



#### HIGHLIGHTS

- 2 Rhubarb Update
- 3 Cyclamen Mites
- 3 Sold-out and limited supply lists
- 4 Shipping information & receiving tips; variety updates

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(413) 665-2658  
Monday–Friday  
8am to 5pm (EST)

#### IMPORTANT!

## SHIP DATES

With increasingly variable and inconsistent spring weather, we highly recommend growers delay shipping or place spring orders with an "OPEN" ship date. Calling by Wednesday the week before you need the plants will allow us time to prepare your shipment and get it on its way to you. Your plants will not arrive before weather and soil conditions are suitable.

## Greetings from Nourse Farms!

I am grateful to report that our 2015-2016 plant harvest was again one of our best ever seen. I want to recognize our staff for this tremendous effort. Because of their efforts, Nourse Farms will again offer the best berry plants. We saw another record fall harvest that will result in the most plants we have ever packed out in the winter. No matter what the spring will bring, your plants will be ready for timely delivery.

Every spring has challenging issues for many of our growers. Normal planting dates can be extended for many reasons. Be confident that we will do whatever necessary to deliver plants on your schedule. We hold plants for customers under optimal conditions, allowing them to express their very best potential no matter how late they find the soil. I received many comments about plants showing signs of life and growing the next day after planting. Allowing plants to start in warmer conditions creates a momentum that will last through the year.

Our sales staff have been honing their skills, we have learned a lot this winter and are eager to share the knowledge. Cyclamen mites have been causing problems for many growers throughout North America. An article with our recommendations for the most effective treatments follows. Whatever needs or questions you have for the coming season, we are ready to serve you to the best of our ability.

*Nate Nourse*



Nate (left), Mary and Tim Nourse



A staple vegetable in New England gardens and farms from Colonial times, the demand for the crop is as strong as ever. Rhubarb acreage has declined, plantings aren't being replaced. The fabled tough and resilient plant has difficulty getting established and is susceptible to *Phytophthora* root rot. We used to plant it on heavier soils that weren't well drained and it thrived. Heavier soils with high organic matter produced abundant crops for years. Now, it struggles on our best soils. The one part of rhubarb production that hasn't struggled is its price, \$3-\$5 per pound is common.

### THE FUNDAMENTALS

Rhubarb likes cooler, well drained soils with a pH of 6-6.8, and afternoon shaded locations. It prefers summer temperatures below 75 degrees. It needs to be exposed to temperatures below 40 degrees to go dormant. The redder the variety gets, the harder it is to grow. Green Rhubarb yields range from 10-18 tons per acre, red varieties are about half the yield. Consumers will say they prefer the red color, but a blind taste test might reveal no significant difference. In our field trials, the greener the strain, the easier it is to grow. Rhubarb leaves contain oxalic acid and should not be eaten.

In row plant spacing is generally 3 feet between plants and 5-6 feet between rows. While plants can be grown from seed, a stand with more uniformity is obtained from divided crowns. Commercially available crown size can vary from one shoot to three shoots per crown. Nourse Farms #1 graded divisions are 3 buds, #2 divisions are one bud.

Plan to plant Rhubarb on heavily composted soils. California recommendations are 15 tons of compost prior to planting. Rotate soils for 1-2 years into green manure crops without using any herbicides prior to planting. I've been recommending heavy mulch after planting for weed control and lowering soil temperatures. 3-4 inches applied every spring will keep out summer weeds, conserve moisture, and keep the soil temperature down. Drip irrigation is an easy, low-cost way to manage soil moisture. Heavier yields and longer crop cycles can be realized with proper care.

Harvesting too soon after planting is one of the biggest mistakes. Allow rhubarb to establish for 3 years prior to harvest, developing 2 foot diameter crowns. Do not harvest the year after planting to allow for the plant to develop. Two years after planting, harvest lightly depending on the amount of growth in your field. Harvesting too much is the second biggest mistake. I recommend leaving a minimum of 25-30% for healthy regrowth. Other recommendations vary from leaving 2-3 stalks to 30-50%. Another rule of thumb is to end harvest when new stalks emerge thin or spindly. Flower stalks should be removed with a knife as they appear. Young plants can be uprooted if flower stalks or young stalks are pulled.

### PESTS AND DISEASES

Rhubarb is not immune to pests and disease. Slugs, Leafhoppers and Rhubarb Curculio need to be controlled early. Leaf spots,

Ramularia and Ascochyta are also preventable with early intervention. Tank mixing insecticides with fungicides should begin to be applied in early May through the growing season. The prevalence of *Phytophthora* Root Rot justifies the preventative control in spring and fall. It will manifest itself in water logged and poorly drained situations and spread down the row.

### MAINTENANCE

Plan to replant every 6-8 years after reaching maturity. Plantings that are too old will have dense growth that results in small sized petioles, reducing yield and increasing harvest costs. Regular division every 6-10 years and re-locating the field will add to crop yields. Growers should consider dividing 10-15% every year as an annual maintenance.

An annual schedule should include early spring herbicide application, prior to growing, to kill overwintering perennials and prevent seed germination. In late April, a straw application after plants begin to grow. Applying Gramoxone or other burn down material with a backpack sprayer to selectively kill any emergent weeds should occur every other week through most of the season. This crop will benefit when long residual herbicides aren't used. Irrigate 2-3 times per week. Two inches per week will sustain the crop, three to four inches will help it flourish before and during harvest. Maintain good soil moisture for your soil type.

### FERTILIZER SCHEDULE

In spring apply 200-250 pounds of 20-10-20 three times, adjust N-P-K levels according to your soil test. Application intervals are before growth begins, before harvest, and after harvest. Remember to consider adding micro nutrients and slow release products. The total pounds nitrogen applied should be reduced according to compost quantity. Apply 15-30 tons of compost in early November,  $\frac{3}{4}$ -1  $\frac{1}{2}$  pounds per sq/ft. Account for any nitrogen in the compost and decrease the spring application accordingly.

Varieties have special requirements and their own personalities. MacDonald's downside of greenish stalks is offset by its vigor. It is easy to grow and is a consistent producer. Cawood Delight is my favorite, it fills the red color requirement. The plant is compact with very thick stems. Flavor isn't as much of an issue as tenderness. Harvesting too late in the season will result in tougher and mealy stalks.

### FORCING

Forcing can be accomplished in two ways. Potting divisions in large containers, rhubarb can be forced in a greenhouse. After harvest, the pots would move outside until the following spring. Remember they won't like hot spots or black ground covers. Regular division would occur after 3-4 years of harvest.

In the field, row covers can be applied to a few rows. As temperatures exceed 70 degrees, remove the covers. The goal is to begin harvest 1-2 weeks early. Pay attention to weeds and killing frosts! Remove the covers and weed every two weeks. Cover during frost nights, 2 covers may be necessary some nights.

Information used to write this article can be found in **The Rhubarb Compendium online at [www.rhubarbinfo.com](http://www.rhubarbinfo.com)**

# FreshMarket™ Packaging System

## Increase the Shelf Life of Your Berries



### Advantages

- Extends shelf life
- Helps preserve fresh flavor, color and texture
- Sell more product at retail price vs. jam or frozen price
- Expand your distribution chain
- Simple and easy to use solution
- Made with food grade materials
- Manufactured in the U.S.A.

### Applications

- Strawberries
- Raspberries

Consumers prefer the fresh sweet taste of locally grown wet berries. However, their short shelf life is challenging for growers. FreshMarket is an easy-to-use packaging system that helps preserve quality and extend shelf life of berries from approximately three days up to ten days. It offers a practical packaging solution specifically designed to help slow the spoilage process and extend shelf life through the use of active packaging technology.

### A Natural Alternative for Preserving Quality

The FreshMarket System offers a natural alternative for preserving quality. The sorbent technologies used in the system are not considered additives and use food grade materials, providing a safe and clean option to extend product shelf life.

### The Benefits of Extended Shelf Life

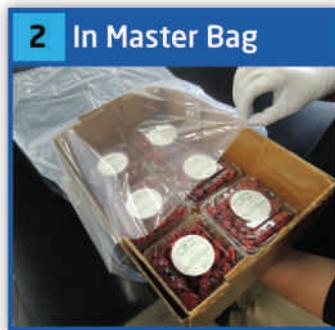
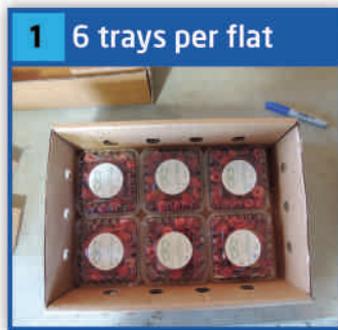
Extended berry shelf life helps you better manage time and production in addition to helping increase retail sales.

- Improve inventory management: Pick berries for later use or in advance of bad weather
- Pick all fresh berries for sale: Less wasted production left in the field results in more efficient land use and production
- Decrease transportation costs by reducing number of wholesale deliveries
- Increase sales at retail prices as a result of longer shelf life and reduce sales at jam or frozen prices

# FreshMarket™ Packaging System

## Simple and Easy to Use

The FreshMarket program is designed to work with your normal picking process. Once berries are placed in containers within a flat, there are just a few simple steps to follow:



By controlling gas composition and storage temperature, the FreshMarket system helps slow the spoilage process by reducing fruit respiration and mold growth to preserve the fresh picked color, flavor and texture.

The FreshMarket packets manage the internal atmosphere within a master bag to create a closed and controlled environment to slow down the decay process and maintain freshness.

## Getting Started

To begin using the FreshMarket packaging system or for more information, please contact Dave Elliason, Business Development Leader, Food and Beverage Packaging at [delliason@multisorb.com](mailto:delliason@multisorb.com) or at 612-819-2662.

## Percentage of Visible Defects\*



\*Data based on actual shelf life studies performed by Multisorb Technologies at Lorence's Berry Farm, Northfield, MN.

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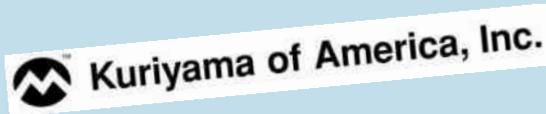


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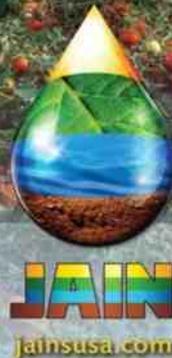
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## Hillside Cultivator for weed control throughout the year

Weed control is probably the most difficult obstacle to successful strawberry production. In a matted row system a combination of effective mechanical tools will greatly reduce hand labor. The Hillside Cultivator incorporates several tools for the different stages of growth. Timing is always critical



- The **Finger Weeder** attachment can be used all season for disrupting small weed growth along the row and close to plants. (pictured left)
- **S-tines** mounted in the front position are used to move runners into the row. (pictured above)
- **Rolling cultivator** gangs are part of the cultivator in all seasons and are excellent for uprooting weeds while not cultivating too deeply.

- The **Eco Weeder** is a separate machine. PTO driven rotating vertical teeth are manually moved between and around young plants. Pictured here in a broccoli field, the Eco Weeder is very helpful in young strawberries. An attachment is available for straw removal in the spring.



- Through the late summer and into the fall, the width of the strawberry row can be controlled with the **rolling cultivators** and weeds between the row removed. These cultivations can remain shallow so that new weed seeds are not brought to the surface. Cultivation can also be done as an herbicide loses its effectiveness and prior to another low rate application.

- Following harvest and mowing the plants, the Hillside Cultivator is ideal for strawberry renovation. **Disk gangs** are mounted in the front position which are used to narrow the row and cut through the straw. A **coil tine** follows and fractures the soil which has been packed by foot traffic during harvest. The rolling cultivator in the rear rolls soil back toward the strawberry plants. Cultivating speed is 3-4 mph with two passes normal for each row. This machine is more economical and less disruptive of soil structure than a rototiller.



- Other uses for the cultivator include cultivating the edges of plastic
- Vegetables such as Pumpkins, Squash, Potatoes, and Cole Crops.

Contact: **John E. Shenk, Hillside Cultivator Co. LLC**

911 Disston View Dr. Lititz, PA 17543

Phone 717-626-6194 Cell 717-669-3158

[www.hillsidecultivator.com](http://www.hillsidecultivator.com) email: shenkberrymfarm@gmail.com

# Cyclamen Mites

NATE NOURSE

We have heard from a few customers and extension specialists in regard to the presence of cyclamen mites in strawberry plantings. The presence of cyclamen mites has been reported to be an increasing problem in many areas during the past few years. The following is a review of the mite for grower reference. Cyclamen mites are a difficult problem and early detection and preventative controls are important.

Cyclamen mites have traditionally been considered to be a nursery problem. Therefore the preventative spray program we use for cyclamen mites has always been a necessary component of our nursery program. Our preventative program consists of a Thionex drench on our strawberry nursery planting, 4-6 weeks after planting. This application has given us good control. The Thionex label on strawberries expires July 31st of this year. We will be working through the year to determine next year's strategy.

**DESCRIPTION:** Cyclamen Mites are soft-bodied and about 1/100" size. They are very small and difficult to detect. They feed on the new unfolding leaves in the crown. Symptoms are the presence of damaged or distorted new leaves emerging from the crown. Examining the crown under magnification assists in finding them. For further assistance contact your University extension specialist.

**CONTROL OF CYCLAMEN MITES:** Choose one of the following insecticides and miticides and apply 2 times at 10-14 day intervals. While some of the insecticides are not labeled for Cyclamen, they will help control other insects like Root Weevils and Strawberry Clipper. Thionex (endosulfan), Diazanone, Lorsban, Platinum, and Provado are the insecticides. Agrimek, Portal or Oberon are the miticides. These materials need to be applied in high gallon, drenching sprays with silicone spreader or crop oil to get crown penetration. Early spring after straw removal and renovation is a good time to apply for older plantings.

Research suggests that sustaining good populations of natural predators is also important in mite control. Sustaining good populations of predators therefore is vital. Oxidantalis and Neoselius are better than Persimilis for Cyclamen. Not using or limiting Pyrethroid insecticides and Sevin are key for maintaining good levels of predators (similar strategy for controlling all mite populations). I recommend controlling the pest first, reintroduction of predators can occur 2-4 days after the application.

\* Please refer to your state's particular recommendations for pesticides and always read all labels before application. Not all materials are labeled for every state. Different state regulations vary for timing, rate, and harvest intervals. We have no intention to promote the use of the materials listed, they are listed in state extension recommendations and CDMS data sheets.

## Visit our website!

We have developed an excellent collection of educational videos and articles for our customers. We will continue adding to the collection. Check them out at [www.noursefarms.com](http://www.noursefarms.com).

Tell us your ideas for more!

Please e-mail your suggestions to [info@noursefarms.com](mailto:info@noursefarms.com)

## SOLD-OUT

**Darrow** *blueberry*

**Elliott** *blueberry*

**Samdal and Samyl** *All elderberries*

**Rumba** *strawberry*

**Jonkheer Van Tets** *currant*

**Invicta** *gooseberry*

## LIMITED SUPPLY! WHILE SUPPLIES LAST!

**Pacific Purple** *asparagus*

**Anne Yellow** *raspberry*

**Mac Black** *black raspberry*

**Caroline** *raspberry*

**Nova** *red raspberry*

**Royalty** *purple raspberry*

**Rutgers Scarlet** *strawberry*

**Imara** *red raspberry*

**Kweli** *red raspberry*

**Kwanza** *red raspberry*

## SPRING/SUMMER 2016

### Tours, Seminars & Field Days

#### MARCH

March 14-16, 2016, **Global Berry Congress**, Rotterdam Netherlands, [www.berrycongress.com/](http://www.berrycongress.com/)

#### JUNE

June 15, afternoon and evening, **CT Pomological Society Twilight Meeting and Equipment Field Day at Belltown Hill Orchards**, South Glastonbury, CT, Email: [mary.concklin@uconn.edu](mailto:mary.concklin@uconn.edu)

**OPGMA Summer Meeting**, Details to come soon at <http://opgma.org>

#### JULY

July 15 & 16, 2016, **6th Annual Oregon Berry Festival**, Portland, Oregon, [www.oregonberryfestival.com](http://www.oregonberryfestival.com)

#### AUGUST

August 13-17, 2016, **International Strawberry Symposium**, Quebec Canada, Details to come soon at [www.iss2016-quebec.org](http://www.iss2016-quebec.org)

August 17 & 18, 2016, **NASGA Summer Tour**, Quebec Canada [www.nasga.org](http://www.nasga.org)

### Planning a 2016 Control Program for Spotted Wing Drosophila (SWD)

In the last two newsletters, we have brought focus to the control of Spotted Wing Drosophila and all the winter meetings had updated information for the control of this new insect. You can review our Fall 2013 Newsletter for information regarding SWD, and what has been learned. As you are organizing your control program, there are many resources online and available from your state university. If you have any questions, feel free to contact us.

#### SWD BASICS

1

Monitor with traps to know when present.

2

Timing of insecticide sprays begins with first color.

3

Cultural controls include removal of cull fruit from field and harvesting all ripe fruit EVERY TIME!

4

Use and rotate labeled insecticides on a 5-7 day schedule.



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SPRING 2016 NEWSLETTER

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## SHIPPING INFORMATION AND RECEIVING TIPS

- Our system automatically e-mails you reminders and details on your FedEx shipments. Please make sure we have a current e-mail address on file for you.
- LTL shipments must be requested before noon on the departure day.
- If at all possible, please notify us by the Wednesday of the week before your scheduled ship date to change an order or FedEx ship date. We pack orders the week prior to shipment during our busy season.
- Some customers store plants in their own cooler before planting. While this can work, we recommend leaving your plants with us until conditions are right for you to plant within a few days of receipt. We have state-of-the-art cooler facilities that maintain constant temperature and humidity levels. Also, plants will warm-up during shipment and start to lose vigor.
- If you must cool plants, open the boxes to allow warm air to escape, reseal and keep them as close to 28°F as possible. Do not allow them to fall below 26°F as that will kill your plants.
- Do not add water or soak plants if you can't plant right away. Open boxes upon receipt to check temperature and freshness and reseal. If mold forms on asparagus roots they should be spread out on a pallet and kept dry to stop more mold from growing.
- Leaving your ship date "open" allows you to watch the weather and let us know when you would like us to ship. **There is no default shipping date on "open" orders, therefore you need to let us know when you are ready.**
- If plants arrive in poor condition, please contact us immediately!

## VARIETY UPDATE

**Rutgers Scarlet** is currently limited and will sell out soon. I suggest you consider placing your order early for 2017.

**Imara, Kweli, and Kwanza Primocane** producing varieties with the highest yield potentials. Imara is the earliest. Kweli has the best shipping characteristics. Kwanza has the largest size. **Quantities are limited.**

## TRIAL VARIETIES

**Rumba** New for 2016! Early-Mid Season, similar ripening time and yield to Honeoye. **Sold Out for 2016**, please reserve now for 2017.

**Verity (Day Neutral)** Produces an upright flower and berry and a large spring crop. An excellent choice for stem berries.

We are here to answer your questions  
Feel free to contact us via e-mail:

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