Welcome to our 2019 Fall Newsletter.

All growers face the challenges of weather, as it is an important component of managing crops, especially outside. In spite of the fact our 2019 season had more than its fair share of challenges, many growers reported one of the best berry seasons ever. Nourse farms also had a good growing season, resulting in a very good crop of plants for the 2020 season. We look forward to harvesting them and preparing them for shipment.

All growers are experiencing increased input and labor costs. In our analysis, with the concept of being sustainable, it is necessary for an across the board price increase for the coming season. In Massachusetts we have continuing $1.00 per hour increases. In addition, as a result of a decision of our Supreme Judicial Court, packing house operations are no longer exempt from the agricultural overtime rule. This will have a substantial impact at Nourse Farms.

Nourse Farms continues to be a part of the many changes happening in our industry. We are adding two new products to our propagation and production - strawberry tray plants and long cane raspberry plants. We have learned a lot about growing a quality product, in this expanding and challenging market area. These plants are used to produce fruit in glass greenhouses and other structures, using a variety of containers and substrates.

We are pleased to announce the addition of John Place as our Chief Operating Officer. John shares our forward thinking, entrepreneurial drive, and passion for leading the industry. We are confident John will continue to grow our dedicated team, enabling us to meet developing grower demands while maintaining the unsurpassed quality and service you’ve come to expect.

The Nourse Team and I thank you for your past business, and we look forward to serving you in 2020.
**Variety Overview**

*by Tim Nourse*

**Nourse Farms reports on the trends we see with strawberry varieties, key observations on Niwot black raspberry, and our asparagus 14-year trial results.**

**Strawberry Varieties and Their Performance**

There is a reason varieties perform differently from grower to grower. Different growing regions, different soil types and soil management, different results desired by each grower and varying crop management all are factors that influence variety performance from farm to farm. Here are my observations on strawberry performance:

1. **EARLY**: We have 2 prominent early varieties which are excellent planted in their adapted locations: **Galletta** and **Wendy**. Their performance can change with grower location. **Earliglow** and **Annapolis** are also important varieties, as they are well adapted for various conditions and requirements.

2. **EARLY MID-SEASON**: **Honeoye** remains the dominant variety in this group of varieties. **Yambu**, a new variety with Honeoye as one of its parents, is recognized for its high yields and excellent flavor, but lacks some berry firmness. **Brunswick** and **Cavendish** remain in good demand because of their performance and adaptability to a wide range of conditions.

3. **MID-SEASON**: **Jewel**, our #1 selling variety for many years, is known for its excellent characteristics. Growers also now recognize **Flavorfest** for its great flavor, disease resistance and plant vigor; its demand continues to grow. **Darselect** remains a popular choice in this category, but demands special nutrient and soil management. It has high yields and berry quality. **Sonata** and **Allstar** remain popular where adaptability to certain soil conditions is required or a specific flavor component is desired.

4. **LATE MID-SEASON**: **Cabot** is the main variety in this group. Although difficult to grow, Cabot is in high demand because of its very large fruit size, high yield and great taste. **Mayflower** is the most dependable variety in this ripening season, with good plant vigor and firm berries that resist rain conditions. Flavor changes from site to site. **Clancy** remains popular in the Pacific Northwest and its other adapted conditions. **Dickens**, a new introduction, was planted by growers for the first time in 2019.

5. **LATE-SEASON**: **AC Valley Sunset** continues to grow in demand as a variety because of its berry size, quality and season extension. **Malwina** has quickly become very popular, because of its late fruiting into July. Although dark red in color, it has great flavor.

6. **DAY-NEUTRAL VARIETIES**: **Albion** and **Seascape** are the highest demand varieties, but **San Andreas** and **Evie-2** have an important place with many growers. The day-neutral varieties continue to increase in demand but the variety mix remains relatively stable.

**Niwot - A Proven Performer**

**Niwot** was introduced in 2014 as the first primocane black raspberry variety available. Over the past several years, growers have discovered its advantages and learned how to grow it. Niwot has established itself as a high-performing florican variety, fruiting as early as Bristol and sometimes earlier. The fruit size is larger than Bristol, improving harvest efficiency. In addition, the harvest period extends through to the Mac Black harvesting period.

Our experience indicates that Niwot is easier to harvest than Jewel—whose fruit are in tight clusters—and the fruit are also firmer. In our next planting at Nourse Farms, we are replacing Bristol and Jewel with Niwot. Hand harvest efficiency is difficult with black raspberries. From our experiences, Niwot will help to decrease our harvest costs.

We have experienced poor results with Niwot as a primocane variety. We have tried tipping it to increase the fall crop, but it delayed harvest to be too late. Even without tipping Niwot, its crop is light and too late for our region.

**Asparagus Trial Results**

Nourse Farms has been conducting asparagus trials for over 20 years. Our trials have consisted of the varieties we offer in our catalog. In our newest trial we added 3 new selections from Europe to test with our established varieties, looking for new and better varieties. This season we terminated a 14-year-old trial, and report our results here.

Our trials are not replicated, but we accumulate the daily harvested amounts from year to year to have an idea on the overall yield and yearly performance. For the past 5 years of this trial, we harvested over 6,000 pounds of asparagus each year on an acre basis. For the past 2 years our yields have been just under 7,000 pounds on an acre basis.

In conclusion, our results show that **Millennium** was the highest performing variety in our trial because:

1. The stand of plants when the trial ended was about the same as when it was planted. The stands of Jersey Knight and Jersey Supreme had developed skips.
2. The uniformity of the spears of Millennium was excellent.
3. The other 2 varieties had more variability which influences the speed of bunching.

**Please contact us if you have questions.**
Brambles are a high value crop much in demand. Here we focus on on summer bearing red raspberries: an excellent complement to strawberries. Varieties typically ripen after strawberries, but before significant SWD pressure.

Site Preparation

• Preparations for red raspberry plantings should begin at least one year in advance. We advise taking soil samples to get a read on your pH, % organic matter and overall fertility to make any necessary changes the year before planting.
• We recommend a pH in the 6.5 – 6.8 range with a minimum 2-3% organic matter. A nutritionally healthy planting in a well-drained soil with exposure to air movement is less susceptible to damage from pests and frosts.
• Raspberries require good internal soil drainage to grow and do best on a well-drained sandy loam. Wet soils restrict root growth and respiration, resulting in weak growth and reduced yields.
• Planting on raised beds is highly recommended to improve soil drainage in the rooting zone, particularly on heavier soils. Selecting a site with a gentle slope (3-4%) and good air drainage will also promote faster drying of foliage, flowers and fruit which will reduce the duration and frequency of disease infection periods Recommended plant spacing is 18 – 24 inches in the row and 10-12 feet between rows.
• Drip irrigation is an essential component to successful raspberry production. Plants generally require 1 to 2 inches of water per week during the growing season and 2 to 3 inches per week during harvest. We suggest having your local irrigation sales company review your field layout for the best recommendations for your situation.

Choosing a variety

Picking the appropriate varieties for your operation is one of the most important decisions a grower can make. In northern areas, winter-hardiness is a key factor in choosing a variety. On the flipside, in zones 7 & 8, care should be taken in variety selection to ensure the fruit can handle intense summer heat. The following is summary of key summer bearing varieties – additional information on these and other varieties can be found on our website or in our catalog.

PRELUDE
Well accepted early variety. Growers like the early season primocane crop combined with good berry quality. In some locations, Prelude produces a primocane/fall crop.

NOVA
In the trifecta of summer bearing key varieties, a very consistent second variety in ripening time. Nova is dependable for winter hardness, overall plant vigor and being highly productive.

KILLARNEY
In similar ripening window as Nova, some growers prefer this variety for its performance, better fruit quality, and flavor in their conditions.

AAC EDEN
Tested as K06-2, AAC EDEN was released by Andrew Jamieson at Kentville, Nova Scotia. Mid-season, summer-bearing florican. A cross between Glen Ample and K93-11, the strong canes are spineless and demonstrate moderate winter hardness. The conical fruit are large, firm, light to medium in color with excellent flavor.

ENCORE
Best alternative for a late florican bearing raspberry. Encore is not the most productive, but fruit quality is excellent. Encore is also the best variety to connect to the primocane/fall bearing season.
5 REASONS TO SWITCH TO FLOWCONTROL® DRIP TAPE
The Best Drip Tape For Strawberries

1. Better uniformity – even in hilly terrain
2. Clog resistance
3. Increased profitability through higher yields and lower system cost
4. Exceptionally better value versus pressure-compensating drip tapes
5. Longer lengths of run

SUPERIOR UNIFORMITY
Standard drip tapes often stress plants and reduce yield and efficiency by over- or under-watering as pressure changes throughout the irrigation run. FlowControl gives a more uniform irrigation, regardless of elevation changes. More uniformity can lead to better yields, even in challenging terrain that might otherwise be impractical to farm.

CLOG RESISTANCE
When standard drip tapes and hard-emitter driplines get clogged, they often stay permanently obstructed. But thanks to FlowControl’s patented flexible emitter flowpath, FlowControl works to free debris every time you shut down your system to help remove obstructions and unplug emitters. Along with proper system maintenance, this reduces labor and increases system longevity and crop uniformity.

For more information please contact
Brookdale Farm Supplies
www.brookdalefruitfarm.com
603-465-2241

*Profitability and yield depend on a number of factors beyond irrigation system performance
*when compared to standard drip tapes
FlowControl® is the only flow-regulating drip tape available, giving you more control and uniformity wherever you farm.
FIVE POINTS TO PONDER
Let’s Start Planning for 2020!

1. GROWING SMALL FRUIT PLANTS FOR RE-SALE

You have a great opportunity to expand your offerings by selling potted small fruit plants at a farmers market, or roadside stand! We hear from many customers who have great success selling hanging basket strawberries for Mother’s Day and potted raspberries as part of their garden center spring offerings. The trick is to pick the correct container and mix, choose the appropriate variety and plant at the correct time:

• Pick the correct container and mix. You could consider 8, 10- or 12-inch hanging baskets for day neutrals/everbearing varieties. We also have customers who pot up our June-bearing bare root plants in 3-4-inch pots so home gardeners “can get a jump” on their outdoor planting. In terms of soil mix, any traditional greenhouse potting soil can work. We do not recommend the incorporation of fertilizer as part of the mix or at planting as it can burn the root system of the plants. We do recommend using drip irrigation starting at planting and then “spoon feeding” small amounts of fertilizer roughly a month after planting.

• Variety choice can be the key to success. For strawberries, particularly hanging baskets, the key is a variety that is attractive to your customer both with its foliage but also during the fruiting stage. Mara Des Bois is a true everbearing variety that produces fruit throughout the summer into the fall. The fruit has an attractive red color, high gloss, intense flavor and is very fragrant. For raspberries, any of our primocane or floricane fruiting varieties are suitable to pot and sell either that first year or carrying over the winter for larger, second year plant sales.

• Planting at the correct time is particularly critical for hanging basket strawberries if you are targeting Easter and/or Mother’s Day sales. We recommend beginning plants in hanging baskets in a heated greenhouse at least 8 weeks prior to your sales date if you are planning to sell them as flowering plants. Add an additional 4 weeks if having fruit on the plants is also desired.

MARA DES BOIS

2. FERTILIZATION RECOMMENDATIONS FOR DAY NEUTRAL STRAWBERRIES

Day-neutral strawberry varieties offer growers in many areas the ability to provide strawberries throughout a period of four to five months, or longer under protection. Our article in our Spring 2019 Newsletter (available on our website) on “Day Neutral Strawberry Production – the Ins and Outs” was very well received, and the #1 question new and existing day-neutral strawberry growers have had is on fertilization practices. There is no prescription that fits everyone, but here are a few tips:

1. We recommend 2 lbs. / units of actual nitrogen per planted acre per week for the first few weeks after planting through drip irrigation system if possible. You can consider using a 20-20-20 greenhouse water soluble mix. Growers can also consider biweekly applications but they should average appropriate amounts of actual nitrogen.

2. Once the plants begin to set fruit, increase nitrogen to 3 - 5 lbs. / units actual nitrogen per week through the drip irrigation system; adjust based on plant growth. We know Albion is a heavier feeder. Failure to provide weekly applications of nitrogen is a major reason for producing lower yields than anticipated.

3. Studies at the University of Delaware show calcium nitrate as the preferred source of nitrogen early in the season. Studies also show a benefit of supplementing any preplant potassium with 10lb/acre of K2O at monthly intervals or 2lb/acre at weekly intervals through the drip irrigation system during the growing season. Day neutrals tend to be heavy consumers of boron due to their heavy production. Levels should be monitored through leaf analysis to ensure that boron levels do not fall below 30 ppm. An application of 2 lb/A Solubar may be required in midsummer if boron levels are too low.

Order by phone (413) 665-2658 M-F, 8am-5pm (EST) • Fax (413) 665-7888
CONSIDERATIONS FOR CHOOSING THE BEST BERRY CONTAINER

In growing berries, many decisions need to be made regarding the crop – ranging from cultural practices to marketing/pricing/distribution. Container choice is sometimes overlooked, but can be critical in marketing/pricing/distribution. Choice is often dictated by what your customer is looking for. The trade show and conference season is a great time to spend a few minutes with container vendors at trade shows to see what options are offered, and how they can meet your specific needs. The following is an overview of product types and potential uses:

Pulp/Fiber. These are the typically green, paper-based products, very popular for brambles and blueberries in the half pint or pint sizing.

STRAWBERRIES from post-bloom through harvest: depending on soil type, plants respond best to 2 inches or more per week.

DURING HARVEST, berry crops require continuing high levels of irrigation to maintain berry size. Growers using drip irrigation daily will benefit from maintaining good moisture levels and the effects of evaporative cooling.

Drip irrigation is also beneficial in fields, where differences in elevation and uneven water distribution result in puddling and wet fruit. An additional benefit is the ability to inject fertilizer to “spoon feed” the plants.

Even matted row growers are experiencing the benefits of drip irrigation.

When applying drip tape, make sure furrow is deep enough to prevent rodent damage.

As many head into the winter season, protection of irrigation equipment from winter damage is important. Your system should be parked in a safe location away from potential wind, rodent and tree damage. All parts of the system, including underground lines should be drained. Trickles and drip lines not covered by plastic, plant material or mulch stand less winter rodent damage.

Winter meetings and trade shows are a great opportunity to visit with irrigation system vendors.

SOCIAL MEDIA OPTIONS

We see more customers not only using social media in their marketing efforts, but asking how they can expand into additional channels. Here is an overview of the most popular channels and potential use for marketing your products:

Facebook is the biggest social media network on the web. It is also one of the most versatile, allowing you to share important updates, events, photos, and videos, and link to websites and web-based newsletters.

Twitter allows users to share text updates (280 characters or fewer) along with videos, links, images. “Tweets” can be easily shared on other social media platforms.

At Nourse Farms, our raspberries are sold as half pints predominantly using these containers. Half pints help us get more competitive pricing, and give the air flow/storage considerations that more delicate fruit like red raspberries require. Our blueberries are picked into pint containers which is the typical standard for blueberries.

Wood. Typically available in pint and quart size, and generally used for strawberries, tomatoes and a variety of produce. At Nourse Farms, our wholesale customers love the look and feel of the wood quarts used with our June-bearing strawberries. The wood quarts are reminiscent of the “days of old”, and are attractive and stand up well in refrigeration when needed. We recommend picking day-neutral varieties into pints versus quarts as they dictate higher price point and pints better fit the berry sizing.

Plastic Clam Shells. Clam shell sizes vary from half pints to pints, quarts and much larger containers. The key benefit of these containers is in sales to large wholesale customers. Larger wholesale customer may require these as they can be easily labeled with product information, including “locally grown” and bar codes, and are stackable for easy of transit, storage and shelf space.

Caps. Not a container but can be a packaging component. Caps can be clear plastic, mesh and or a variety of materials that are used to cover primarily pulp/fiber and wood containers. Clear caps can also be labeled with “local berries” or “locally grown.”

In summary, container choice is based on a variety of factors – type of berry grown, customer type and needs, deliver/storage requirements and costs.
Hillside Cultivators are very effective for weed control between crop rows and renovating strawberries. The Hillside Cultivator may also be configured for 2 Rows or as a model without hydraulic adjustment.

- Renovate Strawberries efficiently and economically with optional front-mounted disk gangs
- Effectively uproot weeds very close to crop rows or plastic mulch or ridge soil along raised beds with rolling cultivators
- Hillside Cultivator Model CS is constructed with a strong frame, multiple adjustments, and hydraulic control of the distance between cultivator gangs
- Hillside Cultivator Model NH is the economical manually-adjusted version

Both models have coil tines mounted between front and rear gangs for fracturing hard soil.

www.hillsidecultivator.com
FIVE POINTS TO PONDER… continued from page 7

linked to their users by using hashtags and “re-tweeting” other content. A good way to let followers know picking conditions as well as share easy recipes and unique use of berries.

*Instagram* is a great platform used primarily on cell phones, for sharing photos and videos with excellent editing capability. There is nothing like visuals of berries in the field or picked at the stand to entice people to come!

*YouTube* is a video-sharing platform with over a billion users, where people can view, upload, rate, share and comment on content. One popular use may be a variety of cooking, canning and processing videos using berries.

*Pinterest* is a visually oriented platform that lets users save and display content by “pinning” photos and other graphics to digital bulletin boards. Like YouTube, could be used to highlight different ways to use berries.

*Snapchat* is another mobile-only network (like Instagram) that’s known for its disappearing content. Photos are available for up to 10 seconds at a time and could be another way to highlight current picking conditions.

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**2020 COMMERCIAL GROWERS PRICE LIST**

**Strawberries**

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<tr>
<th>Type</th>
<th>Variety</th>
<th>500+</th>
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<th>5M+/1M+</th>
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<tbody>
<tr>
<td>June Bearing Varieties</td>
<td>Allstar, Earliglow, Honeoye, Jewel</td>
<td>$91.00</td>
<td>$145.00</td>
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<td>$128.00</td>
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<td></td>
<td>Annapolis, Chandler, Sparkle, *Brunswick, Flavorfest</td>
<td>$95.00</td>
<td>$155.00</td>
<td>$148.00</td>
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<td></td>
<td>Cavendish, *Darselect, *Galletta, *Rutgers Scarlet™, All Exp. Var.</td>
<td>$99.00</td>
<td>$160.00</td>
<td>$153.00</td>
<td>$145.00</td>
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<td></td>
<td>*Cabot, *Clancy, *Dickens, *Mayflower, *Sonata, *Wendy, *Valley Sunset</td>
<td>$101.00</td>
<td>$167.00</td>
<td>$158.00</td>
<td>$150.00</td>
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<td></td>
<td>*Malwina®, Yambu</td>
<td>$112.00</td>
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<td>Everbearing Varieties (Dayneutrals)</td>
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<td></td>
<td>Seascape</td>
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<td></td>
<td>*Albion, *Evie 2, *Portola, *San Andreas</td>
<td>$106.00</td>
<td>$172.00</td>
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<td></td>
<td>Mara des Bois</td>
<td>$128.00</td>
<td>$225.00</td>
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**IMPORTANT!** Pricing is per variety unless: total combined is between 15,00 and 24,999, use 5M pricing; total order at or over 25,000, use 25M price.

**Brambles**

<table>
<thead>
<tr>
<th>Variety</th>
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</thead>
<tbody>
<tr>
<td>Red &amp; Yellow Raspberry Varieties</td>
<td>Anne, Boyne, Caroline, Heritage, Killarney, Latham, Nova,</td>
<td>$183.00</td>
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<tr>
<td></td>
<td>*BP-1, Encore, *Joan-J, *Himbo Top®, Polana, *Polka, Prelude</td>
<td>$198.00</td>
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<td></td>
<td>*Double Gold, *Eden</td>
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**Black Raspberry and Blackberry Varieties**

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<tbody>
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<td>Asparagus (Available as 1-Year-Old Crowns)</td>
<td>Jersey Knight, Jersey Supreme, Purple Passion</td>
<td>$149.00</td>
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<tr>
<td></td>
<td>Millenium</td>
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**Blueberries**

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<th>500+</th>
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<td>Bluecrop, Bluegold, Blueray, Chandler, Darrow, Duke, Elliott, Jersey, Northland, Patriot, Reka</td>
<td>$7.70 ea.</td>
<td>$7.15 ea.</td>
<td>$6.45 ea.</td>
<td>$6.00 ea.</td>
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<tr>
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<td>*Blue Ribbon, *Top Shelf, *Last Call</td>
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<td>$7.80 ea.</td>
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**Horseradish**

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**Elderberries**

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<tbody>
<tr>
<td></td>
<td>Samdal, Samyl</td>
<td>$6.70 ea.</td>
<td>$6.30 ea.</td>
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**SHIPPING & HANDLING CHARGES** (3-day recommended for west of the Mississippi River after May 15th)

Shipping charges are not reimbursed with replacement orders. See zone chart on the inside cover for recommended planting times.

**ORDER VALUE** | **GROUND 3-DAY** | **ORDER VALUE** | **GROUND 3-DAY** | **ORDER VALUE** | **GROUND 3-DAY**
<table>
<thead>
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<td>Under $15.00</td>
<td>$10.95</td>
<td>$22.00</td>
<td>$60.01 to $85.00</td>
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<td>$15.01 to $30.00</td>
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<td>$23.95</td>
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**Early Pay Discount**

Orders over $500, paid in full by:
- Dec. 1, ’19 save 3%  
- Jan 15, ’20 save 2%  

**Note:** Asparagus crown orders over $200 may have shipping charges that exceed 14% - call for quote.
WARRANTY: Nourse Farms, Inc. warrants that the products it sells have been labeled as required by law and that they conform to the label descriptions. Nourse Farms, Inc. makes no other warranties, express or implied, of merchantability, fitness for purpose or otherwise. The exclusive remedy for loss or damages due to breach of the foregoing warranty or contract or for negligence or other cause shall be limited, at the option of Nourse Farms, Inc., to the replacement of such product or refund of the purchase price of such product, and Nourse Farms, Inc. shall in no event be liable for any other damages, whether direct, indirect, incidental, special or consequential.

By acceptance of the product, the buyer acknowledges that the limitations and disclaimers herein described are conditions of sale and that they constitute the entire agreement between parties regarding warranty or any other liability.

ORDERING Prices valid to May 31, 2020. Use enclosed order form, call or order online. Order early to ensure your first choices and on-time shipping. We make every effort to ship on time. We do not recommend fall planting.

PATENTED/LICENSED VARIETIES identified by a *, cannot be propagated without permission. Royalty or usage fees are included in their prices. Patented varieties are protected by U.S. patent laws and licensed varieties are produced under contract with plant breeders.

PLANT PICKUP Orders can be picked up in Whately, MA, mid April through late May, Mon. through Fri., 8am to 4:30pm; Sat., 8am to 1 pm. Call for other available times.

SHIPPING AND HANDLING charges are additional. Shipping by Ground Service unless otherwise specified. Three business days’ notice required for orders with “open” ship dates. We’ll make every effort to accommodate shipping on short notice.

ORDERS TO HAWAII AND ALASKA Ships 2nd-day air only. Sorry, no exceptions.

ORDERS TO MIDWEST OR WEST COAST Shipped on a Monday or Tuesday. On warm temperature days, shipping is by 3-day service to ensure good condition. Added shipping charges are billed. California, Hawaii, Oregon and Washington must have phytosanitary certificates ($15.00).

CANADIAN & FOREIGN ORDERS Import permits must be supplied 30 days in advance of shipment. All shipping by special arrangement. Nourse must receive payment in full with U.S. funds prior to shipment. Special fees may apply. Add $25.00 - $200.00 for export certification by U.S. Dept. of Agriculture. Payment by credit card or bank transfer minimizes your bank fees.

PAYMENT
- Orders $250 or less must be paid in full within 10 days of placing the order or will be subject to cancellation.
- Orders exceeding $250 require a deposit of 1/3 within 10 days of placing the order, or are subject to cancellation. Balance must be paid in full prior to shipment. In the case of a pickup, a customer may pay the balance at time of pickup.
- Orders shipping after June 1 must be paid in full by June 1 to reserve the plants, or the order will be subject to cancellation and loss of deposit. Orders shipping after June 1 are not eligible for refund if cancelled.
- Net 30 Terms may be extended for orders greater than $500 for returning customers only; determined on a per customer basis, based upon a Customer Credit Application, and prior payment history with Nourse Farms.
- Service charges of 1.5% per month are added to past due balances.
- We do not refund amounts less than $3.00.
- We accept Visa, Master Card, Discover, checks, money orders and cash.

Tunnel Production
Not necessarily new to some growers, high tunnel raspberry production has been a topic at many of the winter meetings, with discussion of variety selection and overall production. We have had excellent success in using high tunnels in our own bramble production, including summer bearing red raspberries, and welcome any questions you might have.

Pest Management
Good weed control during the first year is essential. Raspberry plants are sensitive to most herbicides during the first few months after planting. Research from Cornell has shown that applying a clean straw mulch (4 inches deep) to newly plant raspberries provides good weed control. On heavy soils mulch should be used only in the first year since straw mulch over a prolonged period can encourage the development of root rots. We do not recommend bark mulch or any other mulch material besides straw.

Like any crop, a variety of pests need to be managed to maximize yields, fruit quality, and extend the life of your planting. Based on grower experience, besides Spotted Wing Drosophila which impact later ripening summer raspberries, growers should be concerned with:
- Phytophthora Root Rot
- Botrytis Fruit Rot (Grey Mold)
- Aphids
- Yellow (Late or Fall) Rust
- Mites

Please review our Spring 2018 and other past newsletters on our website or contact your local cooperative extension office for specifics on possible controls.
New for 2020!

We are excited to have several new blueberry varieties, available through Fall Creek Nursery, which have performed very well in 3 years of our trials. We’re also offering two new and exciting bramble varieties. As with all new varieties, we suggest ordering early!

**Caddo Blackberry**
(U.S. Plant Patent to be applied for)
Caddo is the latest in a series of erect-growing, high quality, productive floricanefruiting black berry cultivars intended for fresh market use by John Clark at the University of Arkansas. “It has overall high fruit quality, excellent postharvest fruit-handling potential, consistent high yields and excellent plant health,” Clark has said. Early results show Caddo ripening between Natchez and Osage with comparable yields to both Osage and Ouachita. Size has been larger than both Osage and Ouachita; holding size through the harvest season. We highly recommend that growers trial this new and interesting variety. Hardiness is anticipated in zones 5 – 9.

**Mapema Raspberry R**
The fourth in a series of varieties from the Advanced Berry Breeding program in The Netherlands, Mapema® is an early fruiting and easily to grow primocane with a high yield. Ripening time is similar to Polka. This variety produces large, conical fruit with a beautiful, deep colour. The raspberries are of excellent quality and easy to pick. Our trial results have shown Mapema to be the earliestfruiting of the ABB varieties with superb fruit quality and flavor. As with the other ABB varieties, special licensing requirements include a 200 plant minimum, please call us for pricing and details on placing an order.

**Blue Ribbon ***
(U.S. Plant Patent #24,636)
Blue Ribbon is an early to mid-season selection released primarily for the high quality, hand harvest, fresh market. Its most notable attributes are high yields of firm, light blue, flavorful large berries and good post-harvest shelf life. Blue Ribbon is a high yielding, early season berry with exceptional quality. It has performed well across several environmental conditions. We envision Blue Ribbon primarily as a fresh berry with a moderate concentration of ripening, similar to Legacy. Best in zones 4-7.

**Top Shelf ***
(U.S. Plant Patent #24,697)
Top Shelf is notable for its very large, flavorful, firm fruit. While similar to Draper Top Shelf seems to excel in areas such as plant vigor, fruit size and flavor. We recommend Top Shelf for commercial plantings in High Chill regions with milder winters. Top Shelf is a high chill cultivar that has performed excellently in all commercial trials planted throughout Europe, even in high chill regions where winters are not too cold. It has superb fruit quality catching the attention of many European marketers. It is a strong plant, easy to prune, and has high yields at a young stage, mainly due to its very large fruit size. Best in zones 4-7.

**Last Call ***
(U.S. Plant Patent #25,386)
A very late season Northern Highbush, Last Call ripens in the same window as Elliott. This vigorous, upright bush produces high yields of large berries with a classic sweet and slightly aromatic blueberry flavor. Although primary use is for commercial fresh production, it is also recommended for processed or local market growers wanting to extend their harvest season. Last Call is very vigorous with a good upright growth habit. It allows growers to extend their season because of its very late ripening season. Best for zones 4-7.
Nourse Farms on the Road

We attend several trade shows each year so that we can be available to meet commercial growers across the country. We have found that face to face meetings with our customers provide a great opportunity for us to work closely with you to determine your plant requirements. Below is a list of tradeshows we will attend during the 2019-2020 season.

2019-2020 WINTER MEETINGS & TRADE SHOWS

<table>
<thead>
<tr>
<th>Dates</th>
<th>Trade Show</th>
<th>Place</th>
<th>Phone/Website</th>
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<tbody>
<tr>
<td>Dec. 10-12, 2019</td>
<td>Great Lakes Fruit, Veg. and Farm Market Expo &amp; MI Greenhouse Growers Expo</td>
<td>DeVos Place, Grand Rapids, MI</td>
<td>(734) 239-8027 glexpo.com</td>
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<tr>
<td>Dec. 10-12, 2019</td>
<td>New England Vegetable &amp; Fruit Conf.</td>
<td>Double Tree by Hilton (Formerly the Radisson), Manchester, NH</td>
<td>newenglandvfc.org</td>
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<tr>
<td>Jan. 9-10, 2020</td>
<td>Mid Ohio Growers Meeting</td>
<td>Mt. Hope Event Center, Mt. Hope, OH</td>
<td>(330) 275-7566</td>
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<tr>
<td>Jan. 26-28, 2020</td>
<td>Wisconsin Fresh Fruit and Vegetable Conference</td>
<td>Kalahari Convention Center Wisconsin Dells, WI</td>
<td>(920) 478-4277 wiberies.org</td>
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<tr>
<td>Jan. 28-30, 2020</td>
<td>Mid-Atlantic Fruit &amp; Veg. Convention</td>
<td>Hershey Lodge &amp; Convention Center Hershey, PA</td>
<td>Fruit (717) 677-4184 Veg. (717) 694-3596 mafvc.org</td>
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<tr>
<td>Feb. 5-8, 2020</td>
<td>PASA Sustainable Agriculture Conf.</td>
<td>Lancaster County Conv. Ctr., Lancaster, PA</td>
<td>(814) 349-9856</td>
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<tr>
<td>March 3-6, 2020</td>
<td>No. American Raspberry &amp; Blackberry Conference</td>
<td>Chase Park Plaza Hotel St. Louis, MO</td>
<td>(919) 542-4037 raspberryblackberry.com</td>
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