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Fruit Trees Offer Backyard Bounty

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Nebraska – the fruit production hub of the Midwest?

Today Nebraska is famous for its bountiful production of grain and livestock, but in the late 1800s and early 1900s Nebraska was a nationally recognized fruit-producing state. Nebraska's move toward fruit production began in the mid-1850s as pioneers crossed the Missouri River at Brownville on the Brownville Ferry. Many settlers homesteaded near the crossing in Nemaha County located in southeast Nebraska.

Publications from the Nebraska Horticultural Society, which began publishing its yearly proceedings in the 1850s, tell us that during this period Judge J. W. Hall of Brownville Planted the first apple tree in what was to be the state of Nebraska. The variety was unknown, but reportedly the tree bore yellow fruit claimed to be as sweet as honey and exhibited amazing vigor, resulting in production 17 months after planting. The vigor and fruit quality were attributed to the rich soil of the region, and a fruit production industry was born.

A full complement of both trees and small fruits were produced throughout Nebraska in both commercial and smaller plantings. The majority of commercial production took place in eastern Nebraska with the greatest concentration found in the southeast area of the state. Commercial orchards with hundreds of acres were planted. Most homesteads had groves of fruit trees to supply their needs. Apples, peaches, plums, apricots, pears and tart cherries were planted throughout the region. Small fruits such as raspberries, blackberries, gooseberries and grapes also were produced.

The face of Nebraska's fruit industry began to change with Prohibition, the Great Depression and, most notably, the Armistice Day freeze on Nov. 11, 1940. During the late 1930's into 1940 Nebraska experienced a prolonged drought. The growing season of 1940 was very warm and dry, and the first freeze normally experienced in October never came. Light rain began to fall, nourishing the fall-canopied trees, the rain fell heavier and the fruit trees pulled in the moisture. Temperatures dropped overnight from the 60s to below zero causing the trunks of the trees to rupture as the water inside them froze. Hundreds of acres of commercial orchards, as well as, countless smaller plantings of fruit crops were destroyed. Between cleanup costs and the economic times, few trees were replaced and orchards were converted to row crops.

Today, Nebraskans are showing renewed interest in planting a few fruit trees in their yards or on acreages. Many remember the day when their grandparents grew the fruit that they ate directly off the tree or canned for later use.

Planting Fruit Trees

There are many considerations to make when preparing to plant fruit trees. One of the most important tasks lies in the planning. Fruit trees are long-term endeavors, and it's important to fully understand the growing requirements for them to produce at their fullest. Start the planning process with a site analysis. Factors to consider include soil characteristic, the amount of sunlight the area receives, soil and air drainage, competition from other plants and available space.

Performing a soil test is a critical step that needs to take place early in the planning process. A soil test will determine the pH, fertility levels and amount of organic matter present in the soil. Guidelines for taking a soil sample to be used for testing can be found in the University of Nebraska—Lincoln publication NebGuide G1740 (ianrpubs.unl.edu). Since fruit crops are deeper rooted than many agronomic crops, the soil sample should be taken to the depth of 12 inches rather than the more commonly recommended 8 inches. It's important to do this early in the planning to make any amendments that may be needed.

Most fruit crops require full sun for optimum production. Full sun is classified as at least six hours of direct sunlight daily, preferably during midday for most fruit crops. Both soil drainage and air drainage also are important factors to consider. Heavy clay soils that retain water can lead to reduced vigor and death. Reduced air flow can lead to a buildup of cold air which can result in bud loss and, in extreme cases, even plant death.

Once it has been determined that the site is suitable for growing fruit, it's time to begin the fun part, which is choosing what to plant. The options are almost too many because of all the types

of fruit and the varieties found within each type that can be grown in Nebraska. Apples, peaches, pears, Asian pears, plums, apricots and tart cherries all are tree fruits that can be grown.

Several factors must be taken into account when choosing what to plant. Is the variety adapted to our growing zones? (Nebraska falls into zones 4 and 5.) Will the mature size fit into the site? Is the variety self-fruitful or is a pollinator required?

Mature size may be the most important factor to consider. Mature fruit tree size is classified as standard, semidwarf or dwarf. Tree size can be dictated by either genetics or by grafting. Grafting is essentially splicing two types of trees together—two types of apples, for example. The rootstock is the portion of the tree that contains the roots and the scion wood is the portion that is “spliced” onto the rootstock and becomes the upper portion of the tree. The scion takes on certain characteristics of the rootstock. The rootstock can dictate the mature size of the tree.

A standard tree will have no size modification and may reach a size that is inappropriate for the site. Semidwarf trees reach a height of 8 to 15 feet. Dwarf trees range from 5 to 8 feet tall and untradwarfs and dwarf types need to be supported because they are capable of producing a crop that will be too heavy for the tree to physically support without the help of a stake or specially designed trellis for multiple trees.

Fruit trees are classified as either self-fruitful and not requiring a pollinator, or self-unfruitful and requiring a pollinator. Even if a variety is classified as self-pollinating, it’s a good practice to plant a second genetically different variety that will act as a pollinator. Using a pollinator on a self-pollinating variety will maximize the pollination and result in a superior yield. Fruit trees are classified as either early, mid- or late-season bloomers. Be sure to match the blooming period of the pollinator and the tree that is to be pollinated. Ideally, the bloom period should be the same. A mid-season blooming pollinator can be used to pollinate either an early or late season variety with varying success. An early and a late season pairing would generally not result in successful cross pollination.

Resistance to disease and insect pests is another characteristic to consider when choosing what to plant. Most fruit trees are susceptible to a variety of diseases and insects, but some are more susceptible than others. Choosing resistant varieties will reduce the amount of work needed to control disease and pests.

Apples



More than 2,500 apple varieties currently are grown in the United States with Red Delicious being the most frequently planted variety. Apples tend to bloom later than many fruit trees so the likelihood that a crop will escape a normal frost and produce fruit is good. Apples can be either self-unfruitful or self-fruitful, with the majority being self-unfruitful and requiring a pollinator. Two commonly planted varieties, Jonathan and Golden Delicious, are considered self-fruitful and also work well as pollinators. Two other commonly planted varieties, Jonagold and Winesap, are poor pollinators and should not be used for the purpose.

Here are three disease-resistant apple varieties suitable for Nebraska:

- Liberty – is classified as a high-quality “dessert apple.” It’s resistant to apple scab, cedar apple rust, fire blight and mildew. Liberty is an annual producer ripening in Mid-September; zones 3-7.
- Freedom – is a multipurpose apple suitable for both eating and cooking. It is resistant to apple scab and moderately resistant to mildew, fire blight and cedar apple rust. Freedom ripens in late September; it is an excellent keeper and will store until January under proper conditions; zones 3-9.
- Enterprise – has excellent fruit quality and shows immunity to apple scab with high resistance to fire blight and cedar apple rust, as well as moderate resistance to powdery mildew. It ripens mid-October and is a good keeper; zones 4-8.

Peaches



Peaches are a wonderful fruit and many people aspire to grow them. They come with one major drawback; many varieties available for zone 4 production. Choose a variety with a later bloom period, which will reduce the chances of being hit by a late frost common to Nebraska. Most commonly available varieties of peaches are classified as self-fruitful and do not require a pollinator, but as with apples, yields can be increased by using a second pollinating variety.

- Reliance – is very cold hardy and produces medium to large yellow-fleshed fruit. It's classified as "freestone" meaning that the flesh readily separates from the pit. It's not as flavorful as hardier varieties, and ripens late July to early August; zones 4-8.
- Red Haven – is a freestone peach that produces medium to large yellow fruit. It's a good producer of firm fruit and is resistant to leaf spot; zones 5-8.
- Loring – produces medium-size fruit with yellow flesh. It's a freestone, vigorous grower that usually doesn't require thinning. It has excellent fruit quality; zones 5-8

Plums



Plums are classified as European, Damson or Japanese. All three types can be grown successfully in Nebraska, depending on the variety. European varieties are good fresh and for canning while Damson are more tart and therefore more suitable for cooking. Japanese varieties are susceptible to Nebraska spring frosts and will not produce fruit consistently, but are of very good quality and worth a try. The majority of plums require a second variety for pollination.

- Stanley – is European and produces blue-skinned fruit suitable for eating and cooking. It's late blooming and is a heavy producer. The oblong fruit ripens in mid-September; zones 4-9.
- Castleton – is European with blue-skinned fruit that is classified as a dessert plum. It's a good producer, ripening in late August to early September; zones 5-9.
- Shiro – is a Japanese type with yellow skin and white flesh. Very sweet, it ripens in late July to early August; zones 5-8.

Pears



Pears do very well in Nebraska's climate and may be the easiest tree fruit to grow. Most varieties are considered self-unfruitful, and require a pollinator. Although some varieties are classified as self-pollinating, they respond favorably to a second variety acting as a pollinator. Most pear varieties are excellent pollinators with the exception of Seckel pear pollinating Bartlett. Pear flowers are small compared to other fruiting trees and require more pollinating insects to complete the job.

- Bartlett – is considered the standard for pears. Very productive with large, juicy fruit suitable for eating or canning, it ripens in late August and is best if picked mature but green, and ripened off the tree. It's somewhat self-fertile but yields better using a separate pollinating variety; zones 4-9.
- Anjou – is a green pear with a slightly yellow tinge when ripe. This tree bears large fruit that stores well. It will cross pollinate with Bartlett; zones 4-9.
- Comice – is a dessert pear, with large fruit that ripens yellow with a tinge of red. It can be self-fruitful but yields better with cross pollination; zones 4-9.

Apricots



Apricots tend to be one of the most frost-susceptible tree fruits grown in Nebraska. Site location plays a large role in the fruiting success of apricots. Sites with good air drainage that allow cold air to flow out and away from the trees have the greatest success. Good air drainage coupled with choosing the proper variety helps increase the chances of harvesting a crop, although it's unlikely a tree will produce a crop on a yearly basis.

- Hargrand – is very hardy and blooms mid- to late April, this variety produces large freestone fruit with good flavor. It has very good disease resistance and is self-fruitful; zones 4-7.
- Sungold – also is very hardy and blooms mid- to late April. It produces medium-size freestone fruit and is self-unfruitful with limited disease resistance; zones 4-8.

Tart Cherries

Tart Cherries tend to be very good producers. Flowering takes place later in the spring,



allowing crops to be produced most years. Trees are less than 15 feet tall with some varieties such as North Star only growing to 5 feet. The major problem with tart cherries is that birds love them! As soon as they are ripe the birds move in, so be prepared to harvest when you start to see that the birds are interested in them.

Tart Cherries are considered self-fruitful, so a second variety is not needed for pollination, although a second variety can be beneficial. If a pollinator is used, it's important to know that a tart cherry and a sweet cherry will not cross pollinate.

Producing sweet cherries in Nebraska is difficult. Growing conditions are unfavorable and the fruit tends to be small. It's also susceptible to fruit rot.

- Montmorency – is considered the standard for tart cherries. It is very productive, bearing firm medium-size, bright red fruit. The tree blooms in early May and fruit ripens in July; zones 4-9.
- Balaton – blooms and yields 6 to 10 feet tall. It has small, deep red fruit with red flesh; zones 3-8.