locations separately concluded that there is good support for the core programming of ENYCH, which currently includes:

- Pest Identification
- Soil Health and Fertility Management

- Cultural Practices (planting systems, mulches, etc)
- Pesticide application programs (both Core and Category requirements)
- Timely, seasonal commodity newsletters
- Workshops and Field meetings

Interest was also identified in more on-farm meetings within and outside of localities and regions, online resources like video clips and webinars, research on pesticide and variety trials. Enrollment fees were generally supported, but benchmark pricing was suggested as an option to consider in the future.

Almost as important were the things we *did not* learn. This type of meeting was not an effective way to identify priorities for specific commodities (i.e. what kind of programs should be offered for apple growers). The farmers who attended enjoyed meeting with people they do not normally interact with, and productive discussion occurred. However, it was not productive for us to identify specific needs.

To address this for tree fruit, we have initiated a Tree Fruit ‘Virtual’ Advising Committee (see below). We have already received 21 responses.

Please Participate in the Tree Fruit “Virtual” Advisory Committee

The ENYCHP is developing a method of getting your input into our Eastern New York Tree Fruit Extension Program that doesn’t involve physical meetings, and allows a large group of our members to contribute to the discussion. Over the course of the year we will email the occasional on-line survey and/or discussion questions for your response. Your participation will help us develop a stronger program that is more responsive to your needs. Of course, you are always welcome to call, email directly, or schedule a farm visit.

Please take a few minutes to click on the link below and complete the survey questions:

https://cornell.qualtrics.com/SE/?SID=SV_e8KDXChhReVqDch.

Quick Links to Tree Fruit Resources on the Web

- Cornell [NEWA Website](#) for Weather Info, Computer Models, Pest Management
- [Scaffolds Fruit Journal](#), edited by Dr. Art Agnello, Posted Weekly around 3:00pm Mondays
- [Peter Jentsch’s Blog](#) on Eastern New York Entomological Challenges *no link there
- [Dr. David Rosenberger’s Blog](#) on Eastern New York Phytopathological Challenges
- [NYS Pesticide Product, Ingredient and Manufacturer System \(PIMS\)](#) – NYS DEC Sanctioned Information
- The [AGRIAN database](#): Quick Access to Pesticide Labels and Registration Information
- [ENYCHP](#) - Cornell Cooperative Extension Eastern New York Commercial Horticulture Program

Meetings and Announcements

Precision Thinning Workshop

Wednesday, April 29 from 2—4:30 pm (2 locations)

Hudson Valley Research Laboratory
3357 Route 9W, Highland, NY 12528

Clinton County CCE Office
6064 Route 22, Plattsburgh, NY 12901

Learn how to implement precision crop load management techniques in your orchard. New for this season will be a simplified fruitlet measuring technique that won't require the individual numbering of fruitlets. Dr. Terence Robinson will present via Webex from the Geneva Experiment Station.

Eastern NY Apple IPM Training Series

A classroom style Integrated Pest Management (IPM) training for apple growers

Pre-season training April 21 and 22, 2015 followed by a series of summer field trainings

Champlain Valley:
April 21, 10am-2:30pm
Clinton County CCE Office
6064 Rte 22, Plattsburgh, NY 12901

Upper Hudson Valley:
April 22, 10am-2:30pm
Saratoga County CCE Office,
50 W High St., Ballston Spa, NY 12020

This 'pre-season' classroom training will cover IPM theory, major pests requiring management in commercial orchards, resources available to help you (including the NEWA website), and an example IPM plan.

This is the perfect place for new growers to learn about IPM, experienced orchardists to refresh their knowledge, and an opportunity to train the next generation or an employee on your farm.

NYS DEC Credits Available (3.5 Credits for Categories 1a, 10, 22)

Highlights:

- IPM Theory: what is it and why do it? *Art Agnello*
- Disease and Insect Pests: biology, monitoring, and management *Art Agnello and Kerik Cox*
- NEWA Web-based Monitoring Systems: how to make the most of it *Julie Carroll*
- Explanation of Tree Row Volume *Dan Donahue*
- Example IPM Plan *Harvey Reissig*
- Field trainings on commercial orchards covering: early and summer diseases, lepidopteran pests, mites, aphids...

Summer Field Trainings:

The 'pre-season' classroom training in April will be followed by a series of short field trainings throughout the season, each focusing on a different topic or pest. Each training will be offered twice: once in the Champlain Valley and once in the Capital District. They will be short, informal meetings held on commercial orchards. These events will be Free of charge. Locations and dates TBD.

Registration for the April pre-season training is \$15 per person (includes lunch). **Pre-registration is required—registration deadline 4/17. To register online use links below.** For more information or to register by phone, contact Anna Wallis at 443-421-7970 or email aew232@cornell.edu:

ONLINE REGISTRATION: Plattsburgh session: [click here](#) Ballston Spa session: [click here](#).

Cornell Cooperative Extension is Hiring Two Full-Time Project Field Technicians

The Cornell Cooperative Extension Eastern New York Commercial Horticulture Program (ENYCHP) seeks two field technicians to assist fruit and vegetable Extension Educators with research and educational outreach within a 17-county region in eastern NY.

These are 1-year appointments with possible extension depending on funding and performance. Hours may be reduced to a minimum of 20 hours/week during winter months depending on available work and funding. These positions will be located within the Albany area and Lower Hudson Valley region. Full-time with benefits. Minimum 6-month training beyond HS diploma, Associate's or Bachelor's preferred. For more information and application instructions, see our website <http://enych.cce.cornell.edu/>.

- Full time with benefits
- Provide support to 12 regional specialists
- Flexible work locations in the Hudson Valley and Capital Region.
- A.S. or B.S. degree desired
- 1-2 years relevant experience desired
- General knowledge of Agriculture/Horticulture desired

ENYCHP is a Regional Agriculture Team that serves a large multi-county region in Eastern New York State. The team consists of 12 specialists and several technicians who work together with Cornell faculty and extension educators statewide to address the issues that impact the industry. The programs provide educational opportunities and information to producers, processors and agri-business professionals, arming them with the knowledge to profitably produce vegetable, tree fruit, small fruit and grape crops, contributing to the viability of farms and the economic well-being of New York State.

Technicians will be responsible for travelling to and assisting with research plots, collection and recording of data, scouting for insects, diseases, weeds and routine plot maintenance including pruning, weeding and other duties required for carrying out research on commercial fruit and vegetable farms throughout the region. Technicians will also perform basic data entry and summary, and assist in logistical setup for educational meetings and events throughout the region. 1-2 years relevant experience desired. Preferred qualifications also include: the ability to work outdoors in all types of weather, lift 20-50 pounds consistently, access to reliable transportation, valid driver's license, be able to work flexible hours, competence in computer technology (Excel/Word/Publisher).

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The direct links to the postings for these positions are below:

- Capital District region:
<https://cornellu.taleo.net/careersection/10164/jobdetail.ftl?job=27134&lang=en#.VO9IRv300KM.gmail>
- Lower Hudson Valley region:
<https://cornellu.taleo.net/careersection/10164/jobdetail.ftl?job=27139&lang=en#.VO9INld0Acs.gmail>

New Apple Grower Page(s)

By Anna Wallis, CCE ENYCHP

In each issue of the Tree Fruit Newsletter, the back page will focus on a topic geared toward new tree-fruit growers. These articles may also serve as a refresher for more experienced growers. Topic suggestions are welcome!

Starting from the ground up: Orchard Site Evaluation

It is always easier to select and prepare a site ahead of time, than adjust after trees are in the ground.

This is one of the mantras of orchard establishment. Spending the necessary time planning your orchard will save you time, money, and heartache in the future. When choosing land—whether you are buying new property or evaluating land you already own—it is critical to evaluate geography, climate, soil, and location. Here are a brief summary of few things you should consider.

Climate, Weather, and Geography

Apples are one of the hardiest of cultivated fruits. The growing season needed for growth and fruit production can be as short at 100 days—but that doesn't mean there aren't limitations. Climate, Weather, and Geographical characteristics are overlapping, but can be defined as follows.

Climate is the weather conditions at a site, averaged over a long period.

Weather is the immediate conditions at a site, including temperature, precipitation, and humidity.

Geography is the physical location of a site, and will affect climatic and weather characteristics as well as marketing and labor availability.

When evaluating a site consider:

- **Latitude and Elevation.** Higher latitude and elevation require hardier plants. Learn about your site's average and low temperatures, and choose suitable apple varieties.
- **Water Moderated Climate.** A site close to a large body of water (that does not freeze over in the winter) is often much more mild. It may also delay bloom in the spring and frost in the fall.
- **Frost free days.** Find out the number of frost free days in your area. This will tell you the climate zone where you are located which will dictate the varieties that will be hardy there.

- **Growing Degree Days (GDD).** GDDs are a measure of the heat accumulation throughout the season. They are used to predict pest pressure throughout the season and may also be a good indicator of tree phenology. Different varieties will require a certain number of GDDs for adequate growth and time for fruit to mature. Knowing the average GDD accumulated in a season at your site may help you decide which cultivars are appropriate for your area.
- **Wind.** A site with regular, moderate air flow is good because it will help prevent temperature inversions (cold air settling near the ground, which can lead to cold damage) and it will help with canopy drying, leading to less fungal disease. However, excessively windy sites will require extra support for young trees and those on dwarfing rootstock. Wind will also make pesticide application difficult by increasing the risk of drift. Planting a windbreak may be necessary in very exposed sites.
- **Precipitation.** Is there adequate rainfall at your site to support young trees? Adequate irrigation is one of the most critical factors in the establishment of a new orchard. If you don't receive enough rain (and most sites don't reliably) you'll need to consider other water sources. Snow cover in the winter can provide some insulating protection for trees, but can also act as a place for rodents to tunnel through and girdle trees in the winter.

Land Characteristics

- **Previous land use.** What crops were planted in the past, how was the land managed? Herbicide residual at the site will be detrimental to your trees and may require waiting an extra season to plant. Try to get records and speak to the previous owner. They may have invaluable information, not readily apparent such as rockiness, soil variation, and wetness. Every site will have its own idiosyncrasies.
- **Slope.** Optimum slope is about 2-10%. Planting your trees at the top of a slope allows for adequate air drainage, or the movement of cold air to lower elevation. Above 10% slope, and it may be difficult and dangerous to operate equipment.
- **Aspect.** This refers to the direction of the slope; a south-facing slope will provide more sunlight, a critical component of tree growth and fruit maturity.
- **Timber.** Dense vegetation surrounding a planting site has the potential to rob your plants of nutrients. It can also trap cold air pockets.

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Beginning Apple Growers, continued from previous page

Soil

Although soil falls under land characteristics, its importance and complexity warrants a separate section. A good quality soil is the foundation for a healthy orchard. Soil tests are absolutely necessary before making and decisions about planting. Ideal soil for a planting site will have the following:

- ◇ pH 6.0-6.9 (slightly acidic). Up to 8.5 have been used.
- ◇ Deep (1-2m), well-drained, sandy or silty loam soil.
- ◇ Well aerated soil. This means water table should be at least 1m from surface, and there should be no impervious (clay) layers near surface.
- ◇ Good soil structure. Pore space (space between soil particles) provides room for oxygen, which is necessary for root normal functioning.
- ◇ Large moisture supply. In most sites it is a good idea to also have an irrigation plan for newly established plantings.
- ◇ Medium textured soils 2-2.5 m.

Less-than-ideal soil may require:

- ◇ Fertility and Amending. Additions of nutrients is often necessary prior to planting. The best time to apply these is the fall prior to planting. A cover crop tilled into the soil may also be beneficial. Liming can be used to increase pH (reduce acidity). This is the time to correct nutrient deficiencies, such as low phosphorous.
- ◇ Tile drainage. Underground pipe systems can be installed to increase drainage. Installation requires specialized equipment and precise placement. If it is determined that your site would benefit from tile drainage, it is recommended that you find a professional to do this.

To evaluate your site's soil:

- ◇ Take a soil sample and send it to a lab for analysis (information in resources below).
- ◇ Dig a 2m trench and observe it for a day or two.

Every effort has been made to provide correct, complete and up-to-date pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly, and human errors are possible. These recommendations are not a substitute for pesticide labelling. Please read the label before applying any pesticide. This material is based upon work supported by Smith Lever funds from the Cooperative State Research, Education, and Extension.

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See how well it drains. Look for bright brown color. Grey or dull indicates water saturation or poor drainage. Identify soil layers such as a hard pan that may prevent adequate drainage.

Proximity to existing growers and markets

Being close to a highly populated area provides more opportunities for direct marketing—farmers' markets, pick-your-own, agritourism, etc. But it may also mean more competitors.

A location that is near a high concentration of acreage also has its benefits. It makes it possible to share costs, labor, knowledge, and marketing efforts with other growers and organizations. You can expect to already have the resources built in for equipment repair and established market, and it is likely you will be closer to and have an impact on research efforts and legislation.

Resources

AgroOne soil services. Contact your local extension specialist for help taking and submitting a sample.

<http://dairyone.com/analytical-services/agronomy-services/soil-testing/>

NRCS Web Soil Survey. Define your site as your 'Area of Interest' to get information about your soil.

<http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

NY Vineyard Site Evaluation. Tailored to vineyards, but applicable to many other perennial crops.

<http://arcsrver2.iagt.org/vll/>

Cornell Tree Fruit page. Comprehensive information on tree fruit management.

http://www.fruit.cornell.edu/tree_fruit/index.htm

Sources

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