

Fruit Tree Cultivars for Nebraska

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Proper fruit cultivar (variety) selection is important for successful and satisfying results from the home gardener's efforts. Selection should be based on family preferences, available space, and intended use of the fruits. If properly chosen, harvest can be spread over several weeks if cultivars with different periods of maturity are planted.

It is important that homeowners select the cultivars of fruit plants that are best adapted for cultivation in the part of the state in which they live. The cultivars must have adequate hardiness to survive the winter; heat and drought tolerance to thrive in the summer; and the ability to escape or survive spring frosts.

Select plants of the proper size to fit the space available and consider their aesthetic value in the landscape. Many fruit trees are available on dwarfing (size-controlling) rootstocks. Use of such trees may be helpful for fruit tree growers with space limitations. Spring bloom of apples and plums can be very attractive and fragrant; and fruit trees offer seasonal interest, shade, and shelter for birds.

Fruit trees require consistent management for best productivity. Proper pruning is very important, as are other cultural practices such as minimizing insect and disease damage. Select disease-resistant cultivars to reduce the need for pesticides.

Plant Hardiness Zones

The USDA Plant Hardiness Zones map shows two major plant hardiness zones in Nebraska—Zones 4 and 5 (Figure 1). If the cultivar listed is in your zone or a zone with a lower number, it may be hardy in your area. The major zones are subdivided into smaller units called "A & B" (not shown on the map) that represent 5-degree differentials within the 10-degree zone. These hardiness zones

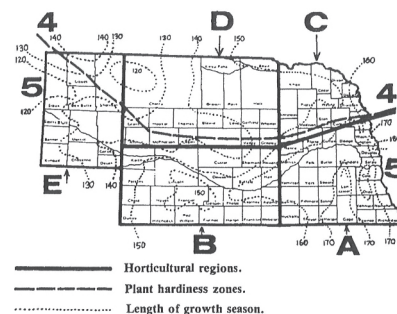


Figure 1. Plant Hardiness Zones and Hardiness Regions for Nebraska.

are based solely on average minimum winter temperatures and should only be considered as advisory. Microclimate variations can significantly impact the survival and productivity of fruit trees.

Horticultural Regions

The horticulture regions (A-E) shown in Figure 1 are further subdivisions of the plant hardiness zones and are more specific to Nebraska's growing conditions. They take into consideration other plant growth factors, such as frost occurrence, seasonal rainfall distribution, wind desiccation (drying), humidity, soil characteristics, and duration and intensity of sunlight. The combined effects of all these factors determine actual plant adaptability.

Frost dates, length of growing season, and minimum winter temperatures are among the least controllable of the major factors governing the geographic adaptability of plants. Close adherence to an understanding of these factors is important in cultivar selection.

Conditions Specific to Nebraska

Rainfall, soil type, and summer heat must also be suitable for plant growth. Some growing conditions may be modified by providing irrigation, soil modification, wind protection, or partial shade.

Located on the western edge of the Midwestern Region, Nebraska has many of the climatic conditions of both the Great Plains and the Intermountain regions. These include low atmospheric pressure coupled with wind movement and low humidity, which allows moisture to evaporate quickly, thus contributing to drought conditions. As one travels west in Nebraska, it becomes more difficult to grow fruit trees because of a combination of low rainfall, low humidity, high winds, greater elevation, and higher soil pH.

Woody fruit trees that are adapted to the very cold winters of Canada and the New England states often will not survive the cold, semiarid winters of Nebraska. This apparent lack of hardiness is mainly the result of desiccation, which is caused by high wind velocity and low humidity associated with cold. A good example is the 'Jonathan' apple, which is adapted to plant hardiness Zones 4 and 5, but not horticulture region "E," because of the high elevation, lack of rainfall, and potential desiccation by wind.

Length of Growing Season

Knowing the number of frost-free growing season days can be helpful in selecting fruit tree cultivars that will mature during your growing season. Many fruit plants may be hardy to your geographic region and will bear fruit, but these fruits may not have a long enough growing season to fully ripen.

Microclimate differences occur in all parts of the state. Microclimatic variations are related to exposure, slope, vegetation, and thermal capacity and conductive characteristics of the soil. As an example, the growing conditions in Lincoln and Omaha are considerably different than that of the farming area just outside their city limits. Both cities have 180-day frost-free growing seasons, primarily because of protection offered by buildings, streets, and trees with their warming effect on the environment and the protection they provide from wind exposure. An even smaller microclimate variation can occur from the north side of a home to the south side. These microclimate variations should be considered when selecting fruit trees for use out of their natural hardiness zones or horticultural regions.

Pollination Requirements

Many fruit tree cultivars are self-unfruitful; that is, their pollen is not compatible with the female part of the flower (pistil). Therefore, pollen from another cultivar is re-

quired for successful pollination and fruit formation. These cultivars are referred to as *pollinizers* (*pollinators* are those creatures that transfer pollen, such as bees, other insects, bats, and birds).

Many fruit tree cultivars will grow in Nebraska—this NebGuide recommends only a few of each species. Recommendations are based on hardiness, maturity, adaptability, and fruit quality. The cultivars in the following chart are listed in order of maturity (ripening). Mail order sources are listed in alphabetical order by number after the chart.

Apricot Cultivars (Ripening season-July) Apricots are hardy to Zone 5, but they bloom very early in the spring so the flowers and small fruits are often killed by a late spring frost. Some homeowners have had excellent results with seedling trees. Sungold, Moongold, Moorpark, Goldcot, and Harglow are worthy of trial. Most apricots are not self-fruitful; thus, a second cultivar needs to be planted as a pollinizer. Goldcot and Harglow are self-fruitful. (*Sources-5,8,9,10*)

NAMES AND ADDRESSES OF SOURCES*

Source, Nursery Name, Address, Telephone, website:

1. Adams County Nursery, 26 Nursery Road, PO Box 108, Aspers, PA 17304; 1-800-377-3106; www.acnursery.com
2. Bergeson Nursery, Rt. 1, Box 84, Fertile, MN 56540; (218) 945-6988; www.bergesonnursery.com/
3. Burpee, W. Atlee & Co., 300 Park Ave., Warminster, PA 18974; 1-800-888-1447; www.burpee.com/
4. Earl May Seed & Nursery Co., Shenandoah, IA 51603; www.earlmay.com/ (Check website for phone number of nursery in your area.)
5. Farmer Seed & Nursery Co., 818 NW. 4th St., Faribault, MN 55021; (507) 334-1623; www.farmerseed.com/
6. Gurney Seed & Nursery Co., Yankton, SD 57079; (513) 354-1492; www.gurneys.com/
7. Henry Field Nursery Co., Shenandoah, IA 51644; (513) 354-1494; www.henryfields.com/
8. Jung, J.W. Co., Randolph, WI 53956-0001; (414) 326-4100; jungseed.com/
9. Stark Bro's Nurseries & Orchards Co., Louisiana, MO 63353; 1-800-325-4180; www.starkbros.com/
10. Van Well Nurseries, PO Box 1339, Wenatchee, WA 98807; (509) 886-8189; www.vanwell.net/
11. Wafler Nursery, 10748 Slaght Road, Walcott, NY 14590; (877) 397-0874
12. Winter Cove Farm, 31 Cove Road, Winterport, ME 04496; (207) 852-9088, www.wintercovefarm.com/
13. Gilby's Orchard, 30069 State Hwy 210, Aitkin, MN 56431; (218) 670-1232, www.gilbysorchard.com/

ACKNOWLEDGMENT

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Table 1: **Apple Cultivars** (Listed in order of ripening; fruiting season early July to mid-October)

Pollinizer Number	Cultivar	Zones	Regions	Pollen Source Cultivars§	Uses	Brief Description
1.	Lodi*	4-5	A-D	2,3,4,7,8, 11,14	Fresh Dessert Cooking	Early blooming (biennial bearing), early summer apple; clear yellow, crisp flesh, fair quality. Fruit has short shelf life. Especially good for pies. Requires several pickings. (Sources-1,8,9,10)
2.	State Fair	4-5	A-E	1,2,3,4,5,6,7,8	Fresh Cooking	Juicy, moderately tart early apple; good for cooking and eating fresh; may exhibit biennial bearing, fire blight susceptible. (Sources-11,12,13)
3.	Zestar**	4-5	A-E	1,3,4,7,8, 10,13,15, 19	Fresh Dessert Cooking	High-quality, early season University of Minnesota introduction (formerly Minnewashta); fruit crisp, juicy, and tart. Very susceptible to scab. Keeps 6 to 8 weeks in common storage. (Sources-1,9)
4.	Gala**	4-5	A-D	4,5,6,8,11,12,13,14,15,19	Fresh Dessert Cooking	Crisp, firm, aromatic; sweet and low acid; well-adapted and consistent cropper; bred in New Zealand; good storage quality. (Sources-1,4,5,6,9,10)
5.	Wealthy*	4-5	B-E	1,2,5,6,11,13,18,19	Fresh Dessert Cooking	Very susceptible to Fire Blight disease. Hardy and long-lived tree. Fruit is medium, crisp, and good quality. Ripens bright red, but can be used weeks before ripening. (Sources-8,9,10)
6.	Honey-crisp**	4-5	A-D	1,2,3,4,6,7,8,11,13,16,18,19	Fresh Dessert Cooking	University of Minnesota introduction; very high fruit quality; tree only moderately strong; biennial bearing tendency; susceptible to bitter pit. (Sources-1,2,5,6,7,8,9,10)
7.	Kindercrisp	3-7	A-E	1,2,3,4,6,7,8,10,11	Fresh Dessert	Reliable, cold-tolerant offspring of Honeycrisp. Fruit slightly smaller than Honeycrisp; excellent for kid's lunchboxes; flavor and crispness similar to Honeycrisp. (Sources-11,12,13)
8.	Liberty**	4-5	A-D	1,2,3,4,6,7,11,13,18,19	Fresh Dessert Cooking	One of the new breed of disease-tolerant apples; resistant to Fire Blight, scab, powdery mildew, and Cedar-Apple Rust; fruit flavorful, medium sized with crisp flesh texture. (Sources-1,6,7,8,9,10)
9.	Empire**	4-5	A-E	1,2,3,4,6,10,11,13,16,19	Fresh Dessert Cooking	Well-adapted vigorous tree; McIntosh type, but firmer; classic apple flavor; occasionally susceptible to late spring frost. (Sources-1,9,10)
10.	Spartan*	4-5	A-E	1,2,3,4,5,10,11,13,14,16,19	Fresh Dessert Cooking	A firmer, attractive McIntosh type, with more color than McIntosh. May exhibit pre-harvest fruit drop. Excellent dessert quality. (Source-10)
11.	Honeygold*	4-5	A-E	1,2,3,4,5,10,11,13,17,19	Fresh Dessert Cooking	A hardy substitute for Golden Delicious. Susceptible to Fire Blight and cedar-apple rust. Medium to large size, golden to yellow-green. Flesh is crisp, yellow, juicy, and has a flavor similar to Golden Delicious. (Sources-5,8)
12.	Haralson**	4-5	A-E	1,3,4,5,7,11,13,15,17	Fresh Dessert Cooking	Very hardy tree that starts bearing young but has a biennial bearing habit. Medium-size fruit with red stripes; tart, fall apple that stays crisp and juicy through mid-winter. (Sources-2,8)
13.	Jonathan and Jonathan types**	4-5	A-D	1,3,4,7,8,12,14,15,17	Fresh Dessert Cooking	Well-adapted but susceptible to Cedar-Apple Rust and Fire Blight. Excellent fall apple, good for cider making, excellent for pies and desserts. (Sources-1,4,9,10)
14.	North-western Greening*	4-5	B-E	4,7,8,10,11,14,15,19	Cooking	Culinary apple; large fruit with smooth, clear, pale yellow skin. Flesh is crisp and mild; good winter storage. (Source-8)
15.	Golden (Yellow) Delicious*	4-5	A-D	1,2,3,4,5,7,8,10,11,14,15,17,19	Fresh Dessert Applesauce	A yellow apple, excellent for both processing and fresh market. Tree is productive and must be thinned to achieve annual production. Susceptible to russetting. Fruit tends to shrivel in storage. (Sources-1,4,6,9,10)
16.	Red Delicious**	4-5	A-C	1,2,3,4,7,8,10,12,13,15,18,19	Fresh Dessert	A popular cultivar grown throughout the apple-producing areas of the country. No processing value, only fair fruit quality. Difficult to grow properly, strong tendency for biennial bearing. (Sources-1,4,5,9,10)
17.	Rome*	5	A-B	1,2,7,8,11,14,17,19	Cooking	Excellent baking and cooking apple, late blooming, pleasant flavor, firm. Keeps through mid-winter. (Sources-9,10)
18.	Enterprise**	4-5	A-E	1,2,3,4,5,10,13,14,15,17,19	Fresh Dessert Cooking	Disease resistant, stores up to 3 months at 1°C; juicy, firm, crisp, medium-red apple. (Sources-1,6,8,9)
19.	Fireside*, Connell Red (red sport of Fireside)	4-5	A-E	1,2,3,4,5,6,7,8,11,12,13,15	Fresh Dessert Cooking	Extra hardy, excellent keeper, large size, attractive red. Flavor is rich and very high-quality, sweet. (Sources-5,6)
20.	Fuji**	4-5	A-D	1,2,4,5,7,8,10,11,13,17,19	Fresh Dessert Cooking	Popular new cultivar from Japanese breeding; inconsistent cropper, high-quality, fine-textured fruit, mild and sweet. (Sources-1,6,7,9,10)
21.	Winesap**	5	A	1,2,3,4,5,9,10,13,17,18	Fresh Dessert Cooking	Good quality winter storage apple that has good keeping qualities. Flavor peaks in February. (Sources-1,4,9,10)

* Partially self-fruitful, but use a pollen source cultivar for good yields.

** Self-unfruitful; requires a pollinizer.

§ Refers to pollinizer number in first column.

Table 2: **Cherry Cultivars in Order of Ripening** (Ripening season-July)

Pollinizer Number	Cultivar	Zones	Regions	Pollen Source Cultivars	Brief Description
Sweet Cherry Cultivars-trial plantings only (plant in a very protected location).					
1.	Starkrimson	5	A-B	Self-fruitful	Semi-dwarf, 10–14 feet. The fruit hangs well on the tree over a long period—pick them just after they have turned red or allow to mature to dark red color. 'Bing'-type flavor. (Source-9)
2.	Yellow Glass or Gold	5	A	1,3,6	Hardest of sweet cherries; large, bright yellow fruit; very high quality. (Sources-3,4,7,9)
3.	Whitegold	5	A-B	Self-fruitful	Introduction from the Cornell breeding program; large yellow fruit with red blush; tree is very hardy, frost tolerant and crack resistant. Good pollinizer for mid-season bloom sweet cherries. (Sources-8,9,10)
4.	Stella	5	A-B	Self-fruitful	Sweet, heart-shaped, dark red/black fruit; susceptible to cracking; upright tree structure; recommended for trial in home orchards. (Sources-5,6,7,9,10)
5.	Lapins	5	A-B	Self-fruitful	Large sweet red fruit; tree upright in stature, productive. Worthy of trial in warmer parts of Nebraska. (Sources-5,8,10)
6.	Blackgold	5	A-B	Self-fruitful	Another introduction from Cornell; dark, sweet cherry with some frost tolerance; late blooming; good pollinizer for late-flowering sweet cherry cultivars. (Sources-1,8,9,10)
Tart (Sour) Cherry Cultivars*					
1.	North Star	4–5	A-E	Self-fruitful	Natural dwarf, 6–9 feet, hardy. Not fully ripe until fruit color is deep, rich mahogany red. Fruit has red juice and flesh, and is fair quality. Very tolerant to cherry leaf spot fungus. (Sources-3,4,5,6,7,8,9)
2.	Montmorency‡	5	A-E	Self-fruitful	Less hardy than North Star or Meteor, but the standard for cherry pie. (Sources-1,3,4,5,6,8,9,10)
3.	Meteor (Ripens 7–10 days later than Montmorency)	4–5	A-E	Self-fruitful	Extra-hardy, natural dwarf, 10–12 feet; annual bearing spur-type tree. Good quality. (Sources-4,5,6,7,8)

* All cultivars listed are self-fruitful and self-pollinating.

‡ The Montmorency cultivar can be bought on dwarfing rootstock, but is not always dependable.

Table 3: **Nectarine Cultivars** (Ripen late July-early August). Difficult to grow, susceptible to insects and disease.

Pollinizer Number	Cultivar	Zones	Regions	Pollen Source Cultivars	Brief Description
1.	Hardired	5	A-B	Self-fruitful	Hardest, uniform-ripening yellow freestone, red skin color, good quality, tolerant of bacterial spot and brown rot disease. (Sources-8,9)
2.	Mericrest	5	A-B	Self-fruitful	Medium sized with attractive dark red skin, good quality yellow flesh; freestone. (Sources-6,7,9)

Table 4: **Peach Cultivars** (Ripen mid-July to late August). For very protected sites; peaches are a backyard fruit in the city where a good microclimate exists.

Pollinizer Number	Cultivar	Zones	Regions	Pollen Source Cultivars	Brief Description
1.	Reliance	5	A-B	Self-fruitful	Hardest, yellow-fleshed, freestone, only fair quality. (Sources-1,6,7,8,9,10)
2.	Redhaven ¹	5	A-B	Self-fruitful	Hardy, very early ripening, firm, gold flesh, freestone, high quality. (Sources-1,5,9,10)
3.	Allstar	5	A-B	Self-fruitful	Bright red skin color with non-browning yellow flesh; fruit and tree resistant to bacterial spot; well-adapted. (Source-10)
4.	Blushingstar	5	A-B	Self-fruitful	High-quality, white-fleshed peach with a pleasing aroma; pinkish-red skin with a white ground color; good bacterial spot resistance. (Source-10)
5.	Contender	5	A-B	Self-fruitful	Bright red over yellow-skinned; yellow flesh resistant to browning; freestone; ripens about 3 weeks after Redhaven; moderate bacterial spot resistance; tree growth habit similar to Redhaven, but more vigorous. (Sources-1,10)
6.	Madison	5	A-B	Self-fruitful	Extra-hardy, yellow-fleshed, freestone, medium quality. (Sources-8,9,10)

Most peach cultivars are available on dwarfing rootstocks, not totally reliable. Seedling rootstocks are more dependable.

¹ The Redhaven cultivar is also available in a natural genetic dwarf.

Table 5: **Pear Cultivars** (Ripen early August to early October). Dwarfing rootstocks are not suggested for pears because the quince rootstocks are very susceptible to Fire Blight, and are also more susceptible to winter injury than seedling rootstocks.

Pollinizer Number	Cultivar	Zones	Regions	Pollen Source Cultivars	Brief Description
1.	Moonglow	5	A-B	4,5,6	Very resistant to Fire Blight; good flavor, early-ripening. (Sources-8,9)
2.	Magness§	5	A-B	1,4,5,6	Very resistant to Fire Blight; fruit light colored, sweet, and aromatic. (Sources-1,7)
3.	Seckel	5	A-B	1,4,5,6,7	Some Fire Blight resistance; easy to grow, small fruit; excellent flavor, yellow-brown pear. (Sources-1,7,8,9,10)
4.	Lincoln*	4-5	A-D	1,5,6,7	Hardest of the pear cultivars, good flavor. Produces heavy crop yearly. (Source-7)
5.	Luscious*	4-5	A-D	1,4,6,7	High-quality, hardy, dessert pear for north. Introduced from South Dakota. Resistant but not immune to Fire Blight. (Sources-3,4,5)
6.	Harrow Sweet	4-5	A-D	1,4 or 5	From Harrow Research Station in Canada; selected for cold hardiness, productivity, and Fire Blight resistance; sweet, juicy fruit that stores well. (Source-1)
7.	Harvest Queen	4-5	A-D	1,4 or 5	Also from Harrow Research Station; selected for earliness and cold hardiness; flavor similar to Bartlett but less gritty; Fire Blight resistant. (Sources-1,10)

§ This cultivar does not produce good pollen so must be planted with two other cultivars if all are to produce fruit.

* Partially self-fruitful, requires pollinizer for good yields.

Table 6: **Asian Pears** In recent years Asian pears have increased in popularity to a significant degree. These sweet and juicy pears are crunchy when ripe, unlike the common European pears such as ‘Bartlett’, which are succulent and “melting” in texture. Although many Asian pears are susceptible to fire blight to varying degrees, their crunchy texture, juiciness, and sweet flavor help explain their increasing popularity. Following are cultivars worthy of trial. Need thinning to achieve acceptable fruit size – most cultivars.

Pollinizer Number	Cultivar	Zones	Regions	Pollen Source Cultivars	Brief Description
1.	Hosui	4-5	A-D	2,3 & some European Pears	Exceptional flavor, sweet, mild, crisp, and juicy; skin golden to golden brown. (Sources-1,9,10)
2.	Chojuro	4-5	A-D	1,3 & some European Pears	Originated in Japan as a chance seedling; fruit crisp, mildly sweet with a distinctive aroma; fruit stores well, up to 20 weeks. Moderately cold-hardy and resistant to scab and blackspot. (Sources-6,9)
3.	Shinseiki	4-5	A-D	1,2 & some European Pears	Smooth, yellow-skinned globose pear with crisp, juicy white flesh; reported to store 12 weeks. (Sources-1,10)

Table 7: **Plum Cultivars**

Pollinizer Number	Cultivar	Zones	Regions	Pollen Source Cultivars	Uses	Brief Description
1.	Superior** (American-Japanese)	4-5	A-E	4 or 5	Fresh Dessert	Very hardy, fast-growing plum; large, good quality fruit; bright red skin that can be peeled. (Sources-5,6,7,9)
2.	Alderman	4-5	A-D	5 or 6	Fresh Dessert Preserves	University of Minnesota introduction; orange-red skin with bright golden-yellow, sweet flesh; excellent quality; clingstone. (Sources-6,7)
3.	Stanley	5 (European type)	A-C	Self-fruitful	Fresh Dessert Canning	Excellent quality, not as hardy as Superior. Purple-blue skin, golden flesh, prune-type plum. (Sources-1,5,7,9,10)
4.	Green Gage (Reine Claude) (European type)	4-5	A-C	Self-fruitful	Fresh Dessert Canning	Very sweet plum. Fruit is small to medium size, greenish-yellow with a reddish blush and amber flesh color; good quality. (Sources-1,9,10)
5.	Toka (American type)	4-5	A-E	2 or 6	Fresh Dessert Preserves	Very hardy plum; medium size, richly flavored, apricot colored. (Source-2)
6.	South Dakota (American type)	4-5	A-D	2 or 5	Fresh Dessert Preserves	Hardy, vigorous, productive; medium-size fruits, with reddish-yellow skin. Ripens in September. (Source-6)

**Self-unfruitful, requires pollinizer to be fruitful.

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