

Cornell University Cooperative Extension

Eastern NY Commercial Horticulture Program

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Weekly Vegetable Update

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North Country—Clinton, Essex, northern Warren and Washington counties

Temperatures are still dropping below freezing each night but the morning snow cover both days last weekend had melted by noon each day. Bright sunshine warms up tunnels quickly so be sure to provide ventilation to keep temperatures from spiking too high on sunny days.

Mud season is here. The soil surface is thawing but the ground remains frozen below causing puddles to form when water has nowhere to go. It's time to be careful to minimize traffic over soft, wet soils to minimize compaction. Clay soils are very prone to compaction, sandy soils are slightly more resilient but no soil benefits from foot or machinery traffic while still wet. Set out boards as makeshift walkways over the soggiest areas and keep your tractors off your fields until they dry out more.

Capital District—Albany, Fulton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, southern Warren and Washington counties

Things are moving at a slow pace and the couple of days of 50 degree weather was welcomed. Greens and spinach harvests in high tunnels have moved into high gear, but most of the field work is still at a standstill. Now's a good time to finish cleaning out those old tomato plants in the tunnels from last year and get those soils ready for this year's crop! Did hear a couple growers getting some peas seeded late last week and early this week in the field so spring is coming!

Mid-Hudson Valley—Columbia, Dutchess, Greene, Orange, Putnam and Ulster counties

In the Orange County Black dirt region, a few fields of transplant onions are planted but for the most part farmers are still awaiting appropriate field conditions to even begin to fit the fields. In other areas a few growers got peas in this past week but overall little field work has taken place. Seeding is going full force in greenhouses. Just a quick warning that I've already seen operations with veg /ornamentals mix that have thrips roaming around. Thrips can carry viruses from ornamentals to veg transplants so be on the lookout. You can use yellow sticky cards to monitor for thrips. Look for thrips feeding damage and act promptly to control thrips before they get out of hand. Weeds under benches serve as a perfect reservoir for thrips and other problematic pests such as two-spotted spider mites and aphids.

Salts and Seedlings

When we see seedlings not germinating or dying off, it can be tricky sometimes to decipher the cause. Is it a fungus, fungus gnat, temperature too high or low, poor seed vigor? Any of these may be the case, but one of the things that I often find damaging seedlings is high salts in growing media. Usually the cause is too much fertilizer in the germination mix, and possibly, irrigation water can be a source of salts that damage seedlings as was the case in the picture on the next page.

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Serving the educational and research needs of the commercial small fruit, vegetable and tree fruit industries in Albany, Clinton, Columbia, Dutchess, Essex, Fulton, Greene, Montgomery, Orange, Putnam, Rensselaer, Saratoga, Schoharie, Schenectady, Ulster, Warren and Washington Counties

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Salts and Seedlings, continued from previous page

For those of you buying in mixes, ask about the starter charge and if it is appropriate for germination. Purchase an EC meter to measure salts on a regular basis. If you make your own mix be careful not to fall into the temptation of "front-loading" the mix with readily available nutrients as this can lead to germination problems. For lots more information on this topic and related topics see http://www.greenhouse.cornell.edu/crops/organic.html. *-TR*

The following is excerpted from Appendix 4: Lessons Learned from On-Farm Trials with Organic Mixes – Mix Fertility, by Molly Shaw, CCE Tioga Co., Stephanie Beeks & Neil Mattson, Cornell Dept. of Horticulture.

High salt levels is a common problem, especially when using manure-based composts. "Salts" in this case means any ion (molecule with a positive or negative charge), including nitrate (NO₃), ammonium (NH4), K, Ca, Mg, Na and Cl. Notice that most of those are plant nutrients—only sodium and chloride (table salt) are not. Plants need these nutrients to grow, but too much of them burns root tips, causing poor germination and slower plant growth.



We measure salts with an Electrical Conductivity meter (EC meter), and there are several methods and units of measurement. In our tests, we diluted 1 part potting mix with 2 parts distilled water and measured results in microseimens per centimeter (μ S/cm). Another common unit that EC meters list is milliseimens per centimeter (mS/cm) which is

EC guidelines – maximum salinity before plant damage 1:2 extraction method (1 part soil, 2 parts distilled water)

Vegetable	Max salinity before damage (μS/cm)		
Turnip	900		
Bean	1000		
Carrot	1000		
Onion	1200		
Radish	1200		
Lettuce	1300		
Pepper	1500		
Sweet potato	1500		
Broad bean	1600		
Corn	1700		
Potato	1700		
Cabbage	1800		
Celery	1800		
Spinach	2000		
Cucumber	2500		
Tomato	2500		
Broccoli	2800		
Summer Squash	3200		
Beet	4000		
Zucchini	4700		

equivalent to mhos/cm. To convert to μ S/cm multiply mS/cm (or mhos/ cm) by 1,000. Therefore, 0.5 mS/cm (0.5 mhos/cm) = 500 μ S/cm. Phew!

The tables on this page list guidelines for EC of vegetable seedlings and transplants. Notice that in the tables the acceptable range for germinating seeds is lower than for sizing transplants. Germinating seeds are particularly susceptible to salts damage. Remember, salt damage is often because of high nutrients like high nitrogen, rather than sodium chloride.

In our on-farm measurements, high salts really did lower germination and early plant growth. One farm tried three potting mixes for growing early transplants of lettuce, spinach and beets. There was a marketable difference between plant growth in the different mixes. The pH was acceptable in all mixes, so in this case the EC measurement explained the growth difference. The best plants had an EC of 850 us/cm, right in that "good for growth" range. The smallest plants had an EC of 1400 us/cm, too high for seedling germination and growth. The middle plants had an EC of 420 us/cm, fine for germination but nutrient-limited for growing on the seedlings. An additional mix they had made with poultry compost didn't germinate anything at all—EC was sky high at 2200 us/cm, and the compost used was still producing heat.

EC guidelines	1:2 extraction	method (1	part soil, 2	parts distilled w	vater)
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1:2 extraction µS/cm	Indication
0-250	Very low
260-750	Good for germination
760-1250	Desirable for growth – reduced growth in onions, peppers and lettuce
1260-1750	Slightly high, too high for seedlings
1760-2250	Reduced growth, leaf edge burn
>2250	Extreme. Most crops will suffer salt injury at these levels. Immediate leaching required

Source: Knott's Vegetable Handbook

Cover Crop Insights

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type of cover cropping system on our farms. The benefits of cover crops I believe go above and beyond those that have been reported, but at the same time I have seen some catastrophes when cover corps are not used properly. In particular is the case of rye: we all love to use rye because we can seed it late in the fall and we still seem to get something out of it in the spring. However, letting rye get ahead of you can be a major issue when it comes to trying to incorporate all of that biomass in late spring/early summer. Not only will it require more labor, energy and trips across a field to work all that organic matter in, but there are other issues we face that we don't necessarily see that can be problematic. I've included an article from Thomas Björkman, one of Cornell University's leading experts on cover corps, that I thought should be shared with you. -CDB

Spring Management of Overwintering Cover Crops: Don't Wait!

By Thomas Björkman, Cornell University, published in VegEdge, March 2011, Volume 7, Issue 3

One of the frightening things about using a rye cover crop is when it rains all spring, and the rye is over your cap by the time you can get to it. Rye that tall is really challenging to manage, and even when you get the ground worked, it takes a long time for it to be good for vegetables. Fortunately, there is no need to cut it close on killing that winter cover crop. Most overwintering cover crops give you the most value if you kill them guite early. April is the best time to kill many cover crops. They can be killed with an herbicide that works at lower temperatures, and smaller plants can often be killed with shallow disking. April weather doesn't offer lots of chances to get on the ground, but it is worth taking those chances when they happen.

For getting nitrogen value out of grains like rye, the best time to kill them is when they have recently greened up and have just started to grow perhaps six to eight inches tall. When rye is larger than that, the nitrogen concentration drops, leading to N tie-up when your crop needs it. An early kill can give you 30 to 50 lb N credit (yes, from those little plants!), while killing at boot can be a significant debit. Killing at boot also makes the rye slower to break down, gives less time for it to break down before you need to plant, and the crowns make it more difficult to prepare a seedbed. The risk of missing the chance to kill it also goes up.

Annual ryegrass, on the other hand, only becomes sufficiently sensitive to glyphosate when it's warm enough for it to really grow. Once that happens, don't delay because the young growth is the source of nitrogen.

Fall-sown crucifers usually die in the fall (radish, mustard) or early spring (turnip). The latter is better for recovering N. In either case, there is little regrowth in the spring. The reason to control them early in the spring is to avoid volunteers from stray survivors. If you see yellow (or pink radish) flowers in the field, it should be a signal to act. The boot stage is a commonly recommended age for killing that is usually much too late. It is relevant in two situations: if the rye (usually a rye-vetch mix) is to be killed by mowing or rolling, the stems are susceptible at this point. The vetch is also at its maximum nitrogen content. I consider that a special case where the late kill is appropriate.

In my research program, we tested whether the crop inhibition is reduced if one uses triticale or wheat, which are less allelopathic. We killed all of them with herbicide at early to mid-boot, incorporated and let them break down. We transplanted tomatoes, peppers and cabbage, and direct seeded corn, beans and cucumber. All these crops showed about a 25% reduction in growth in the first month. It made no difference which cover crop. That result shows how deleterious late control of small grains can be, and it is not all allelopathy.

It may seem premature to kill cover crops before they put on much biomass in the spring. You do forego some addition of active carbon. However, the cost of adding the extra organic matter just before planting is too high. It is better to get the nitrogen value and the soil improvement for the extensive root growth, and to work on organic matter production at the end of the growing season.

Eastern NY Commercial Horticulture Website

For event announcements and registrations, previous issues of our newsletters and more, please visit the Eastern NY Commercial Horticulture Team's website at http://enych.cce.cornell.edu/. We hope you bookmark it on your computer and begin using it as your 'go to' website for production and marketing information.

Email or call any of the educators with questions or comments on the website – we want to make it work for YOU!

Handling and Cutting Potato Seed

Even though some of you might not be ready, spring is here according to the calendar and potato cutting has started to happen. I have run a version of the University of Maine "Bulletin #2412, Selecting, Cutting and Handling Potato Seed" the last couple years as a reminder of what to look for and how to cut and handle potato seed. This year I am going to give you the highlights and then give you the link to the full article. For the full version of Bulletin #2412, go to http:// www.umext.maine.edu/onlinepubs/pdfpubs/2412.pdf or if you don't have internet call me (518-859-6213) and I will send you a copy. Due to the limitation of space, if you are looking for the updated list of potato seed and in-furrow treatments, and the diseases they control or suppress, go to http://vegetablemdonline.ppath.cornell.edu/NewsArticles/ Potato-Seed-Piece-fungicide-chemicalgroup.pdf or call me and again I will mail you a copy. -CDB

Information excerpted from Bulletin #2412, Selecting, Cutting and Handling Potato Seed:

- 1. Determine the physiological age of your seed: Dormant, young, middle age, old and potato no top are the stages that seed potatoes will pass through (see Figure 1). Old and Potato No Top seed should be avoided as poor stands will be the result.
- 2. Precutting Seed: Only seed of young (precut one month prior to planting) or middle physiological age (precut two weeks prior to planting) should be precut. If the seed has previously sprouted, the seed should be cut only two weeks ahead. Middle-aged seed can be precut up to two weeks ahead of planting only if it has not sprouted. Middleaged seed that has sprouted and been desprouted is old seed.
- 3. Warming seed: Potatoes should be warmed to 45—50° Fahrenheit prior to cutting.



Good seed piece



Blind



Undersized









Sizes of potato piece affects early plant vigor

4. Proper Seed-Piece Size: Cut seed tubers into blocky pieces about 1.75 ounces in size and should have at least one eye. For varieties with poor eye distribution, consider cutting seed pieces closer to two ounces each. Tubers under 1.5 ounces should not be planted. Tubers weighing between 1.5 ounces but under 3.0 ounces should be planted whole. Tubers 3.0—5.0 ounces should be cut into two pieces; 5.0-7.0 ounce tubers should be cut into three pieces.

5. Disinfect all equipment including knives and mechanical cutters before each seed cutting session and between seed lots

6. Keep knives sharp and straight to prevent ripping the potato surface.

7. Curing Cut Potato Seed: Cool the cut seed to 38 to 40 degrees F and do not pile it more than six feet deep. Provide good air circulation with relative humidity levels at 85 to 95 percent for 6-10 days to promote healing and prevent dehydration.

8. Before Planting: Re-warm seed again for two days before planting to get sprouts growing again and to avoid condensation on the seed.

9. Handling Cut Seed: Cut potato seed is easily bruised and damaged areas allow decay organisms (on seed or in the soil) to infect the seed piece resulting in slower emergence and less stored energy to promote early growth.

Young seed piece



Middle-aged seed piece



Old seed piece



"No top"

Figure 1: Physiological Age of Seed

Sanitizing Used Tomato Stakes and other Surfaces

It's that time of year again when the weather starts to warm and we start to get restless and want to get out into the fields. However, there are still a lot of things that we can do now before a bulk of the field work gets started. I know many of you already have plants started in the greenhouse, but this sanitation note is still not a waste of your time. The bulk of this message is meant for those of you with used tomato stakes that may be you didn't get around to cleaning and sanitizing last fall. There are several disinfectants that can be used for disinfecting tomato stakes and each one has pro's and con's., but first things first: **The cleaner you start, the better job your disinfectant will do!** Start by:

- * Cleaning all dirt and debris from the surfaces you want to disinfect! In this case our stakes, but this includes all of the other surfaces I mentioned above including greenhouse benches, inserts, bottom trays etc.
- * "Pre-cleaning" is important because organic matter, dirt and other particulates tie up the active ingredients in our disinfects and reduce their effectiveness!
- * There are lots of ways to do this but I think the most effective is to use a power washer or a hose and scrub brush. Yes, it is time consuming, but well worth it otherwise the rest of the sanitation could be worthless!
- * In the case of tomato stakes, do not pack stakes too tightly in washing container—allow solution to distribute evenly and contact all surfaces of the stake. Surfaces of stakes in the middle of a tightly packed group may not completely be soaked.

Clorox/Bleach (5.25% sodium hypochlorite)

• Use rate of 1 part bleach to 9 parts of water (or 10% solution).

- Completely submerge stakes and allow to soak for at least 30 minutes before removing and rinsing.
- If possible, *lower water pH to 6.5 5.8 to obtain the most activity from bleach.*
- Add bleach or change water frequently when it becomes visibly dirty.
- Bleach is also short-lived after mixing in water, with a half-life of only 2 hours so replenishing often will be critical for the best activity.

Green-Shield (quaternary ammonium chloride salt)

- Recommended use rate is 1 tablespoon (= 0.5 fl oz) per gallon of clean water.
- Allow surfaces to remain wet for 10 minutes before rinsing off with clean water.
- For stakes, trays and inserts, use the same rate as above and fully submerge and allow to soak for 10 minutes and rinse thoroughly.
- Very effective and economical: 1 gallon of Green-Shield is equal to 28 gallons of Clorox.

ZeroTol 2.0 (hydrogen peroxide + ethaneperoxoic acid)

- Use a dilution of 1:300 or ½ fl. oz per gallon of clean water and spray until runoff on greenhouse surfaces etc.
- Use a dilution of 1:50 or 2¹/₂ fl. oz. of ZeroTol 2.0 per gallon of clean water **if surfaces have not been pre-cleaned.**
- For stakes, trays and inserts, use a 1:100 1:300 or $1\frac{1}{4}$ fl. oz. $-\frac{1}{2}$ fl. oz. per gallon of clean water and spray until runoff (according to label). However, I would recommend submerging these items for at least 5 minutes before rinsing with clean water. -*CDB*

Weed Control in Asparagus

Now is the time to apply pre-emergent herbicides in asparagus plantings. Rutgers University in New Jersey recommends 2.5 lb Solicam DF plus 1-2 lbs Karmex DF (do not apply more then 3 pounds per season), 14 days prior to spear emergence (that's the pre-harvest interval) which means applications need to be going out very soon if not immediately (for beds that are at least 1 year old)! This tank mix works on a wide range of pre-emergent broadleaves and grass weeds and is relatively safe to the asparagus. Both of these materials will not work on already growing weeds and also work better if moisture is received soon after application. The label for Solicam also recommends that you apply in a minimum of 20 gallons of water per acre. The addition of Calisto at 3.0 ozs per acre can also improve residual and Common Larmbsquarter and horseweed (marestail or stickweed) control.

However, those are not the only materials labeled for asparagus weed control and below is a list of all the materials labeled in NYS, but targeted towards the more commonly used and effective materials as discussed with Robin Bellinder, Cornell Weed Specialist. The materials vary according to application timing (pre vs. post) and targeted weeds. You will need to consult the labels as most of the rates are soil type dependent. Tank mixes will generally provide a broader spectrum of weed control.

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Weed Control in Asparagus, continued from previous page

As always, please consult the labels for rates and additional use precautions or call your local ENYCHP team member. *-CDB*

Callisto (pre spear and post harvest) - annual broadleaf weeds. Callisto controls largely broadleaf weeds and has soil residual as well as postemergence activity on sensitive species. Use 3.0 fl. oz. for postemergence control and 6.0-7.7 fl. oz. for preemergence control. **May be applied twice per season but may not exceed a total of 7.7 fl. oz, so be sure to take into account any preemergence applications.** See the label for adjuvant instructions.

Lorox 50DF (pre and post) Broadleaves and grasses. Lorox may be applied preemergence (minimum of 15 gallons/acre) and post emergence (minimum of 25 gallons/acre) on newly planted crowns or established beds. Do not tank mix Lorox with other herbicides or adjuvants. See label for recommended use of activated carbon with applications to new crowns. Three applications of 1-4 lbs can be made annually with a maximum use of 4 lbs/year.

Dual Magnum (pre spear emergence) - annual grasses, yellow nutsedge, hairy galinsoga, suppression of other broadleaf weeds. A single application may be made to dormant, established beds in the spring prior to crop emergence but may fit best as an application right after your last cutting to control Yellow Nutsedge and Eastern Black Nightshade (pre-emergent). Choose rates based upon soil type. Because this label is a New York State's multi-crop 24(c) Special Local Need (SLN) supplemental label, you must acquire an indemnification from Syngenta in order to use this product. Be sure to use the Dual Magnum formulation as that is the product that is labeled for asparagus (do not use Dual II Magnum).

Clarity 2.5 EC (pre and post spear emergence)sowthistle, mustard spp., redroot pigweed, Russian thistle, common chickweed, field bindweed. Apply Clarity to emerged and actively growing weeds immediately after cutting the field but 24 hr before the next cutting. Multiple applications may be made per season but may not exceed a maximum of 16 fl oz per acre per year. If spray contacts emerged spears, twisting may result. Label recommends 40 – 60 gallons of water/acre be used.

Prowl H2O (pre-spear emergence). Application must be made prior to spear emergence or remove emerged spears prior to making the application, however there is a 14 day PHI. Do not apply post emergent or injury will likely occur. Do not apply more than 2.4 pints if grown on sandy soils.

Sandea (pre and post) - Pre-emergence applications: galinsoga, lambsquarters, mustard/radish species, redroot pigweed, ragweed, velvet-leaf. Post-emergence applications: yellow nutsedge, galinsoga, redroot pigweed, mustard/radish species, ragweed, velvetleaf. Apply post emergence to established beds. May be applied during harvest season (1 day PHI) May be applied at the end of the harvest season but it is recommended to use a nonionic surfactant or COC with drop nozzles to maximize coverage of weeds while minimizing fern contact and injury to the asparagus. Do not exceed 2 oz/A/ season.

Chateau WDG (pre spear and post harvest) — annual broadleaf weeds. Chateau SW should be applied at least 2 weeks prior to spear emergence or to dormant asparagus after harvest. **There is the possibility of injury if Chateau is applied less than two weeks before spear emergence.** Chateau may be used for residual weed control as well as to assist in postemergence burndown of some annual and perennial weeds in dormant asparagus. To control weeds postemergence use 0.25% v/v non-ionic surfactant and a spray grade nitrogen source. This is a very active material and I have seen some crop injury (twisted spears) in the past when used pre-emergent so get it on early.

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.



Give Tomatoes Space to Thrive

Tomatoes will be going into tunnels soon. Take a moment before planting to sketch out the spacing. Far too many growers set their tomatoes too close together in the row and/or set the rows too close together. Here are some good general guidelines to consider:

Between Row Spacing

For all types of tomatoes the between row spacing ('center-to-center', or bed spacing) is a minimum of 4 feet, preferably 5 feet.

In-Row Spacing, Between Plants

For determinate types:

- Train using the basket weave method
- Set plants 18" apart in a single row
- Set a stake between every 2 plants

For indeterminate types:

- Train plants to a single leader, although heirloom varieties and Big Beef do well when trained to a double leader
- Set plants in a double staggered row
- Set plants 24" apart in row

For grafted plants - Train to double leaders (result is a V-shaped plant)

Option A – a double staggered row

- 24" from each leader which means 48" between the central rootstock.
- This comes down to the same stalk density as the 24" double row of indeterminates above

Option B – a single row

• Set plants 24" apart in a single row.

-ADI

Spring Fertilizer Needs of Garlic

Garlic is peeking out of the ground in many parts of the region, so it's time to assess fertility needs and address deficiencies. Our current recommendation is to apply any needed spring nitrogen as soon as garlic starts to emerge, and all at once. We were advocating splitting applications of N in the spring, but this doesn't seem to make a difference in yield.

We are recommending applying in the neighborhood of 100 lbs of total N for garlic during the growing season. Organic growers and those using organic (slow release) fertilizers like manure are applying 75-100% of the N in the fall, with the idea that it will not become available until the ground warms in the spring. This also allows growers who leave mulch on to leave it undisturbed, rather than knifing in fertilizer.

d Proper between row spacing for all types of

tomatoes and the in-row spacing for a double staggered row of indeterminates.

Scale: 1 square = 1 foot



If you are applying fertilizer in the spring, remember a few things that will help reduce the actual N you need to apply.

- Deduct 10-15 lbs of N from the recommendation for each percent organic matter in your soil.
- Deduct for legumes planted preceding garlic.
- Calculate acreage based on the area you are fertilizing. If you are dropping fertilizer in a 24-inch band, multiply row feet by this width to figure total square feet fertilized. Divide this by 43,560 to get total acreage.

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Spring Fertilizer Needs of Garlic, continued from previous page

Since this might be the first fertilizer calculation of the spring, let's run through it once so we are all on the same page.

First, calculate acreage being fertilized. If you have 20, 500 -foot long beds and are dropping a 24-inch band of fertilizer, that's an area of 20 times 500 times 2, or 20,000 square feet. Divided by 43,560, we have 0.46 acres being fertilized. Yes, I'd round this to half an acre to make life easier!

Let's say that we are able to reduce our needed fertilizer to 50 lbs/A because of a little manure application and soil organic matter of 3%. If I need to apply 50 lbs of N/A to half an acre, I just divide the number in half. So we need 25 lbs of N.

If using Ammonium sulfate (21%N) as the N source, how much would we need to apply to get 25 lbs N? There are

different ways to figure this, but I treat it as a simple algebra equation. Yes, I used simple and algebra in the same sentence. Please don't stop reading! If I need 25 lbs of N, and have a 0.21 N source, I set up this equation and solve for 'x'. It's always the same equation, so just fill in your own numbers depending on what type of fertilizer you are using (the % N varies, so change that number, and change the needed N/A based on your own situation)

25=X * 0.21

Divide by .21 to get x alone on one side of the equation...

25/0.21=X

X=119 lbs Ammonium sulfate needed

As always, if you want to run through your own fertilizer calculation with us, please feel free to call. We're happy to go through it with you. -CLS

WPS Trainings Offered

Just a quick reminder that any farmers who apply pesticides (conventional or organic) and have workers (non-farm owners/renters) who are not immediate family members (children, siblings or parents) need to perform Worker Protection Standards Training for all of their workers.

Workers who may come in contact with pesticides or be in fields where applications have been made have to be trained.

To administer training to workers who handle pesticides, you have to have a pesticide applicator's license. Rules and regulations can be found at <u>http://www.epa.gov/pesticides/health/worker.htm</u>.

WPS trainings for farm owners who are not certified applicators and/or need assistance with translation into Spanish for the question and answer portion of the training will be offered. Trainings will be:

The Alamo Farmworker Community Center, 888 Pulaski Highway, Goshen, NY 10924

English and Spanish trainings for workers and handlers will be provided at these dates and times:

Sunday: April 19th from 12-1 pm Monday: April 20th from 10:30-11:30 am Monday: April 20th from 12-1 pm Tuesday: April 21st from 12-1 pm Tuesday: April 21st from 3-4 pm

Ulster County CCE is also arranging dates and times of trainings in Ulster. For more information on those, contact Emily Cook at 845-340-3990 x389. -*MRU*

Cornell Cooperative Extension and the staff assume no liability for the effectiveness of results of any chemicals for pesticide use No endorsement of any products is made or implied. Every effort has been made to provide correct, complete, and current pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly and human errors are still possible. These recommendations are not substitutes for pesticide labeling. Please read the label before applying any pesticide. Where trade names are used, no discrimination is intended and no endorsement is implied by Cornell Cooperative Extension.

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