

NOURSE

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COMMERCIAL NEWSLETTER

Volume XIV • Fall 2005

From the Editor,

Greetings from Whately. This summer has delivered a great crop of healthy plants. By the time you begin reading this newsletter, we will be wrapping up our raspberry plant harvest here in Whately, and beginning our strawberry plant harvest.

As we finish up for '05 there are several trends that we have recognized. First, we are seeing an increase in demand for small fruit plants. We feel that this is due in part to the large increase in per capita consumption of berry fruits, as well as the fact that more people are recognizing the value of buying 'Locally Grown.' We are experiencing more local enthusiasm than we've seen over the last ten years. People are finally realizing that freshness and flavor is worth a little more. Secondly, our growers are realizing that they have left plantings in too long and are getting them back on track. We have also realized the advantages of new plantings, selling our berry customers higher quality, bigger berries that are increasing their sales as much as 10-20%. Finally, as the economy gets a little tighter we know more people will look to 'save' a little more by picking and processing their own berries. Although our 'Pick your own' was about the same as last year, we have sold more 8 quart flats from our stand than in any other year. People don't always want to pick, especially when it is hot, and they are saving a quarter a basket by purchasing the whole crate.

This year we are focused on helping our growers plan for the future. We have varieties that will bring excitement back to your Pick Your Own and roadside stand. We can help you choose a site or the right varieties that will work best for your area. We want to help tailor a plan for success that considers your needs and expectations. Please let us know by phone, email, fax or letter, where you want to go and we will do everything we can to get you there.

Nate Nourse
Sales Director
nnourse@noursefarms.com

Attention Growers—Join a National Fruit Organization!

The National Berry Crops Initiative is being organized for the benefit of all Berry Growers, and now is the time for all Growers to show their support. There isn't enough space here to cover all the details, so please contact us or your state association for additional information. In order for Growers to be properly represented, Nourse Farms is recommending the following actions. Join your state and National Berry Associations.

Contact your Senate and Congressional Representative and ask him to support The National Berry Crop Initiative in the next Farm Bill and to support Specialty Crop Growers' in the state. We foresee these efforts will have lasting impact towards the Sustainability of Berry Growers in the United States.

Nourse Farms Open House

On August 20, 2005, Nourse Farms held an Open House for our commercial customers. It was a very successful event with over 200 people attending. The day was organized so visitors could see all aspects of our nursery and fruit production on bus and walking tours. A trade show of specialized vendors also participated.

At lunch, we had 2 specialists on our speaking program. Dr. Doug Doohan, Weed Specialist from Ohio State University, spoke on strawberry and raspberry weed control. His presentation is outlined in a separate article in this newsletter. Also, Fran Dellamano of Belle Terre Irrigation Supply Company discussed advances and applications of drip irrigation to strawberry and raspberry production.

After lunch, we adjourned to our fruiting fields where Nate Nourse described different production systems. Fran Dellamano further explained and discussed irrigation applications with our visitors and Proptec's Marc Ledebur demonstrated their rotary sprayer. Tours resumed for the remainder of the afternoon.

Customers attended from up and down the east coast and from the mid-west. We even had a customer who traveled from British Columbia!

We thank all those customers and trade show vendors who attended for taking the time to travel and see us. We appreciated the opportunity for us to visit.

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New Varieties for 2006!

Blueberry - REKA

(US Plant Patent #6700)

Reka, an early season blueberry variety bred in New Zealand, is one of the fastest growing and most adaptable varieties we have seen. A very vigorous variety, it grows well on light sandy soils, peat and heavier clay loams, and is more tolerant to wetter ground than many other varieties. Fruit ripens after Duke and the berries have better flavor. Berries are an attractive dark blue color and plant produces large crops. Its winter hardiness is rated equivalent to BLUECROP. We are pleased to add this high performing variety to our list and strongly suggest it for trial.

Blackberry - OUACHITA

(US Plant Patent Pending)

Ouachita (pronounced WAH-shi-tah) has been released by Dr. John Clark at the Arkansas Experiment Station. This thornless variety has excellent quality fruit, with firm, sweet attractive berries. Fruit ripens before Navaho. Plant has very erect canes, and intermediate vigor. Winter hardiness appears to be less than Navaho, similar to Apache. Plants also appear resistant to anthracnose, double blossom/rosette and no orange rust has been seen on any plants. Recommended for trial in the mid-atlantic and south.

Red Raspberry - JACLYN

(US Plant Patent #15,647)

This new primocane fruiting raspberry is a recent release by Dr. Harry Swartz from the University of Maryland. Jaclyn is quite vigorous, similar to Caroline and Heritage. Erect, growing to 4 to 5 feet tall. Ripening time is similar to that of Polana. Jaclyn fruit is a distinct dark red when ripe. Drupelets are held tightly together with a narrow plug cavity. Fruit needs to be ripe for it to be removed easily. Fruit is firm and exhibits less

fruit rot and sunscald than other varieties. Flavor is sweet. Fruit is adapted for local shipments, farm markets, and Pick-Your-Own. Plants are field resistant to many insects and diseases. Shows susceptibility to yellow leaf rust. Jaclyn is an excellent consideration for its early production of firm berries and its excellent flavor.

Red Raspberry - MOUTERE

(US Plant Patent Pending)

A new release from the HortResearch breeding program in New Zealand, Moutere is resistant to Raspberry Bushy Dwarf Virus (RBDV). A floricanne fruiting variety, it is an early-midseason producer, fruit size is medium to large, conical shaped, medium red color with a light to medium glossiness. Shelf life is rated good. Plant habit is upright with good plant vigor. Fruiting laterals are medium to long. Canes are semi-spineless. Plants have good winter hardiness for the Pacific Northwest. Moutere is a similar season to Malahat and has been tested at the Pacific Agricultural Research Center, Agassiz, BC by Chain Kempler.

Strawberry - ITASCA™

(US Plant Patent Pending)

Released from the University of Minnesota, Itasca is a cross between Seneca and Allstar. Fruits early to early-midseason in Minnesota or early-mid-season in Massachusetts. In Minnesota, fruit was larger than that of Annapolis, medium large in size, conic to blunt wedge shaped. Fruit flesh is orange-red with a classic flavor. Itasca is resistant to five races of red stele, and its foliage is highly resistant to mildew. Itasca is suitable for Pick-Your-Own and farm sales. Best in zones 3-5. Itasca should be trialed to evaluate its early to early-midseason performance.

Strawberry - Evie 2

(US Plant Patent Pending)

This new release from the Peter Vinson breeding program in Kent, England is day-neutral. An improvement over the Everest, Evie 2 is easier to grow, higher yielding and less sensitive to our warm summer temperatures, which tend to shut down day-neutral production in the East and Mid-West. Berries have an attractive red color, good flavor and maintain good size. In fruiting trials here, Evie 2 produced the largest spring crop than any day-neutral we have tested to date. Commercial growers will want to trial this variety.

2005-2006 Trade Shows

We plan on attending this selection of shows for the coming season.

Dec 6-8: Great Lakes Fruit & Veg. Expo, Grand Rapids, MI.

Dec 13-15: New England Veg. & Berry Conference, Manchester, NH.

Jan 4-6: North American Berry Conf. (NASGA), Savannah, GA.

Jan 5-7: Southeast Reg. Fruit & Veg. Conf., Savannah, GA.

Jan 8-10: WI Fresh Fruit & Veg. Conf., Oconomowoc, WI

Jan 12-14: No. American Farmers' Direct Mktg. Conf., Austin, TX

Jan 17-18: Ohio Fruit & Veg. Growers Congress, Columbus, OH.

Jan 23-25: Indiana Horticultural Congress, Indianapolis, IN.

Jan 31-Feb 2: Mid-Atlantic Fruit & Veg. Conf., Hershey, PA.

Feb 14-16: Empire State Fruit & Veg. Expo., Syracuse, NY.

Mar 7-8: Illinois Small Fruit School, Mount Vernon, IL.



Weed Control in Review

By Tim Nourse

Weed control for strawberries and raspberries continues to be an important topic for commercial growers. Dr. Doug Doohan presented an excellent herbicide review at our Open House in August. The following is a summary of his comments:

There are three important components to any weed control program:

- 1. *Preparing your site before planting strawberries and raspberries.***
By selecting a site the year before planting, you have the opportunity to observe what weed species will be a problem and treat the site accordingly to remove those weeds. Whether you plant a rotational crop such as sweet corn or a cover crop, your weed management can prevent a weed problem the following year.
- 2. When choosing an herbicide program for your strawberry or raspberry planting, *identify the specific weeds that are most abundant.*** Several of the now predominate weeds that growers must deal with have specific herbicides and application timing necessary for control to work successfully. Of course, each state has a list of the labeled herbicides for your reference. There are several weed identification references available that are very helpful or consult with your state weed control specialist for proper identification.
- 3. Based on your weed pressure, *choose the correct herbicide and time of application*** of that herbicide to best control your target weeds. Following are a list of herbicides that are effectively used in the fall.
PLEASE NOTE – Not all of these herbicides are labeled in every state. Consult your state recommendations for labeling and the weeds controlled.

A. Devrinol – (Pre-emergent) A standard weed control for fall application. Devrinol controls annual grasses, suppresses nutgrass and will suppress some other weeds. It may also be applied in the spring, after planting.

B. Spartan – (Pre-emergent) A newer herbicide labeled for use as a control of broadleaf weeds, specifically common groundsel, lambsquarters, pigweed, pineapple weed and others. For Wisconsin, the label states that fall applications should be from October 15 to December 15th. A warning also states that the sprayer needs to be washed thoroughly to prevent damage to subsequently sprayed crops.

C. Stinger – (Post-emergent) A new 24C label in several states, Stinger controls a group of difficult to control weeds, including thistle, clovers, dandelion, groundsel, red sorrel plus several others. The label also stresses several other considerations:

1. Minor leaf cupping may occur
2. Apply with 20 to 75 gals. of water per acre
3. Do not apply within 6 to 8 hours of rainfall
4. Do not apply when the ground is frozen

As Stinger is a post-emergence broadleaf weed control, best results will be achieved when some fall dormancy has occurred to harden off the plants, but not after extensive frosts have damaged the weed tissue, resulting in less take up of the Stinger. Stinger is a 2,4-D type of compound.

D. 2,4-D Amine – (Post-emergent) Another alternative herbicide used in strawberries, it controls dandelions and other broadleaf weeds. It should be applied after several frosts or in the early dormancy period, before weed tissue is damaged too severely.

E. Sinbar – (Pre-emergent). A standard weed control that works well for fall application. Growers have considerable experience with Sinbar and are familiar with the weeds that it does control successfully. Sinbar does not control all of the broadleaf, perennial weeds that growers are now concerned with.

F. Poast or Select – (Post-emergent). For control of perennial grass – early fall is a good time to control perennial grasses, before extensive frost damages the tissue. The newer SELECT appears to be more effective in controlling perennial grasses than the other materials. If control is not completed in the fall, spring application works well, but you need to wait until grass growth is at least 4 - 6" high which is usually later in the spring and more difficult to schedule.

The question is often asked about the control of annual grasses in the fall. As frosts will kill all annual grass, it is only necessary to use a pre-emergent control.

G. Dacthal – (Pre-emergent) Applied only in the early spring, Dacthal is an old herbicide that controls oxalis from seed. It also controls chickweed, annual grasses and other weeds.

If you have any questions that we can assist you with, please let us know. Many of you also have good weed control specialists in your state.

Email: tnourse@noursefarms.com

Reference

Weeds of the Northeast
Published by Cornell
University Press.

Sage House
512 East State Street
Ithaca, NY 14850

Updates on New Strawberry Varieties

L'AMOUR (US Plant Patent Pending) – is a Cavendish hybrid that performed very well in our 2005 fruiting trials. It fruited early mid-season, just after Honeoye, and produced an excellent yield of high quality berries. This was the first time that we have observed the fruit and we were favorably impressed with its performance. Color is excellent, attractive red, but not too light or too dark. The fruit ripened very evenly. Fruit size was large and it held its size well during the fruiting period. Berries were firm, well adapted for all uses, from u-pick to commercial shipping. From our observations this past June, L'Amour will make a good addition to our early-midseason varieties.

CABOT (US Plant Patent Pending) – This very large fruited variety is performing well for many customers. Its most outstanding qualities are its very large size and good flavor. Some growers mention that its early fruit can be somewhat rough. This characteristic can be modified with the addition of Boron, applying it during the bloom sprays. Sol-u-bor is one soluble product that can be used. Boron assists in the pollination process, allowing the fruit to develop more evenly, resulting in a smoother berry. For more details contact us.

88-74-1 – This is an experimental variety from a breeding program in Italy. We have been trialing it here in Massachusetts and with some of our customers for several seasons now. It's highlight is that it is very late fruiting, capable of extending the fruiting season by 10 to 14 days. We have, however, identified a problem, which is seriously causing us to consider its elimination from further testing. We have discovered that 88-74-1 is not a "perfect pollinator". Its flowers do not produce pollen. Pollen must then come from a second variety for any berry to form. In small trial plantings we did not see any issue, as pollen was plentiful from surrounding trail varieties. In a big plot, however, and with our very cool, cloudy spring, pollination was not complete and the fruit was very rough, misshapen or missing altogether. We will have to evaluate this selection further to determine if there is any value to its release.

Early Pay Discounts

(orders over \$350, paid in full by:)

December 1st, 2005 4%

January 15th, 2006 3%

NOURSE

41 River Road
So. Deerfield, MA 01373

Phone (413) 665-2658
Fax (413) 665-7888
info@noursefarms.com
www.NourseFarms.com

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THE *OXION* OZONE SYSTEM FOR DRIP IRRIGATION

OZONE FOR CLEANER LINES

Oxion, Inc. has the patented process covering the ionization of air and admixing that ionized air into irrigation water. One of the products of ionization is ozone. Ozone (O₃) is three atoms of oxygen weakly bonded together. Ozone reacts rapidly with any organic matter such as iron bacteria, fungi, and algae. Most of the remaining oxygen becomes stable dissolved oxygen in water. **Ozone is a cost effective alternative for chlorine and other chemicals used to keep drip lines clean.**

Oxion Ozone Advantages

-  Ozone is **more effective than chlorine** in destroying algae and iron bacteria.
-  Ozone oxidizes **several times faster than chlorine**.
-  When ozone decomposes, it leaves **no harmful by-products**.
-  **Ozone is generated onsite and safe** – no dangerous chemicals that workers must interact with and manage.



The *Oxion* system will maintain a constant ozone level in your irrigation water throughout your entire irrigation system. Ozone is very effective in the removal of biofilm inside your lines. The result will be cleaner lines both from biological and mineral sources.



OXYGEN TO YOUR ROOTS

From an agronomic viewpoint, the main advantage of admixing *Oxion* air is the **increase in dissolved oxygen** in irrigation water. Plant root systems need oxygen to carry out respiration. **The *Oxion* system normally increases dissolved oxygen by 30-45%.** The increased dissolved oxygen will improve water penetration. Some growers have eliminated gypsum after installing *Oxion* machines. The dissolved oxygen will penetrate the soil, liberating tied up nutrients and providing oxygen for a healthy, growing root system. Root pathogens such as pythium and phytophthora have been reduced through the use of the *Oxion* system.

Increased Dissolved Oxygen Advantages

-  **Better root growth** – increased respiration and nutrient availability.
-  **Greater resistance to anaerobic diseases** such as pythium and phytophthora.
-  **Increased water penetration**



P O Box 477, Hugoton, KS 67951
(620) 544-2882 / 800-552-0617 / Fax (620) 544-4066
e-mail: oxion@pld.com
web site: www.oxioninc.com

Hillside Cultivator Co. LLC

911 Disston View Dr., Lititz, PA 17543

717-626-6194

E-mail: sales@shenkberrymfarm.com.

On the web at www.HillsideCultivator.com



All models of Hillside Cultivators include the soil engaged, weed removing tools pictured above and described below.

There are several models of cultivators available from Hillside Cultivator Co. They are all built to be very durable, easily adjusted, and finished with a long lasting heat cured epoxy powder coating. The toolbars are designed to be easily adjusted for versatility in cultivating many crops, but especially useful in **strawberries, raspberries, blueberries, potatoes and crops grown on plastic mulch.**

- Rolling cultivator gangs are the primary tillage tools. These gangs are composed of 3, 4, or 5 rolling spider wheels per gang and are very effective in cutting and uprooting weeds. The rolling cultivators are mounted on a slotted plate which allows the angle at which the gang rolls through the soil to be adjusted. As the angle is increased the aggressiveness is increased. The slotted plate is mounted on a vertical pivoting arm which allows the rolling cultivator to be adjusted to follow the side of a ridged row. The rolling cultivators operate as a pair of oppositely cast spiders. The front pair is used to move soil away from the row while the rear pair moves the soil back toward the row. This feature is of particular usefulness in cultivating strawberries either for the purpose of cutting off excess runners or renovating strawberries after harvest.
- Disk gangs may be used to replace the rolling cultivators for applications where thick plant residue or straw is encountered.
- A cultivator tine is used between the front and rear cultivator gang. This may be either an s-tine or a coil shank. The coil shank is adjustable to different depths. This tine serves the purpose of digging deeper than the more shallow working rolling cultivators. It is to be adjusted to follow the track of the tractor, loosening the soil which has been compacted.



The cultivator frame consists of two channels which form the track for two sliding sub frames. The cultivating tools are mounted on the sub-frames and are hydraulically adjusted by the tractor operator. With this adjustment fine tuning of the cultivator to size of the crop size is done quickly when moving between different fields. This feature is especially useful for cultivating the edges of plastic mulch. The rolling cultivators move the soil laterally



which will cover small weeds along the side of the plastic mulched bed or cover loose edges of plastic, but will not tear up the plastic if they come too close. A total of 16" of adjustment for each side of the row is possible by inter-changing the attachment points of the cylinders.

With the sub-frames fully extended it is possible to mount a set of cultivating tools to the center of the frame to create a two row cultivator.

An economy model of this cultivator is available with all of the cultivator mountings bolted to the toolbar.