# **Fall Fruit and Nut Tree Sale**

All selections of fruit and nut trees, vines, and shrubs offered in this sale are of varieties proven to perform well in Eastern North Carolina. *Some plants will be delivered field dug and bare root (without soil).* ***Plan to plant or heel in plants immediately after delivery.*** *Care instructions will be included at pick up.*

**All orders are due with payment** to Johnston County Center by ***Tuesday, November 30th, 2021***. ***Due to COVID-19, please plan to pick up your plants at the Johnston County Livestock Arena located at 520 County Home Rd. Smithfield, NC 27577.*** **If you have any questions, please call (919) 989-5380.**

***Plants will be available for pickup on Thursday, February 10, 2022 between 8am and 5pm.***

### Site Selection

**Tips and Considerations**

Proper site selection is critical in growing healthy, productive plants. All plants offered produce best in full sun. Blueberries are the most shade tolerant of the fruit plants available, and will produce even at 50% shade.

Good air circulation will help in reducing disease outbreaks. Plant all plants well away from buildings and tall trees. Avoid low-lying areas, or frost pockets, in order to protect spring blossoms.

Good drainage is essential for all fruit plants. If you have poorly drained soil and wish to grow fruit plants, create raised beds by mounding up the soil, or using some type of construction material for the sides. Beds need to be at least 12 inches deep.

### Soil Testing

Once you select the site, take a soil sample and submit it to NCDA-Agronomic Division for analysis. Test

results will provide advice on the amount of lime and nutrients needed. Most fruit plants perform best at a pH of 6.0, except blueberries, which need a more acidic soil.

It is important to incorporate lime and nutrients into the soil prior to the time of planting. Information on soil testing, forms, and boxes can be obtained from the NC Cooperative Extension Service. Soil testing is completely free if the samples are sent in between April and Thanksgiving. There will be a $4.00 charge per soil sample if they are sent in during Thanksgiving through March 31st. If you would like Johnston County Agriculture Agents to take your sample to the lab, we need to receive them *the week before Thanksgiving.*

### Nematode Testing

Nematodes are microscopic round worms, which can adversely affect plant health. Soil samples can be

submitted to NCDA for nematode testing at a cost of $3.00 per sample. Figs and peaches can be severely affected by high nematode populations. Populations are highest on sandy soils. If you are considering growing figs or peaches, and have sandy soil, a nematode test is recommended. Guardian rootstock on peaches is resistant to root knot nematodes and peach tree short life.

### Pollination

Apples, pears, blueberries, and pecans which have the “ℵ” symbol next to them to note that they require more than one variety for fruit set. Be sure to order at least two varieties of each of these fruit plants. Plants marked with an asterisk (\*) are good universal pollinators for that fruit type or pecan tree.

**Summary: We advise that once you have selected a site for your new plants, you take a soil sample to have tested for nutrients and pH as soon as possible. If you are purchasing fig bushes or peach trees, we also suggest you have a nematode assay done.**

**Note: These trees and shrubs are offered to you at wholesale, delivered prices; therefore, the nursery cannot guarantee livability of plant material, because most are bare-root trees. Since most plants are bare-root, make plans to plant them immediately after you pick them up on February 10, 2022. Fruit and nuts marked with**  ** are from North Carolina suppliers.**

Prepared by: Brandon Parker, Marshall Warren Johnston County Extension Agent Agriculture - Horticulture

2021, Sponsored by

*Johnston County Cooperative Extension Advisory Council*

### “APPLES” ℵ $ 18.00 each

#### 3-4 ft. tall plants, semi-dwarf - Geneva 41 rootstock Bare-root plants

These apple trees are grown on semi-dwarfing Geneva 41 rootstock which grow 25-30% of the size of a standard apple tree. A perfect size for urban gardens. The Geneva 41 rootstock has good precocity (produces fruit at a younger age) and is resistant to collar rot and fire blight**. It is recommended these grafted trees be trained and staked with a 10 ft. metal pole or trellised with two wires spaced at 3.5 ft. and 9 ft. heights.** Apples perform best on rich soils with good drainage and require full sun. Optimum soil pH is 6.0. You will need more than one apple variety to ensure adequate cross-pollination. For our area, Yellow Delicious is an excellent pollinator. Semi-dwarf trees should be spaced 10-14 feet apart.

|  |  |
| --- | --- |
| **Variety** | **Fruit Characteristics** |
| **Gala** | Mild sweet and vanilla-like with a floral aroma, firm and crisp. Perfect snacking variety. One of the most widely grown. |
| **Yellow Delicious\*** | Excellent pollinator source. Fine sweet flavor. Good for snacking or cooking. |
| **Fuji** | One of the sweetest apples around. Firm, crisp and very juicy. Long shelf life. |

### “BLACKBERRIES”  $ 20.00 each

#### 2 yr. old plants, 3 Gal. Container – Staked

#### (No need to wait-Enjoy blackberries in the 1st year with these plants)

Blackberries are among the easiest fruits to grow. They tolerate most soils and fruit best in full sun. Space plants 3’ apart. All varieties listed are thorn less, Floricane-fruiting cultivars.

|  |  |  |  |
| --- | --- | --- | --- |
| **Variety** | **Type** | **Season** | **Comments** |
| **Ouachita** | **Erect** | **Early-Mid** | Pronounced WAH-CHA-TAH. Excellent flavor and high yields. 400-500 chill hours. Ouachita is resistant to rosette disease and orange rust. Consistent production. |
| **Navaho** | **Erect** | **Late** | Sweet, high quality berries, good yield. Stores well. 800-900 chill hours. Navaho is tolerant of rosette disease but susceptible to orange rust. |
| **Osage** | **Erect** | **Mid** | New cultivar with superior flavor medium size |

### “BLUEBERRIES” ℵ $ 8.00 each

#### 2-year-old plants, 1 Gallon Container plants

Blueberries require a well-drained sandy soil with abundant organic matter and a pH of 4.0 to 5.3. They will bear well in full sun to light shade. Amend the soil with four to six inches of pine bark mulch. This lowers pH and improves drainage. Mulch with pine straw or pine bark mini nuggets to reduce water stress and control weeds. Under these conditions’ plants produce in abundance. The following Rabbiteye varieties produce best when at least two different varieties are planted together.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variety** | **Ripens** | **Size** | **Fruit Characteristics** | **Comments** |
| **Legacy** |  | **Medium** | Gray-blue berries | (Southern Highbush) Vigorous grower,  heavy producer |
| **Garden Blue** | **Late May/June** | **Medium** | Light blue berries | Vigorous grower, fine flavor |
| **Powder Blue** | **Late June-July** | **Med/Lg** | Light blue berries | Sweet flavor, upright, good producer |
| **Pink**  **Lemonade** | **June/Oct** | **Medium** | Pink berries | Firm, juicy sweet, Long producer, ornamental |
| **Ira** | **July** | **Medium** | Medium blue berries | Self-fertile, aromatic flavor, vigorous upright |
| **Columbus** | **July** | **Large** | Gray-blue berries | 2005 NCSU introduction, High yields, sweet flavor, Bill Cline’s favorite |
| **Brightwell** | **June/July** | **Med/Lg** | Light blue berries | Sweet flavor, upright vigorous |
| **Montgomery** | **June** | **Med/Lg** | Light blue berries | Very productive, semi-upright, good flavor |
| **Southland** | **June/July** | **Med/Lg** | Medium blue berries | Compact growth, sweet, ornamental |

### “FIGS” $15.00 each

#### 2-3 ft. tall plants, Bare-root plants

Figs are as close as it gets to a fruit you can plant and forget. They prefer a moisture retentive, well-drained soil and full sun. On sandy soils, be sure to test for nematodes. Incorporate plenty of organic matter and mulch deeply. Figs are self-fertile – One bush sets fruit. Space 10 feet apart.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Varieties** | **Ripens** | **Size** | **Fruit Characteristics** | **Comments** |
| **Brown Turkey** | **Early July- Early Aug** | **Med- Large** | Light coppery brown shin with amber flesh | Also called Texas Ever-bearing; Good fresh or canned. |
| **Celeste** | **Mid July** | **Small** | Violet or light brown skin with Strawberry pink flesh | Good fresh, canned or preserved. |

### “JAPANESE PERSIMMON” $ 25.00 each

#### 3-4 ft. tall plants, Bare-root plants

The Japanese persimmon is a non-astringent variety meaning you can eat it while it is mature and firm. It is well adapted and easy to grow with few pest and disease problems. The compact spreading growth habit requires 16-foot spacing between trees. Grafted on American Persimmon root stock.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variety** | **Ripens** | **Fruit** | **Fruit Characteristic** | **Comments** |
| **Fuyu** | **Oct – Nov** | **Med – Large** | Reddish-orange skin, sweet and crisp | Excellent for cooking, most popular for fresh eating |
| **Jiro** | **Sept – Oct** | **Med – Large** | Red in color, sweet mild flesh | Sugarcane like flavor, needs a long hot summer to ripen, excellent fall color |

### “MUSCADINES” ℵ $ 18.00 each

### 2 yr. old plants, 1 Gallon Container – Staked

Our native Muscadines, tolerate a wide range of conditions, but perform best in moisture retentive well-drained soil and full sun, with a deep mulch of organic matter. Muscadines produce best and are easiest to manage when trained on a trellis.

|  |  |  |  |
| --- | --- | --- | --- |
| **Variety** | **Season** | **Color** | **Comments** |
| **Carlos\*** | **Early** | **Bronze** | Medium sized grapes excellent for fresh eating or wine, self fruitful |
| **Fry** | **Mid** | **Bronze** | Medium-large size, excellent quality, popular bronze, ***pollinator required*** |
| **Jumbo** | **Mid-Late** | **Black** | Largest of Muscadine grapes, sweet & delicious taste, ***pollinator required*** |

### “PEACHES” $ 18.00 each

#### 4-5 ft. tall, Bare-root plants

All these peach varieties offered are grafted on Guardian rootstock. If you want success with growing peaches in our area, you should only buy the ones that are grafted on Guardian rootstock. Guardian Rootstock is resistant to root knot nematode and peach tree short life.

Peaches are among the most challenging, but rewarding fruits to grow. They require excellent drainage, full sun, good air circulation, and watering during drought. Peaches are self-pollinating and only one tree is needed for fruit set. A multi-purpose fungicide and insecticide program will be needed during the growing season. Trees should be spaced 20 feet apart. Be sure and test for nematodes, especially on sandy soils.

Chilling hours = the total number of hours below 45 degrees F that is needed during winter for flower buds to develop and bloom normally. Only varieties that require at least 750 hours of chilling are recommended to be grown in our area. The greater the chilling hours, the less likely the peach blossoms will be damaged by late frosts.

|  |  |
| --- | --- |
| **Varieties** | **Fruit Characteristics** |
| **Winblo** | NCSU variety – Freestone medium to large sized, high quality fruit. 850 chilling hours. Fruit ripens 15 days before Elberta. Winblo is like the “perfect” peach! Sweet, juicy, it melts in your mouth! The flesh does not brown, so it is very well-suited for canning or freezing. |
| **Contender** | NCSU variety, large crops of sweet juicy yellow fruit, Free stone, 1050 chilling hours. Fruits ripen 7 days before Elberta. Disease resistant to bacterial spot. |
| **Carolina Gold** | NCSU variety, very large yellow fruit, texture, flavor and aroma are excellent. Free stone, 1050 chilling hours. Fruits ripen 4 days before Elberta. Disease resistant to bacterial spot. |
| **China Pearl** | NCSU variety, large, mild sweet, white-fleshed fruit, Free stone, 1100 chilling hours.  Fruits ripen 4 days after Elberta |

### “PEARS” ℵ $ 18.00 each

#### 4-5 ft. tall plants, Bare-root plants

You will need more than one pear variety to ensure cross-pollination. For our area, Moonglow is an excellent pollen source. Trees should be spaced 20 feet apart. Harvest pears after they have reached full size but are still firm and green (about 105 to 130 days after full bloom). You can then ripen them by placing them in a closed bag with a ripe apple and placing the bag in a moderately cool location (60 to 70 degrees) for several days. Fire blight is a major problem on pears in the South. Avoid this by selecting fire blight resistant varieties like those below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variety** | **Ripens** | **Size** | **Fruit Characteristics** | **Comments** |
| **Keiffer** | **Early September** | **Large** | Yellow skin at maturity; course gritty flesh; knotty, unattractive fruit. | An old favorite for canning or preserves. Resistant to fire blight. |
| **Moonglow** | **Early August** | **Large** | Yellow skin at maturity with soft-textured flesh and few grit cells. | Good fresh or canned. Resistant to fire blight. Excellent pollinator. |
| **Seckel** | **August- September** | **Small** | Reddish brown skin, 2” diameter fruit have sweet, aromatic flavor with few grit cells. | Excellent for fresh eating and canning. Moderately resistant to fire blight. |

### “PECANS” ℵ✰$ 37.00 ⭘ $ 42.00

#### 5-6 ft. tall plants, 5 Gallon Container Plants in Soil

Pecans are native to the Mississippi River basin and prefer deep, rich, well-drained soils. Nut production requires cross-pollination between a Type I\* and Type II variety. Trees in a mature orchard should be at least 70 feet apart. Scab is a common disease caused by a fungus that attacks the leaves and the shuck. Manage the disease by choosing scab-resistant varieties, such as the ones below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Varieties** | **Bearing Age** | **Nuts/lbs.** | **Fruit Characteristics** | **Comments** |
| **⭘ Lakota Type II** | **5-7 years** | **56** | Early nut maturity. Nuts are 58% kernel | USDA introduction 2007. High Scab Resistance, yield and nut quality. Excellent tree strength. |
| **⭘ Mandan Type I\*** | **5-7 years** | **49** | Early nut maturity and ripening. Nuts are 60% kernel | USDA introduction 2009. High Scab Resistance, yield and nut quality. Excellent tree strength and late bud break. |
| **✰ Sumner Type II** | **6-8 years** | **54** | Nuts are 51% kernel. Late harvest date. | Thin shell, easily cracked and shelled. Good Scab Resistance, yield and nut quality. An older variety with proven results. |
| **✰ Gafford Type I\*** | **6-7 years** | **56** | Nuts are 50% kernel. Mid to late harvest date | Excellent pest and Scab Resistance with high yields. Good for low input plantings. |

**For More Information:**

When deciding which fruit plants to grow in your home garden be sure to think about the following:

✔ Do you have an appropriate site – full sun, well-drained soil?

✔ Maintenance requirements: pest management; training and pruning requirements; irrigation.

✔ Do you have space for plants to mature?

✔ What is your soils pH? Do you need to add lime or nutrients? Have you done a soil test?

For more information, consult the following publications online, or stop by the NC Cooperative Extension, Johnston County Center located at 2736 NC Highway 210 in Smithfield to pick up a copy.

**Horticulture Information Leaflets** <https://horticulture.ces.ncsu.edu/publications/>

Muscadine Grapes in the Home Garden Growing Blueberries in the Home Garden Production Guide for Smaller Orchard Plantings

Southeast Regional Caneberry Production Guide

Muscadine Grape Production Guide for the Southeast

A Step-by-Step Approach to Pruning Carlos Muscadine Grapevines

**Resources from:**

Tree Fruits and Nuts

Training and Pruning Fruit Trees in NC

2019 NC Peach and Nectarine Disease and Pest Management Guide

Growing Pecans in NC

A Gardeners Guide to Soil Testing

Fig Culture in NC



*Check out our website:* www.johnston.ces.ncsu.edu

✔ *Find us on Facebook: @NCCEJohnstonCounty*

✔ *Sign up for our newsletters or updates by visiting our website and clicking on the left-hand side menu that says “Sign-Up for ALL Our Newsletters HERE”*

✔ *Call our office at (919) 989-5380*

✔ *Have Gardening Questions? Email: jcemastergardener@gmail.com to get tips from certified Extension Master Gardeners*

*Thank you!*

NC State University and N.C. A&T State University work in tandem, along with federal, state, and local governments, to form a strategic partnership called N.C. Cooperative Extension.

NC State and N.C. A&T State universities are collectively committed to positive action to secure equal opportunity and prohibit discrimination and harassment regardless of age, color, disability, family and marital status, gender identity, genetic information, national origin, political beliefs, race, religion, sex (including pregnancy), sexual orientation and veteran status. NC State, N.C. A&T, USDA and local governments cooperating.

Declaración Completa (Español) “La Extensión Cooperativa de Carolina del Norte prohíbe la discriminación y el acoso independientemente de la edad, el color de la piel, la discapacidad de la persona, el estado civil y situación familiar, la identidad de género, el país de origen, la ideología política, la raza, la religión, el sexo (incluido el embarazo), la orientación sexual y la condición de veterano de guerra. Colaboración entre las Universidades NC State y N.C. A&T State, el Departamento de Agricultura de los Estados Unidos, y los gobiernos locales.

Contact bmspivey@ncsu.edu or 919-989-5380 for accommodations related to a disability

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name: | | | Phone: | | |
| Address: | | | Email: | | |
| **FRUIT** | **VARIETY** | **PRICE** | | **# OF PLANTS** | **TOTAL AMOUNT** |
| **APPLES** | **Gala** | **$ 18.00** | |  |  |
| **Yellow Delicious** | **$ 18.00** | |  |  |
| **Fuji** | **$ 18.00** | |  |  |
| **BLACKBERRIES** | **Ouachita (local, container grown)** | **$ 20.00** | |  |  |
| **Navaho (local, container grown)** | **$ 20.00** | |  |  |
| **Osage (local, container grown)** | **$ 20.00** | |  |  |
| **BLUEBERRIES** | **Legacy (local, container grown)** | **$ 8.00** | |  |  |
| **Garden Blue (local, container grown)** | **$ 8.00** | |  |  |
| **Powder Blue (local, container grown)** | **$ 8.00** | |  |  |
| **Pink Lemonade (local, container grown)** | **$ 8.00** | |  |  |
| **Ira (local, container grown)** | **$ 8.00** | |  |  |
| **Columbus (local, container grown)** | **$ 8.00** | |  |  |
| **Brightwell (local, container grown)** | **$ 8.00** | |  |  |
| **Montgomery (local, container grown)** | **$ 8.00** | |  |  |
| **Southland (local, container grown)** | **$ 8.00** | |  |  |
| **FIGS** | **Brown Turkey** | **$ 15.00** | |  |  |
| **Celeste** | **$ 15.00** | |  |  |
| **JAPANESE PERSIMMONS** | **Fuyu** | **$ 25.00** | |  |  |
| **Jiro** | **$ 25.00** | |  |  |
| **MUSCADINES** | **Carlos (local, container grown)** | **$ 18.00** | |  |  |
| **Fry (local, container grown)** | **$ 18.00** | |  |  |
| **Jumbo (local, container grown)** | **$ 18.00** | |  |  |
| **PEACHES** | **Winblo** | **$ 18.00** | |  |  |
| **Contender** | **$ 18.00** | |  |  |
| **Carolina Gold** | **$ 18.00** | |  |  |
| **China Pearl** | **$ 18.00** | |  |  |
| **PEARS** | **Keiffer** | **$ 18.00** | |  |  |
| **Moonglow** | **$ 18.00** | |  |  |
| **Seckel** | **$ 18.00** | |  |  |
| **PECANS** | **Sumner Type II (local, 5 gal. container)** | **$ 37.00** | |  |  |
| **Gafford Type I (local, 5 gal. container)** | **$ 37.00** | |  |  |
| **Lakota Type II (local, 5 gal. container)** | **$ 42.00** | |  |  |
| **Mandan Type I (local, 5 gal. container)** | **$ 42.00** | |  |  |
| **PAYMENT DUE WITH ORDER FORM TOTAL # OF PLANTS: TOTAL $** | | | | | |

**Send completed order form WITH CHECK made payable to Johnston County Ag. Center**

**MAIL TO: Johnston County CES, Attn: Fruit & Nut Tree Sale, 2736 NC Highway 210 Ste. A, Smithfield, NC 27577-9556**